

Do-It-Yourself Financial Plans

VeriPlan User Guide - 2024

By Lawrence J. Russell



Manage your own personal finance and investment affairs

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You can find links to pdf, epub, mobi, etc. versions of this eBook here:

<https://www.theskilledinvestor.com/VeriPlan/financial-planning/>

You can find the VeriPlan lifetime financial planning software here:

<https://www.theskilledinvestor.com/VeriPlan/>

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It is too long. Search to find what you need. Only print short sections.

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VeriPlan is a self-learning lifetime financial planning and investment application.

- * All operating instructions are embedded within the VeriPlan software.
- * This guide is supplementary. You do not need it to use VeriPlan.
- * This guide includes all the instructions that are provided within VeriPlan.
- * Because this guide includes all operating instructions and all supplementary information, those who do not have the VeriPlan software can read this manual to understand how it works and what it can do.

1.1: Overview



Many people find a simple, free financial planning calculator on a website. After plugging in a few numbers and pressing the magic button, a green or red light shines or maybe it spits out a

"save this much more" number. Too often, this is just a sales front-end for the expensive financial products the website really intends to promote.

Earning a good living and to saving enough for lifetime financial security is difficult. Financially successful people often work far more than 2,000 hours per year for about 35 years -- totaling well over 70,000 hours. it makes sense to spend more effort on your financial planning.

You cannot do informed financial planning without sophisticated software. Even if you pay an expensive financial advisor you will not get direct access to the professional grade financial planning software, they could, but do not always use.

The do-it-yourself alternative is VeriPlan, the most sophisticated lifetime financial planning software available to home users. VeriPlan is personally customizable financial planning software that helps you develop your own comprehensive lifetime financial and investment plan for your family. With VeriPlan, you can improve your financial decision-making and be better informed about the implications of your decisions. VeriPlan demonstrates the value of improved financial practices within your particular situation, and it can save you many thousands of dollars.

VeriPlan automatically develops fully integrated projections of your lifetime income, expenses, debts, taxes, and assets. It gives you direct control over all the data and assumptions that underlie your lifetime financial plan. Functioning as financial decision support software, VeriPlan makes lifetime financial planning feasible by automating millions of fully-integrated, personalized projection calculations for you. With any change that you make, VeriPlan will instantly revise your lifetime cash flow and asset growth model for you.

VeriPlan helps you to answer important financial and investment planning questions within the context of your personal affairs, projected across your lifecycle. Developed for self-directed individuals and their families, VeriPlan is capable of modeling the financial and investment affairs of anyone and any family across a full adult lifecycle. VeriPlan provides fully integrated personal modeling technology that reflects best practices from the scientific finance literature.

VeriPlan is a sophisticated personal decision support tool with extensive documentation embedded within it. VeriPlan provides a wealth of tools and variable controls that quickly react to each user input or adjustment. These flexible VeriPlan facilities help users to evaluate rapidly many alternative scenarios within the particular context of their own personal financial and investment affairs as projected across their lives.



Self-directed individuals have many important, unanswered questions that VeriPlan can help them to evaluate and answer. These questions might include:

- * What is the long run value of increasing my income and/or reducing my expenses?
- * When might I be able to make a down payment on a house?
- * How would putting the kids through college affect us?
- * What tradeoffs are associated with accelerated debt repayments?
- * Can I retire early? Can I ever retire?
- * Will my retirement assets be adequate after taxes are paid?
- * Will my assets be adequate to cover my expenses, if I live a very long time?
- * What is a relatively safe asset withdrawal plan, given my particular circumstances?
- * What risk-adjusted investment outcomes might I expect with different strategies?
- * How would investment costs affect my net investment returns?
- * If I am wasting money on unproductive investment costs, what is the long-term impact?
- * If I were to lose income in the future, how long would my assets cover my expenses?
- * Am I managing my investments tax-efficiently?
- * How much should I put into taxable versus tax-deferred accounts?
- * How much insurance should I carry?
- * After my living expenses, how much could I give to family and charities?
- * How might my potential estate evolve, as I age?

Lawrence Russell and Company develops and distributes VeriPlan. It also publishes The Skilled Investor website and the Pasadena Financial Planner website, which provide objective and educational articles on financial and investment topics for the general public.

VeriPlan provides hyperlinks to articles about sensible lifetime financial planning and investment strategies. None of these articles are required to use VeriPlan. However, you may find them to be informative. These three websites contain dozens of useful do-it-yourself financial and investment planning articles that have been written by the developer of VeriPlan.

Go to the VeriPlan part of The Skilled Investor website:

<https://www.theskilledinvestor.com/VeriPlan/>

Go to the Pasadena Financial Planner website:

<https://www.financialplannerpasadena.com/>

Go to The Skilled Investor main website:

<https://www.theskilledinvestor.com/>

These websites offer objective personal finance information that will be useful over many years.

1.1.1: Unconditional 30-day user satisfaction guarantee

VeriPlan is a genuine, low price bargain that does not require repeated software expenditures. However, if VeriPlan is not right for you, you have a full 30 days to get your money back.

Lawrence Russell and Company offers a thirty (30) day unconditional money back satisfaction guarantee for VeriPlan users. If for any reason you are not completely satisfied with VeriPlan during the first 30 days after your purchase, just send us a short email summarizing your concerns. We may be able to help with some “how to use” guidance. If you remain unsatisfied, we will issue a refund of your purchase price and any sales tax paid.

1.1.2: High value, low cost, and no planned obsolescence

VeriPlan is a genuine bargain that does not require repeated software expenditures. VeriPlan provides highly sophisticated financial planning capabilities at a small fraction of the cost of professional products and services.

An integrated lifecycle financial planning tool is vital for any serious, self-directed individual. VeriPlan is a highly sophisticated financial decision support tool designed for intelligent individuals and the advisors who genuinely serve their fiduciary interests.

VeriPlan is unique in the marketplace. It costs a fraction of the prices charged by other financial planning software vendors, who sell almost exclusively to advisors rather than directly to individuals. We believe that VeriPlan's lifecycle financial planning functionality is equal to or better than many products sold to professional advisors.

VeriPlan's valuable customized planning functionality and low price enable very rapid payback of its cost. VeriPlan helps younger adults adopt efficient savings and investment practices that can pay-off substantially throughout their lives. For those who already have substantial assets, VeriPlan is a phenomenal bargain.

Among its many other capabilities, VeriPlan helps you to understand the great damage to your lifecycle finances caused by excessive investment costs. If you have a portfolio with inefficiently invested assets and you adopt a more cost-efficient strategy, VeriPlan can pay back its cost in weeks or even days.

Furthermore, VeriPlan avoids the marketing tie-ins of other vendor's planning products, which usually promote the industry's expensive investment products and services. While many competitive financial planning products used by advisors lead their clients toward expensive investments, VeriPlan leads you away from them.

No planned obsolescence

VeriPlan is intended to be a full lifetime financial planner that evolves to meet your needs over the years. We want it to serve your needs as a financial decision support tool and to become more valuable with the passage of time. To keep VeriPlan relevant to you over time, we have built into it an extensive ability for you to make your own updates.

Many application software vendors depend upon planned obsolescence to force customers to buy new software versions. While we may offer enhanced versions of VeriPlan in the future and we may charge an upgrade fee, you do not need an upgrade to keep your copy of VeriPlan current. You can change VeriPlan's settings and stay up-to-date. For example, you can change any tax parameters, if tax numbers change.

When a company does not force its customers to upgrade, it must instead attract and satisfy new customers to support its ongoing operations. If you like VeriPlan, please spread the word and encourage your friends to purchase VeriPlan. Encourage them to visit our website, <https://www.theskilledinvestor.com/VeriPlan/> to learn more about the utility of VeriPlan.

1.2: Navigating within VeriPlan

VeriPlan has extensive, fully integrated functionality across a variety of worksheets. To understand how to find what you want to use among the wealth of functionality in VeriPlan simply click on the tabs to see what is there. As you become familiar with navigating within VeriPlan, your productivity will accelerate.

VeriPlan groups worksheets with similar functionality. These worksheet tabs are arrayed along the bottom of your computer screen from left to right. Worksheet groups have descriptive names on their tabs and are numbered within groups.

Since VeriPlan has a large number of user-accessible worksheets, not all tabs are visible on the screen at once. To scroll across the tabs, in Excel's lower left hand corner, notice two small arrowheads pointing to the left and two small arrowheads pointing to the right. Use these arrows to scroll among the worksheet tabs. The leftmost or rightmost of these small arrowheads, you will take you to the first and last of the spreadsheet tabs. Clicking repeatedly on the two inner arrowheads or holding down an arrow with your pointer will allow you to scroll spreadsheet tabs one at a time. When you find the tab that you want, click on it to open the worksheet.

To navigate within any worksheet, use the vertical scroll bar on the right edge of your screen and the horizontal scroll bar in the lower right corner of your screen, adjacent to the worksheet tabs. Only some of VeriPlan's worksheets require use of the horizontal scroll bar, and this is dependent upon you screen size and choice of screen resolution. When you review VeriPlan's output graphics, scroll bars normally are unnecessary and will not be displayed.

Also, on any worksheet that allows user inputs click on the hyperlink headings at the top of the worksheet to go directly to that section. Use the "Return to the Top" links to pop back to the top of that worksheet.

1.3: Information, input, and output graphics and data worksheets



VeriPlan's information and input worksheets

Informational worksheets

START HERE (left-most red tab)

HOW TO USE (next red tab)

OPTIMIZATIONS (next red tab)

RETIREMENT PLANNING (next red tab)

GRAPHICS & DATA (left-most blue tab)

Input worksheets (with yellow tabs)

INCOME

EXPENSES

FINANCIAL ASSETS

PROPERTY+DEBT

TAXES

MOVE-STATES

RETIREMENT

MEDICARE

TAX-ADVANTAGED PLANS

ROTH ANALYSIS

ASSET ALLOCATION

RISK & RETURNS

INVESTMENT COSTS

Input Summary (with purple tab)

SUMMARY of INPUTS

VeriPlan's graphical and data output worksheets

Output Graphics (with blue tabs)

INCOME

EXPENSES

DEBT PAYMENTS

PERSONAL TAXES

RENTALS+PROPERTY

CASH FLOW

SAVINGS RATES

HUMAN CAPITAL

ALLOCATION

TOTAL ASSETS

ASSET FLOWS

DEBT OWED

ASSET TAXABILITY

TRANSACTIONS

RETIREMENT INCOME

WITHDRAWALS

RETIREMENT SHORTFALLS

SAFETY MARGIN

VALUE OF TIME

COST-EFFICIENCY %

COST-EFFICIENCY \$

SALES LOADS

LIFE EXPECTANCY

HISTORICAL RETURNS

ROLLING RETURNS

Output Graphic Data (with green tab)

GRAPHICS DATA (columns of all data used to draw VeriPlan's graphics)

VeriPlan's Plan Comparison Tool (with orange tabs)

HOW TO COMPARE

COPY FROM

PASTE VALUES TO

PLANS COMPARED

Overview of VeriPlan's Output

VeriPlan develops for you a chained series of customized annual projections through age 100. As you enter your data and set your parameters on VeriPlan's yellow-tabbed input worksheets, your projections automatically evolve with output in graphical and data table formats.

You can evaluate your lifetime financial plan in VeriPlan's graphics. In the blue tabs from left to right, you will find that the combined effects of your projected Income, Expenses, Debt Payments, Personal Taxes, and Rentals+Property graphics get summarized in the Cash Flow graphic. In essence, this series of graphics provides your projected annual "income statements." Net cash flow is the average projected annual profit or loss of your family "business" going forward.

For most people their net cash flow will be positive in most years prior to retirement and will then turn negative during retirement years. Positive cash flow provides net savings that VeriPlan automatically adds to your investment portfolio governed by your settings for asset allocation and retirement plan contributions within VeriPlan.

Your projected assets and liabilities reflect the financial position or "balance sheet" of your family "business" annually into the future. VeriPlan's blue tabbed Allocation, Total Assets, Asset Flows, Debt Owed, and Asset Taxability graphics supply this family balance sheet information

In retirement, VeriPlan will automatically project your expected earnings sources, such as Social Security, part-time earned income, real estate income, annuities, and pensions. It will automatically project your retirement expenses, debt payments, and various kinds of taxes.

- A) Transactions graphic -- Projects net transaction out of and between taxable and tax advantage retirement accounts
- B) Retirement Income graphic -- Shows retirement earned income, Social Security retirement payments, Pension and Annuity payments, and Real Estate income. This graphic also indicates Required Minimum Distributions (RMDs) from traditional retirement accounts on the opposite y-axis.
- C) Withdrawals graphic -- Projects the annual percentage of total cash, bond, and stocks needed to cover negative cash flow. In addition, it demonstrates the degree to which RMDs are projected to cover this negative cash flow.
- D) Retirement Shortfalls graphic -- Gives additional information about negative cash flow, RMDs, RMDs taxes, and the net of RMDs that would remain after covering negative cash flow and RMD taxes. Each year, VeriPlan will automatically reinvest any remaining net RMDs in your taxable investment accounts.
- E) Safety Margin graphic -- This is a specialized and pessimistic graphic. It projects how long into the future at any point that the portfolio's cash and bonds alone would cover necessary expenses, if stock values were zero and all retirement income sources ceased.

1.4: Making inputs and changing settings

Only certain cells on the yellow-tabbed data entry worksheets can be changed by the user. The graphics and graphics data worksheets are "read only" and are not user changeable.

After each new entry or change that you make to any user-adjustable cell, VeriPlan will generate a new projection automatically and instantly. If you have a collection of data to enter or want to change several settings at the same time, simply make all your additions and changes and then refer to the graphics and data worksheets for the final projection results. Each change will generate a new projection, but will not affect your entries.

\$258 <<< This is an example of a "bold bordered" user data entry box.

All your data entries and adjustments of VeriPlan's controls will be made in "bold bordered" user data entry boxes or cells. While these user data entry boxes always have bold borders, in some tables with multiple rows, lines of gray boxes will alternate with lines of blue boxes to help

you distinguish one line from another. Only these bold bordered user data entry boxes will be selectable with your computer's pointer. After making any numerical entry, you can press either the 'Enter', 'Tab', or arrow keys to add your entry and develop a revised projection.

Numbers in other cells with more narrow borders are for your information only and are not user changeable. You will not be able to select these cells with your computer pointer. If their information is output oriented, then these cells will change automatically, when a new projection affects them.

Your entries into any of the bold bordered user data entry boxes will be constrained to certain acceptable data types and ranges of data by VeriPlan's data validation processes. When you click on any data entry box, a "Movable Data Entry Guidance Box" will pop up automatically. This box will provide customized written guidance regarding acceptable inputs for this particular data entry box. You can move this box, if you need to by selecting and dragging it with your computer's pointer. **Once you move the "moveable" data entry guidance boxes out of the way, they will stay in that position on the worksheet even when you select a different gray data entry box.**

If you have precise figures for any number that you enter, then enter that precise number. Rounding is not necessary. **ALWAYS CHECK YOUR ENTRIES TO ENSURE THAT YOU HAVE TYPED WHAT YOU HAD INTENDED TO TYPE.** If you enter data into any user data entry box that is not of the correct data type or within the acceptable range, then an error box will pop up. This error box will ask you to either "retry" your entry or "cancel" it. This error box is movable and will provide guidance on how to make a proper entry. You will not be able to proceed, unless you make a proper entry into the data entry box according to the instructions that are provided.

Whenever the data you are entering is a percentage, **YOU MUST TYPE THE PERCENTAGE SIGN.** Check your entry to ensure that you have entered the number you intended with the percentage sign. For example, if you entered a 1 without the percent sign for a real growth rate, Microsoft Excel would interpret a 1 as 100%. Growing and compounding annually by 100% over decades could lead to some astronomical numbers. VeriPlan's data validation processes will limit the potential for some major errors such as this, when you enter percentages, but you should always check every entry you make, before moving on.

While user data entry cells have been restricted, these data entry cells will allow a very wide range of inputs that should accommodate the personal financial circumstances and sane expectations of anyone on earth. Most users will undoubtedly try to use the best personal estimates that they have regarding their own circumstances to develop a VeriPlan projection. However, sometimes you may enter erroneous data, which can differ from a reasonable measurement of your personal circumstances. Whatever data you put in, VeriPlan will develop a projection based upon those numbers. If something looks odd on any graphic, check your inputs.

Because VeriPlan is built on top of the Excel spreadsheet engine, VeriPlan's ability to develop any scenario projection is only restricted by VeriPlan's input limitations and by the computational resources of Excel and your PC. By accident or for amusement, you could project that you quickly would become the richest person in the world. Therefore, as you get more experience with VeriPlan's output graphics and data tables, you usually will find that inspecting the output graphics and data tables can help quickly identify your erroneous inputs. If your graphics and data outputs show doubtful, astronomical, or clearly erroneous results, then retrace your steps to your most recent changes on the input worksheets to find the source of your input error. Also, after you have completed all your data entry and settings on the user data entry worksheets, carefully review and verify all your inputs and settings.

NEVER USE "CUT-AND-PASTE" OPERATIONS. If you do, you could ruin your planning workbook and be forced to roll back to a prior version that you saved as a backup.

ONLY USE "COPY-AND-PASTE" WITHIN TABLES AND ONLY BETWEEN CONTIGUOUS CELLS IN THE SAME COLUMN.

Notice that "Copy-and-Paste" operations are dramatically different from "Cut-and-Paste" operations.

1) A "Cut-and-Paste" operation will cut out the cell from the entire spreadsheet. Since everything within VeriPlan is integrated and interconnected, VeriPlan is likely to be fatally unhappy with what you have done, so be nice to VeriPlan and do not use "Cut-and-Paste" operations. Since VeriPlan is an Excel spreadsheet, VeriPlan cannot stop you from doing this, but you can stop yourself.

2) In contrast, a "Copy-and-Paste" operation will make a copy of the current cell into another cell. Since all user data entry cells **WITHIN THE CONTIGUOUS CELLS OF THE SAME COLUMN** of any user data entry table behave the same, then this is the only situation

where you should perform "Copy-and-Paste" operations. VeriPlan's user data entry cells all have defined data types and associated checking logic. Within columns of tables the cells behave in the same manner. If you "Copy-and-Paste" within a contiguous column you will simply replace a cell with the same characteristics, and you will not remove a cell from Excel that other cells may depend upon.

1.5: VeriPlan and Microsoft Excel on Windows and Macintosh

Microsoft Excel cross-version, cross-OS, and cross-platform compatibility

VeriPlan operates as a standard Microsoft Excel workbook application. For the best experience, VeriPlan should be used on a Windows or Macintosh desktop or laptop with a reasonable sized screen.

As a fully self-contained Excel application, VeriPlan takes advantage of Excel's cross-version, cross-OS and cross-platform compatibility. For twenty years, VeriPlan has been developed using "vanilla" logical operations that have been supported by Excel for many years. VeriPlan will run on any Windows or Macintosh version of Microsoft Excel from the latest version all the way back to Excel 2002.

VeriPlan requires Microsoft Excel and no other spreadsheet engine can run VeriPlan. In particular, for usability purposes, VeriPlan makes extensive use of Microsoft Excel's formatting and data checking capabilities. These features get lost when one attempts to load VeriPlan on another spreadsheet engine that claims to be Excel-compatible.

File saving operations

As a Microsoft Excel workbook application, VeriPlan's files are simply Microsoft Excel files. You can save as many versions as you wish on your hard drive, thumb drive, etc. Back up your work frequently.

When you first receive VeriPlan via download, always copy all of the files into a directory on your hard drive using your Windows or Mac file system.



DO NOT KEEP USING THE SAME FILE NAME.

CHANGE IT FREQUENTLY, USING "SAVE AS"

The first time you use VeriPlan, open the original master VeriPlan file, and before doing anything else, resave your working VeriPlan model to your hard drive with a different file name.

When saving your VeriPlan files that contain your various personal lifetime financial models, use some file naming convention, such as MyFinPlan_05-22-202x-A, -B, -C, etc. that makes sense to you.

To end a planning session, just save your VeriPlan file and shut down Excel. To restart the next time, reopen VeriPlan by clicking your most recently saved VeriPlan file name within your file system.

Large file size

VeriPlan's efficient internal design enables your rapid development of a new projection after each user data entry. VeriPlan's fully integrated internal logic requires a large file size. VeriPlan contains a substantial amount of logic on hidden spreadsheets that are not user accessible. VeriPlan maintains separate full lifetime projection information for each of your income sources, debts, and assets, and this is the primary reason for the large file size. Your user data will have very little impact on VeriPlan's file size.

To reduce file size, VeriPlan is initially delivered to you in a download as an Excel "binary" file with a file size of about 14 to 15 MB. When saved to the native file type of the particular version of Excel on your machine, the file size will roughly double.

As you use VeriPlan, you can continue to save various versions in "binary" format, or you can do a one-time file format conversion. The process is a one-time process, because once the file type is converted, subsequent save operations will use that file type.

To do a one-time file format conversion, when you are saving your VeriPlan file with a new name via the "Save As" function, notice that just below the file name, there is also another pull-down menu to select the file format. Simply pull down that second menu and look for the Excel Workbook format for your version of Excel. The Excel Workbook format for your machine will be at the top of the list of file formats. Highlight that Excel Workbook format, and Excel will do the format conversion.

Email systems have file attachment size limits, usually 25 MB. If you need to move VeriPlan files among your computers and wish to do this by using an email attachment, you can convert your file back to binary format so that the file size will be smaller.

No macros

VeriPlan does not contain and does not require any macros to perform its functions. There is a Microsoft Visual Basic project associated with VeriPlan, but it contains no code. This Visual Basic project is used solely for locking and hiding VeriPlan's internal logic spreadsheets.

Because all internal VeriPlan logic is completely integrated and has been developed over about twenty years, it is not easily changed without intimate knowledge of the system design.

Performance

VeriPlan is performance optimized for sub-second revisions to your model on a Windows PC. Changes on a Mac may take longer.

VeriPlan's very large file size means that Excel can take more time to open and to save your VeriPlan files on your Windows PC or Mac. Newer, faster machines open and save VeriPlan faster.

File security and backups: Protect your VeriPlan files from two perspectives: access security and backups.

VeriPlan will contain your sensitive personal financial information. VeriPlan never asks for nor does it require your account numbers or other such highly sensitive financial information. VeriPlan does not communicate externally. It is a fully self-contained, standalone Microsoft

Excel workbook application. Nevertheless, once you have loaded your data and have fine-tuned your projections, your VeriPlan files will contain a rather comprehensive picture of both your current and projected financial affairs. Obviously, you should take reasonable steps to secure your information from unwanted access.

Regarding access security, you should follow standard, recommended practices to restrict physical access to your computer system, use appropriate file system passwords, and properly set up network security. How to do this is beyond the scope of this introduction, but if you have not already done this for your personal computer systems and home network, you should learn how to do this, and you should do it as soon as possible. Find an extensive article about identity theft protection and prevention here:

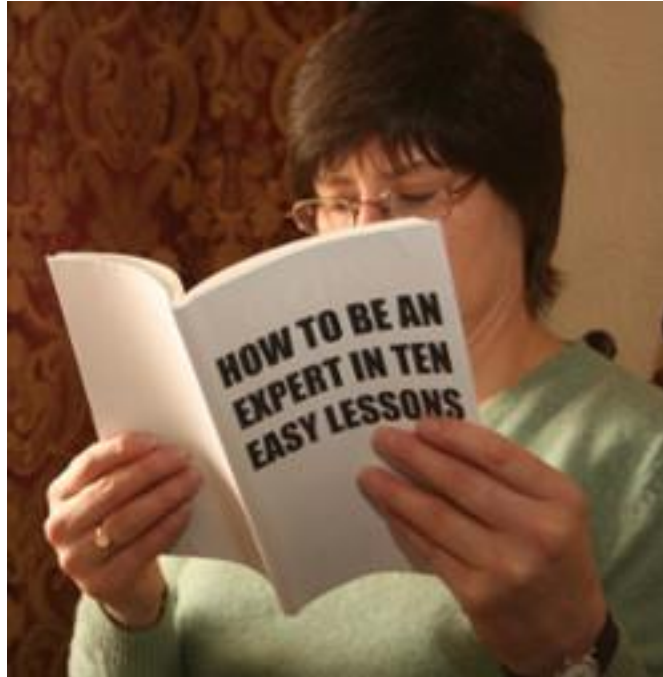
[Find this extensive article about Identity Theft Protection and Prevention](#)

1.6: VeriPlan End User License Agreement and Terms of Use

VeriPlan is licensed and copyrighted software and is not sold. The VeriPlan End User License covers the personal and non-commercial use by one household of VeriPlan running on Microsoft Excel on the Macintosh and Windows devices owned by that household.

By using, installing, or copying VeriPlan, you agree to be bound by the Terms of this Agreement. If you do not accept these Terms, you are not permitted to use, install, copy, or otherwise retain VeriPlan. If you do not agree to the Terms, you must return or destroy the software. The text of the VeriPlan End User License can be found in this section.

Chapter 2: How To Use worksheet



Developing a lifetime financial and retirement plan – VeriPlan user guidance

- 2.1: Develop your initial lifetime financial plan
- 2.2: Refine your financial plan
- 2.3: Where to enter various types of income
- 2.4: Overview of VeriPlan's graphical output
- 2.5: Constant purchasing power "real dollar" projections with average inflation removed
- 2.6: Use VeriPlan's inflation differentiators carefully and sparingly
- 2.7: Develop and clarify your financial goals
- 2.8: Evaluate alternatives with VeriPlan's Comparison Tool
- 2.9: Update your plan over the years

2.1: Develop your initial lifetime financial plan

Your action plan in a nutshell

- 1) Read the red-tabbed "Start Here" worksheet
- 2) Read this "How To Use" worksheet
- 3) Follow the directions below regarding how to develop your initial, "quick-start" lifetime financial plan.
- 4) Evaluate your projection with VeriPlan's blue-tabbed graphics and the green-tabbed "Graphics Data" worksheets
- 5) Refine your plan and change assumptions, while comparing as many projections as you wish, as you iteratively converge on the financial plan that you intend to implement going forward
- 6) Make real life adjustments to your financial behaviors, portfolio, etc. that will put your planning intentions into effect
- 7) Monitor your progress periodically, update your data in VeriPlan, and analyze new financial decisions in the future

Most people are naturally impatient for results. With VeriPlan, you can develop a first-pass starter, quick-start plan. Doing this, you get a general understanding of your lifetime financial projection, while you become familiar with VeriPlan's rich, automated projection features, and its personal financial decision support capabilities. After that, you can refine your plan and compare alternative financial decisions as much as you wish.

VeriPlan instantly and automatically revises your projection with every entry you make. It will allow you to make dollar entries down to the penny. However, if you want to develop your starter plan more quickly, just use rounding. Later, using your financial documents, you can add precision, as you flesh out your more customized and comprehensive lifetime financial plan.

If you are highly impatient and want a quick look at what VeriPlan does with no refinements, just enter \$100,000 for annual income on the yellow-tabbed "Income" worksheet and \$60,000 for annual ordinary expenses on the "Expenses" worksheet. VeriPlan will automatically populate a projection model from those two factors alone. Then, examine the blue-tabbed output graphics to see the results.

Follow these steps to develop your initial plan:

- 1) Save your VeriPlan file with a unique name, such as: "Pats-Plan_January-30-A"

2) Start with the yellow-tabbed "Income" worksheet, and move from left to right across VeriPlan's yellow-tabbed user entry worksheets as you complete the steps below. At the top of the Income worksheet:

- A) enter 1 or 2 users to set the single versus married filing jointly tax status
- B) enter current ages and planned retirement ages for each user
- C) enter current annual income information in Section 2
- D) ignore the rest for now

3) At the top of the "Expenses" worksheet, estimate your total annual ordinary living expenses. Remember to exclude debt payments, mortgages, savings, business expenses, and taxes, because these are automatically projected for you elsewhere in VeriPlan. Ignore the rest for now.

4) At the top of the "Financial Assets" worksheet, enter a "2" to choose the account totals data entry method. Then, enter separate dollar total estimates for your:

- A) taxable bank and investment accounts
- B) traditional retirement accounts
- C) Roth retirement accounts
- D) ignore the rest for now

While VeriPlan provides this quick and simple "asset totals by account taxability" method, you are strongly encouraged to enter each of your asset holdings separately. When you enter your individual asset holdings separately, VeriPlan can automatically project investment costs, track asset tax basis, project long-term capital gains distributions, differentiate assets by cash, bonds, and stocks, automatically rebalance projections, and enable VeriPlan's user portfolio rebalancing tool.

5) If you own your primary residence, in Section 1 of the "Property+Debt" worksheet, use the first column of the table to enter information about your home. Provide at least this information about your home:

- A) the property address as the identifier
- B) current market value and approximate tax basis
- C) for one or two mortgage debts and/or home equity line of credit debts, enter the current amounts owed, interest rates, and minimum monthly payments
- D) enter annual real estate taxes and annual maintenance expenses

- E) ignore the rest for now
- 6) If you have any significant non-real estate debts, enter them in Section 2 of the "Property+Debt" worksheet.
 - A) in the columns enter the amount owed now, the annual interest rate, and the required monthly payment
 - B) ignore the rest for now
- 7) At the top of the "Taxes" worksheet, use the pull-down menu to select your state, which will trigger the automatic lifetime projection of applicable state income taxes. Ignore the rest for now.
- 8) At the top of the "Retirement" worksheet:
 - A) enter your expected monthly Social Security retirement payments
 - B) select the age for Social Security retirement payments to begin
 - C) if desired for a couple, enter a 1 to choose simultaneous retirement
 - D) ignore the rest for now
- 9) At the top of the "Tax-Advantaged Plans" worksheet, for each user, use the pull-down menu to choose the type of employee contribution retirement plan that is available through work. The default is already set indicating willingness to make regular, maximum contributions.
- 10) At the top of the "Asset Allocation" worksheet, select the method you would like to use. The quickest method is to enter 2, which triggers the asset allocation of the average investor. To specify your own cash, bond, and stock percentages, enter 3, and then select your percentages in the section for Method 3. Ignore the rest for now.
- 11) Skip the yellow-tabbed "Risk & Returns" and "Investment Costs" worksheets for now.
- 12) Evaluate your starter projection after saving the file with a unique filename:
 - A) Scan down the purple-tabbed "Summary of Inputs" worksheet. It will summarize the values that VeriPlan is using to develop your projection. It will also give you some idea about VeriPlan's other features with links to find them quickly.
 - B) Look at each of the blue-tabbed graphics starting from left and right. Read the headings of these standard projection graphics, which all project out to age 100.

VeriPlan's standard graphics (automatically updated with every user change)

- * "Income": Non-asset income -- earned, pension, annuity, Social Security & other income
- * "Expenses": Ordinary living expenses with other planned & adjusted expenses
- * "Debt Payments": Personal debt payments
- * "Personal Taxes": Personal tax payments
- * "Rentals+Property": Income, expenses, debt payments, taxes, and cash flow from for rentals and other properties
- * "Cash Flow": Non-asset cash flow
- * "Savings Rates": Pre-retirement savings rates with investment-oriented debt repayments
- * "Human Capital" Expected income and savings before retirement
- * "Allocation": Lifetime financial asset allocation
- * "Total Assets": Cash, bond, stock, property, and debts with cumulative assets lost to excessive investment costs
- * "Asset Flows": Net cash flow with cash, bond, and stock asset returns
- * "Debt Owed" Personal, real estate, and business debt principal owed
- * "Asset Taxability": Taxable, traditional & Roth tax-advantaged account assets
- * "Transactions": Taxable & tax-advantaged account deposit and withdrawal transactions
- * "Retirement Income": Retirement income sources and pre-tax Required Minimum Distributions (RMDs) after Earner #1 retires
- * "Withdrawals": Withdrawal rates from cash, bond & stock assets
- * "Retirement Shortfalls": Cash flow shortfalls after Earner #1 retires including RMDs
- * "Safety Margin": Adjusted cash, bond, and stock coverage of necessary expenses without income
- * "Value of Time": Hourly value of income, expenses, and financial assets
- * "Cost-Efficiency %": Cash, bond & stock asset % returns net of losses due to excessive investment costs
- * "Cost-Efficiency \$": Cash, bond & stock asset \$ returns net of losses due to excessive investment costs
- * "Sales Loads": Lost returns on past and future financial asset sales load purchase fees

- * "Life Expectancy": Average U.S. male and female total life expectancy and remaining life expectancy by current age
- * "Historical Returns": U.S. real dollar asset class returns from 1928 to the most recent full year
- * "Rolling Returns": Annualized rolling 5-year real dollar asset class returns from 1928 to the most recent full year

If you want to look at the numbers, go to the green-tabbed "Graphics Data" worksheets further to the right, which contain all the data used to draw VeriPlan's projection graphics.

Now that you have a starter plan, you can begin to refine it and to use it for your financial decision-making. The sections below will help you to understand how get the most out of the lifetime projection models that VeriPlan automatically develops for you.

2.2: Refine your financial plan



A VeriPlan "quick-starter" plan is like a suit off the rack in a store. It might be close to what you need, but it is not yet tailored to your particular needs.

VeriPlan offers you these tailoring options, listed in the order of the yellow-tabbed worksheets. Each worksheet provides specific guidance on how to use these features:

Income worksheet

- * Add positive and negative income adjustments on a year-by-year basis for either earner
- * Make adjustments for real dollar income growth rates
- * Add and adjust income from IRS Form 1040 categories, such as alimony, rental income, royalties, partnerships, etc.

Expenses worksheet

- * Add positive and negative adjustments on a year-by-year basis for major and extraordinary expenses
- * Make adjustments for real dollar expense growth rates
- * Develop a 24-month budget, including actuals and variances, using customizable categories

Financial Assets worksheet

- * Convert to the individual asset holding method and enter up to 24 cash assets/funds, 24 fixed income assets/funds, and 99 stock assets/funds
- * Using the individual asset entry method enables instant updating of all VeriPlan features related to cash, bond, and stock asset projections. In addition, it provides the necessary inputs for the tax optimized automated portfolio rebalancing tool on the Asset Allocation worksheet.
- * Categorize assets by account taxability and enter current tax basis to track automatically future taxation in addition to automated asset appreciation projections
- * Enter various investment expenses for each asset for automated lifetime investment cost analysis

Property+Debt worksheet

- * Add all your valuable real estate and other properties to your projections
- * Enter information about account taxability, tax basis, expected appreciation, costs, and taxes
- * Enter debts including balances, interest rates, minimum payments, and higher payments to evaluate accelerated debt repayment on a debt-by-debt basis
- * Utilize automated features to project future purchases and sale any real estate or property

Taxes worksheet

- * Once you indicate your state of residence, VeriPlan automates the projection of all taxes across your lifetime

- * You can change all tax information related to:
 - * rates for federal, state, and local income taxes
 - * differences between taxable income subject to federal, state, and local income taxes
 - * federal income tax exemptions and dependent deductions
 - * expected taxable adjustments from Form 1040
 - * itemized tax deductions in addition to automated deductions for interest and real estate taxes
 - * Social Security and Medicare payroll tax rates, long-term capital gains and NIIT tax rates and breakpoints

Move States worksheet

- * Plan a future move to another state of residence
- * VeriPlan will automatically switch all taxation at that point
- * Taking into account A) differential state income tax structures, B) differential taxation of Social Security retirement benefits, and C) differential state taxation of traditional retirement withdrawals and RMDs
- * Rationally analyze whether another state's "tax grass might actually be greener" -- particularly when retired

Retirement worksheet

- * Project Social Security retirement payments, including spousal benefits
- * Analyze initial age of acceptance of Social Security retirement payments
- * Enter information about your pensions, annuities, and deferred compensation
- * Control pension, annuity, & deferred comp. taxes; Deposit payments into taxable, traditional, or Roth accounts
- * Make adjustments for post-retirement expenses and set real dollar expense growth rates
- * Add positive and negative adjustments on a year-by-year basis for retirement expenses
- * Enter a Social Security retirement payments reduction factor, if desired

Medicare worksheet

- * Understand the Medicare health insurance program
- * Plan your Medicare Parts A, B, C, and/or D expenses

- * Compare retirement healthcare expenses with your out-of-pocket costs while working
- * VeriPlan automatically projects IRMAA insurance subsidy reductions for high retirement income

Tax-Advantaged Plans worksheet

- * Adjust contribution limits to employer sponsored retirement plans including employer matching
- * Project contributions for IRAs and 401(k), 403(b), 457, SIMPLE-IRA, SEP_IRA & federal Thrift Savings plans
- * Project additional employer-side contributions up to overall legal maximums
- * Project traditional deferred-tax contributions and/or after-tax/Roth contribution combinations
- * Set VeriPlan's total contribution limitation tool
- * Understand how VeriPlan's fully automated IRA and employer plan projection features
- * Adjust future contribution limits for traditional IRAs, Roth IRAs, employer plans, ages, and penalties

Roth Analysis worksheet

- * Set VeriPlan's Roth contribution limitation tool
- * Plan year-by-year conversions into Roth retirement accounts
- * Understand the tax and investment tradeoffs between traditional and Roth retirement assets
- * Develop a personally optimum strategy for contributions while working and conversions in lower tax years
- * Understand the impact of Roth conversions on Social Security income taxability and IRMAA Medicare subsidies

Asset Allocation worksheet

- * Access additional cash, bond, and stock asset allocation features including fixed lifetime percentages and equity percentages that decline with age

- * Utilize the portfolio rebalancing tool to determine the geographic and tax location optimized allocation of your cash, bonds, and stocks across taxable accounts, traditional tax-advantaged accounts, and Roth tax-advantaged accounts

Risk & Returns worksheet

- * Test the impact of positive and negative asset class return assumptions either systematically or arbitrarily on an asset class basis
- * Use the portfolio revaluation tool to model the impact on your portfolio of a near-term financial crisis
- * Use the portfolio safety tool to see how long your expenses would be covered by cash and bonds in the absence of any income

Investment Costs worksheet

- * Evaluate the lifetime impact of the various investment costs on your portfolio, if you have used the individual asset data entry method on the Financial Assets worksheet
- * Enter reasonable cost estimates for management fees, trading fees, marketing fees, loads, and account custody fees
- * Have VeriPlan develop projections with lower costs so that you can understand the lifetime impact of excessive investment costs

You can view this detailed VeriPlan Inputs video on YouTube:

[VeriPlan-Overview \(Inputs\)](#)

<https://www.youtube.com/watch/glaR4mJ88OU>

2.3: Where to enter various types of income

Users may expect a variety of types of income in the future. This lists where to enter different types of income within VeriPlan. Taxation is automated for each type of income entry.

The primary input point for ordinary income during normal working years is the yellow-tabbed Income worksheet.

- * In Section 3, enter your current annual earned income that you would repeat until retirement. You can enter both employee wage and salary income and/or self-employment income for each person. Self-employment would include net taxable income from actively managed enterprises, including partnerships, LLCs and S corporations.
- * In Section 4, you can make positive and negative year-by-year adjustments to your projected earned income, including annual adjustments above or below the rate of general inflation.
- * In section 5, enter passive income sources that are taxed at ordinary income tax rates. Such passive income sources would include alimony, other gains rental real estate, royalties, partnerships, S corporations, trusts, farm income, and other such passive income sources.
- * When you own rental properties directly, you should enter detailed rental real estate ownership information on the Property + Debt worksheet, and VeriPlan will automatically project lifetime taxable rental real estate income.
- * In Section 7, enter expected future gifts to be received, inheritances, non-spousal beneficiary RMDs, and the receipt of other new assets in the future

The primary input point for ordinary income during normal retirement years is the yellow-tabbed Retirement worksheet.

- * In Section 2, enter your Social Security retirement benefits and Social Security disability payments and ages when payments would begin
- * In Section 3, enter your expected pension, annuity, and deferred compensation payouts

VeriPlan's tax-advantaged retirement plan input and analysis functionality is found on the yellow-tabbed Tax-Advantaged Plans worksheet and on the adjacent yellow-tabbed Roth Analysis worksheet.

- * You (and your spouse) have the right to make traditional and/or Roth contributions to IRA accounts each year, and these contributions may affect your taxable income. VeriPlan automatically implements IRA contribution rules and limitations. As a default, whenever the rules and your projected earned income and finances permit, VeriPlan will

automatically make contributions into traditional IRA accounts. You can, of course, adjust this default contribution behavior.

* In addition to your right to make annual IRA contributions, you may also have a right to make annual contributions into the employer sponsored retirement plans that are available to you. Such contribution could also affect your taxable income. VeriPlan will automatically make contributions into your employer plans according to the various settings and parameters you select on the Tax-Advantaged Plans worksheet and on the Roth Analysis worksheet.

Regarding asset related income sources, VeriPlan has largely automated the projection of asset related taxable ordinary and long-term capital gains income.

* You would enter your current cash, bond, and stock financial assets on the yellow-tabbed Financial Assets worksheet.

* For each such asset entry, you would properly code that account with respect to account taxability

- 0 = a traditional deferred taxation retirement account,
- 1 = a non-retirement taxable account, and
- 2 = a Roth retirement account).

VeriPlan handles the lifetime projection of asset appreciation and associated taxation automatically.

* Cash and bond taxable ordinary dividend income are calculated from asset entries (Financial Assets worksheet Sections 1 & 2)

* Stock short- and long-term capital gains are calculated from asset entries (Financial Assets worksheet Section 3)

* Regarding interest income, ordinary, and qualified dividends, these vary by asset class. Cash and bond returns are automatically taxed as ordinary income within VeriPlan. It is unusual for bonds to have capital gains or losses, although this is possible in the short-term due to interest rate fluctuations.

* Regarding qualified dividends from stocks, in the right-most columns of the stock section of the yellow-tabbed Financial Assets worksheet you can enter annual percentage

distributions assumptions by each asset holding. You can enter assumptions for either qualified dividends automatically taxed federally at the appropriate long-term capital gains tax rates or as non-qualified dividends taxed as ordinary income. Since most equity assets tend to be held for the long-term, the focus of such assumptions is normally on the qualified dividend percentage being reported out annually. Note also that the degree to which you focus on very low cost and low turnover index funds, setting these assumptions is of lesser concern.

- * RMDs and other traditional retirement account withdrawals are calculated automatically (see the Taxes and the Tax-Advantaged Plans worksheet) If RMDs are needed to fund negative cash flow, that happens automatically. If not, some or all of after tax RMDs are automatically reinvested into taxable account assets.

- * Taxable asset withdrawals may be needed in negative cash flow years (See the Optimizations worksheet -- "How it Works" section) As an overview, when annual cash flow is negative, VeriPlan will first deplete taxable accounts, then traditional retirement accounts, then Roth retirement accounts to fund the negative cash flow gap.

- * On the Property + Debts worksheet, VeriPlan automates the future purchase and sale of residential homes, rental real estate, and other properties. For future sales long-term capital gains relative to the tax basis will be projected at the federal level, and after applicable capital gains taxes are paid, the net proceeds of the future sale will be automatically reinvested into future cash, bond, and stock financial assets according to your investment strategy settings. For non-rental homes and vacation properties, appropriate federal capital gains tax exclusions will be applied automatically.

2.4: Overview of VeriPlan's graphical output

When you scroll to the right across VeriPlan's colored tabs at the bottom of your screen, you will find VeriPlan's blue-tabbed graphics. Note that the first blue tab that you find is titled **"Graphics & Data."** This is where you can find the most detailed description of what VeriPlan's individual graphics mean.

Ordered from left to right, these graphics present key information that a general manager would want to know about a business enterprise. In this case, you are the general manager, and the business enterprise is your family's long-term financial affairs.

The first graphics you encounter are associated with your family's financial operations and profitability, while subsequent graphics focus on your family's asset balance sheet. These are followed by additional graphics addressing specialized topics important to long-term family financial planning.

You can view this detailed VeriPlan Outputs video on YouTube:

[VeriPlan-Overview \(Graphics\)](#)

<https://www.youtube.com/watch/HsyaHfOmyYo>

Your projected family financial operations and profitability

The **Income, Expenses, Debt, Taxes, Rentals+Property**, and **Cash Flow** graphics relate to your family's projected lifetime financial operations and profitability. These graphics summarize information that a business manager would find on an income statement. From these graphics, you can understand the money coming in and going out in each projection period. Receipt of income from various sources and expenditures for living, debt payments, and taxes are familiar to everyone.

In some circumstances, families directly own rental real estate properties and other properties such as closely-held businesses. While these business activities are usually separate legal operations from the family, the proceeds from these closely held ventures typically flow directly to the family. Rental real estate and closely-held businesses can provide the majority of family income and some of the earnings of these businesses flow into the family's tax returns.

Cash Flow is a key graphic in the sense that it projects the net of the **family's Income, Expenses, Debt, Taxes**, and **Rentals+Property** graphics. The **Cash Flow** graphic allows you to understand then your family's cash flow would be projected to be either positive or negative. Positive cash flow means that the family has new money to invest. Negative cash flow means that investment assets would need to be drawn down to fund this negative cash flow gap.

The next two graphics, **Savings Rates** and **Human Capital** provide measures of your family's savings rates in the years before retirement. In any projection year prior to the retirement of Earner #1, when your net cash flow is positive, the **Savings Rates** graphic indicates your regular savings rate plus principal pay down on investment-oriented debts.

Human Capital provides a different perspective on pre-retirement consumption and savings. This graphic projects the total expected lifetime wages and salaries of both earners up until the retirement of Earner #1. Human capital is a means to measure the value of your future projected "sweat equity." It is not a tangible, currently owned asset. If you do not keep working you will not realize your human capital. As the years go by, your projected human capital is converted into consumption and savings. Remaining human capital reduced to zero at retirement.

Gross human capital is total projected earned income until retirement, and net human capital is your total projected savings. Gross human capital is the money that you need to spend along the way until retirement on expenses, debt payments, taxes, and assets with negative cash flow. Net human capital is the money left over or your total expected savings. These savings are the projected fruits of your labor that remain to be converted into other valuable investment assets for retirement.

Note: In addition to wage and salary earned income, VeriPlan's human capital measures also include other income entered in Section 5 of the income worksheet plus any taxable income from flowing from other properties entered in Section 4 of the **Property+Debts** worksheet. These other income and property income sources are included, because this is where self-employment income and income from closely held businesses would enter your projection model. Rental real estate income is excluded from these human capital projections.

Through a family's working years, the solid green gross human capital wedge on the graph projects forward the total family bills that will be paid along the way. The other wedge with lighter green diagonal lines displays the family's projected net human capital or savings during its working years. If a family is projected to spend all or most their expected earned income along the way, then this second graphical wedge might be very narrow or even non-existent on this graph. The thinner this net human capital or savings wedge is, then the less the family is projected to save for building up its investment portfolio.

Your projected family investments and asset balance sheet

As you move further along to the right across the blue graphics tabs, VeriPlan's graphics transition from your operating financials to your investment assets. The **Allocation** graphic

shows your projection model's output for the cash, bond, and stock financial asset investment model you have chosen. Then, **Total Assets** projects your overall asset picture, including debt principal owed, cash, bonds, stocks, and the projected market values of your home residence(s), rental real estate, and other properties. **Total Assets** may also project your financial asset cost inefficiencies across your lifetime.

The **Asset Taxability** graphic provides a different view of your cash, bond, and stock financial assets. This graphic indicates the projected split of these assets between taxable accounts, traditional retirement accounts, and Roth retirement accounts. The right vertical axis separately projects Required Minimum Distributions (RMDs) from your traditional retirement accounts after age 70 and 1/2 and from any traditional IRAs that you might have inherited. The magnitudes of the left-hand and right-hand vertical axes are not related, so take care to compare the dollar values before drawing any conclusions.

The **Asset Flows** graphic provides the year-over-year changes in your major assets. This graphic also allows you to compare your operating cash flow with changes in asset values. This provides an indication about whether ongoing asset earnings and appreciation could cover any operating cash flow shortfalls.

Specialized information for financial decision-making

Every family wants to understand whether their financial plan might provide sufficient resources to pay all of their bills along the way and then support them through a long retirement. Two retirement income graphics help you to understand the projected adequacy of your income resources for retirement.

The **Retirement Income** graphic projects your family's retirement income sources after Earner #1 is scheduled to retire. It displays the various income sources that you are projected to have in retirement, and it also includes Required Minimum Distributions (RMDs) from traditional retirement accounts,

These RMDs are projected as a dashed overlay line measured by the right vertical axis. Note the retirement income sources on the left vertical axis and RMDs on the right vertical axes are usually not the same numerical scale. Also, note that if any RMDs are indicated before age 70, these would be associated with inherited traditional retirement accounts.

RMDs are not strictly an income source. Instead, they are required distributions of invested assets from retirement accounts that force taxation in the process. If you would need some or all of the after-tax RMD proceeds to pay your bills, then you can think of them as income. Whatever might be left of these RMDs after taxes and after expenses would then be deposited into taxable asset accounts.

The next graphic, **Retirement Shortfalls**, projects any yearly cash flow shortfalls after Earner #1 retires. These cash flow shortfalls have already taken into account the retirement income sources projected on the previous **Retirement Income** graphic. However, the cash flow shortfall line does not include the impact of your projected RMDs from traditional retirement accounts.

Retirement Shortfalls demonstrates whether your RMDs are projected to be sufficient to make up for any cash flow shortfall that you might experience during various retirement years. If the cash flow shortfall in any projection year were to exceed your projected net after-tax RMDs, then other assets would be needed to cover the remainder.

To provide a better understanding of traditional retirement account RMDs, this graphic includes both pre-tax RMDs and after-tax RMDs drawn with different dashed lines. In addition, a third style of dashed line indicates the total federal, state, and local ordinary income taxes that would be associated with pre-tax RMDs plus any additional traditional retirement asset withdrawals that might be needed in excess of RMDs.

This **Retirement Shortfalls** graphic displays another continuous line that indicates whether any net RMD might remain after RMD income taxes and any cash flow shortfall have been covered. When this line is positive, this means that these RMD assets would be automatically reinvested in your taxable accounts as financial assets.

The **Transactions** graphic provides information about how financial assets enter and exit your projection model by type of account. This graphic helps you to understand positive and negative cash flows by taxable accounts versus retirement accounts.

The **Withdrawals** graphic indicates the percentage of your cash, bond, and stock assets that would need to be withdrawn in any year. Negative net operating cash flow could cause financial asset withdrawals, as well as, real estate and property purchases. Because this graphic combines the operational side of your family enterprise with the "balance sheet" side of your family finances, do not expect this **Withdrawals** graphic to be similar. The **Cash Flow** graphic shows

only the operational side of your projected finances while the **Withdrawals** graphic combines both operations and assets.

Next, the **Safety Margin** graphic provides an indication of portfolio safety. Representing a severely negative financial scenario, this graphic projects how long in future years user-adjusted cash, bond, and stock assets would cover necessary expenses without income. This **Safety Margin** graphic is especially pessimistic, because it presumes that all your income sources would evaporate. Even at the depth of the great depression, when most stock value had disintegrated, a large majority of the population was still able to work. This is another indicator of whether your projection modeling might indicate sufficient accumulated assets.

Next, the **Value of Time** graphic projects earned income with asset earnings. Time in life is the most valuable thing we have, and its duration is unknown. This graphic provides some perspective on asset earnings versus labor earnings. At some point, your assets might begin to out-earn you, and you may not need to keep working to keep the lights on. This graphic converts financial values to a 2,000-hour year to allow a comparison of earned income, expenses, and asset returns. Annual income and expenses are divided by a 2,000-hour work year, while financial assets are divided by 2,000 hours times remaining years of life.

The next three graphics evaluate the impact of investment costs on your cash, bond, and stock financial assets. The **Cost- Efficiency %**, **Cost- Efficiency \$**, and **Sales Loads** graphics help you to understand the huge negative impact that excessive investment costs can have on your family's future.

The remaining three graphics furthest to the right provide background information on average life expectancy and historical investment returns. **Life Expectancy** indicates the average U.S. male and female total life expectancy and remaining life expectancy by age. **Historical Returns** provides compounded annual U.S. real dollar asset class returns from 1928. The **Historical Returns** graphic can be challenging to interpret, so the **Rolling Returns** graphic presents the same compounded real dollar returns over annualized rolling 5-year periods.

2.5: Constant purchasing power "real dollar" projections with average inflation removed

VeriPlan uses real, constant purchasing power dollars with the long-term compounded historical consumer inflation rate removed. Real dollars allow your projected finances across the

years to be easily compared. Throughout VeriPlan, you also will find numerous user inflation adjustment controls. If you expect that price inflation for a particular model factor might consistently vary up or down from average historical inflation or you simply wish to test your model for differential inflation, you can use these inflation adjustment tools. In most cases, however, this will not be necessary.

Real dollars project constant purchasing power for currency and allow you to understand how projected assets in different years might support your consumption. For example, if a bottle of beer costs a dollar today and your total assets are \$100,000, then you could buy 100,000 bottles of beer. If in 30 years, you have accumulated \$1,000,000 in real, constant purchasing power dollars with inflation removed, you could purchase one million bottles of beer. If instead, your projections used "nominal dollars" with the historical, compounded inflation rate of close to 3% included, then your projection would indicate \$2,427,262. While that projection might make it seem like you would be much richer, alas you could still only buy one million bottles of beer. Constant purchasing power over time is what counts, and you only get that by taking the inflation factor out of nominal dollars to get real dollars.

Inflation (and sometimes deflation) are facts of financial life, but they are not systematically predictable. Making "nominal dollar" projections that include an inflationary component adds no value to projection modeling or financial decision-making -- as long as you still have the opportunity to evaluate factor inflation that might vary from average inflation. To the contrary, nominal dollar projections that include inflation assumptions tend to confuse decision-making. Projections with inflation may create an illusion of growth, when the opposite might be true.

Obviously, future inflation rates -- particularly unexpectedly high and sustained inflation rates -- are a concern in personal financial planning. Asset allocation strategy can address these concerns. Some riskier assets, such as stocks and real estate, tend to do better in inflationary environments, because these riskier assets can be repriced in competitive markets. Cash and bonds tend to be more vulnerable to rising inflation situations, because markets reduce their value as inflation increases unexpectedly.

VeriPlan's graphics can help in understanding constant purchasing power, "real dollar" projections

One of the better ways to understand the meaning of real, constant purchasing power dollar projections is to evaluate a few of VeriPlan's blue-tabbed output graphics.

Income graphic with real, constant purchasing power dollars

On the Income worksheet, the entries for Earners #1 and #2 are an initial age of 30 and a retirement age of 65 with annual wage and salary income of \$90,000 and \$60,000 respectively. Below on the sample graphic, you will see that the Income graphic displays the \$90,000 wages of Earner #1 from ages 30 to 65 horizontally across these years. The additional \$60,000 income of Earner #2, is stacked on top for the same period of years and is also horizontal. These workers are projected to continue to earn the same amount for 35 years in real dollar terms. Using real dollars assumes that over these years their wages will keep up with the general rate of inflation. Their purchasing power based on \$150,000 of total earned income at age 30 would be the same at age 65.

If at the top of the Retirement worksheet, Earner #1 and #2 provide their Social Security benefit entitlements. Earner #1 chooses to delay accepting benefits until age 70 and Earner #2 claims benefits at 65. In this case, Earner #1's age 70 entitlement might be \$3,400 monthly or \$40,800 annually and Earner #2's age 65 entitlement might be \$2,000 monthly or \$24,000 annually. Again, the Income graphic would display Social Security income starting at age 70 and continuing through age 100. This Social Security retirement benefit income would also be graphed horizontally, because Social Security benefits are subject to cost of living adjustments (COLA) to maintain purchasing power over time.

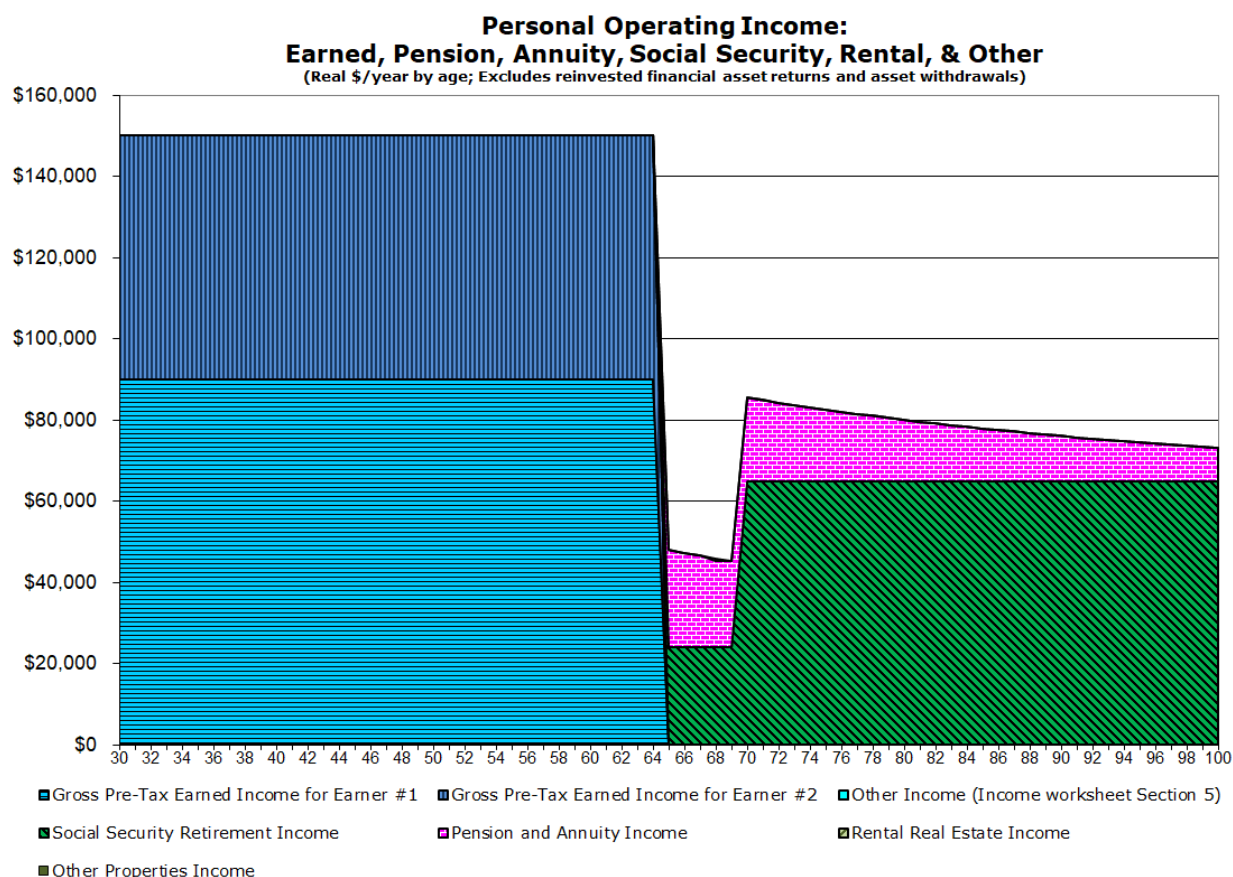
Now let us assume that one of these workers is also entitled to a work-related, private sector defined-benefit pension -- NOT a defined contribution retirement plan, such as a 401k, 403b, 457, etc.). Traditional pensions are increasingly rare, and pensions rarely have any inflation protection in the private sector. This is also true of most annuities received as a monthly payment.

We will assume that this worker expects a \$2,000 per month pension or annuity that will begin paying benefits at age 65 and payments would continue through age 100, if that person is lucky enough to live that long. These pension entries are made in Section 3 of the Retirement worksheet.

After entering the \$2,000 monthly benefit amount and choosing other parameters, this person will see that Columns H and I allow for inflation adjustments prior to when payments begin and after payments have begun. While working, pension benefits can increase based upon years of service and other factors. Thus, this will require user judgment as to whether these pension benefits will keep up with inflation prior to retirement. Being optimistic, the user enters 0% in Column H to indicate that the \$2,000 monthly will maintain its purchasing power until age 65.

Next, the question is how much inflation protection these \$2,000 monthly payments will have after age 65. The answer for almost all private pensions is none. Therefore, minus 3% would be entered in column H to approximate long-term inflation. Note that average annual long-term, compounded CPI inflation has been close to 3% since the 1920s. The Risk & Returns worksheet provides detailed information.

On the Income graphic, the pension payment would begin at \$24,000 at age 65, and is stacked on top of the Social Security income. However, instead of being graphed horizontally from ages 70 to 100, like this worker's Social Security payments, the pension line slopes downward. This downward slope represents the erosion of purchasing power over time, because these pension payments would lack inflation protection. Referring to the appropriate column of the green-tabbed Graphics Data worksheet, the age 65 annual \$24,000 pension benefit would have shrunk in real, constant purchasing power dollars to only \$8,265 annually by age 100. The value decline in real dollar terms clearly illustrates the problem.



Expenses graphic with real, constant purchasing power dollars

Similar to the Income graphic, the Expenses graphic shows their ordinary expenses graphed horizontally over time, because they represent real dollars with constant purchasing power. The primary difference compared to the Income graphic is that expenses are graphed as negative numbers, since they represent cash outflows rather than cash inflows.

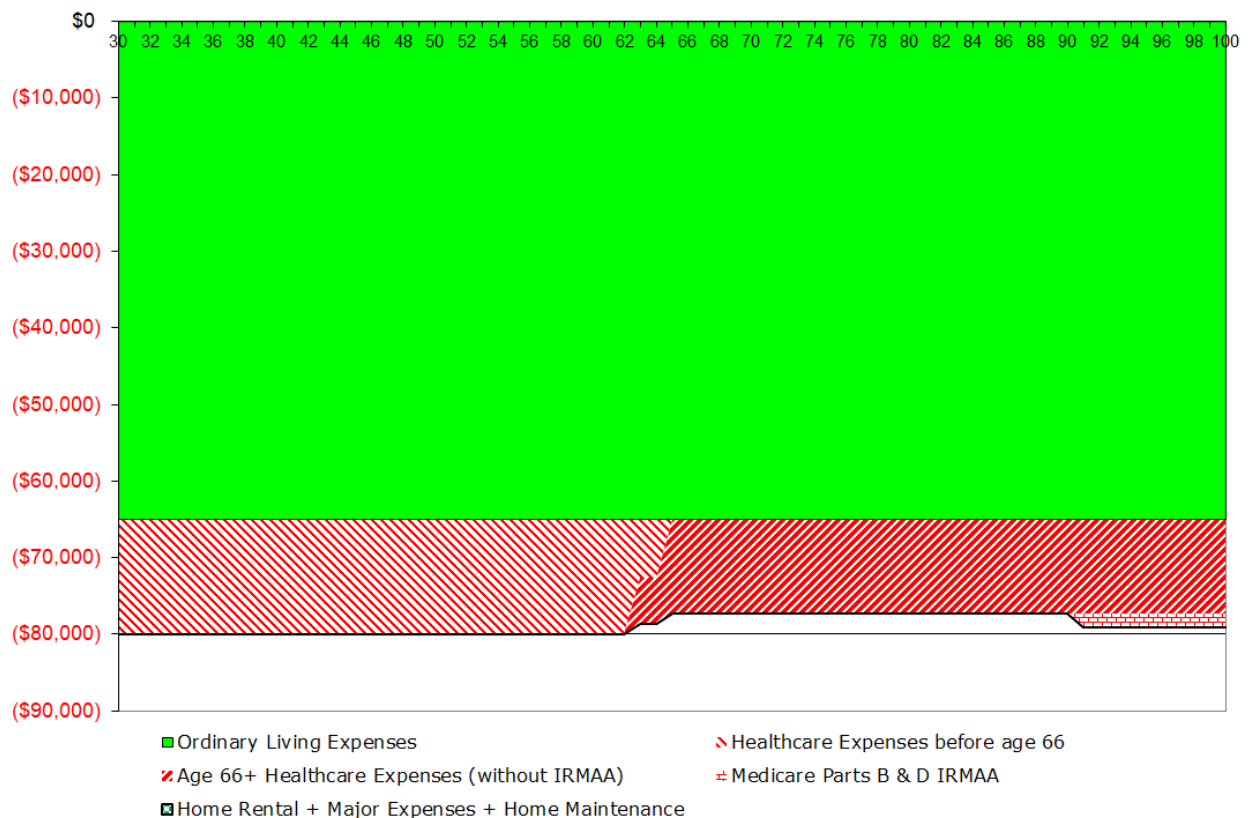
During their working years, this couple has ordinary living expenses totaling \$80,000 in real dollar terms from ages 30 to 65. The expenses line across the bottom is again horizontal, because they expect that their ordinary expenses will stay roughly in line with the general rate of inflation going forward. Since their income is \$160k annually and their ordinary expenses are \$80k or half, you should note that these ordinary expenses are not their total cash outflows. VeriPlan automatically models and projects their mortgage debt payments and their various tax payments separately, which will be illustrated in graphics below.

On the sample Expenses graphic below, you will also note the various red areas that project their lifetime healthcare costs in real dollars. They have turned on and utilized VeriPlan's

healthcare functionality on the yellow-tabbed Medicare worksheet. After retirement, they are covered by Medicare and supplementary Medigap insurance and their total healthcare costs decline somewhat. This is a real dollar decline compared to the healthcare insurance cost sharing payments that they expect to make while working.

Their baseline Medicare costs in retirement are flat in real dollar terms until about age 90. The rise in costs after age 90 is not due to differential inflation. Instead, their traditional retirement account RMDs would have risen over time, and this would push up their taxable ordinary income in old age. At about age 90, some of their Medicare insurance subsidies for Parts B and D would be reduced by the first level of IRMAA reductions. In addition, note that if they had chosen to do so, which is not illustrated here, they could have used VeriPlan's general expenses and healthcare expenses inflation differentiator tools to model cost changes relative to average CPI inflation during retirement.

Personal Living Expenses with Other Major Planned Expenses
(Real \$/year by age; Excludes tax payments, debt payments, and asset fees & expenses)



Debt Payments graphic with real, constant purchasing power dollars

In real dollar projection modeling, debt payments and debt principal owed are graphed as negative numbers, because they represent cash outflows and obligations that reduce overall net assets.

On the yellow-tabbed Property+Debt worksheet, various types of property assets and debt obligations can be entered. We will assume that this couple purchased of a \$500,000 home in the very recent past. In Section 1 of the Property+Debt worksheet, they enter an associated debt obligation is a \$450,000 taken as a 30 year fixed payment for a traditional amortizing loan with a 5% interest rate. The monthly payment obligation would be \$2,416 monthly or \$28,988 annually.

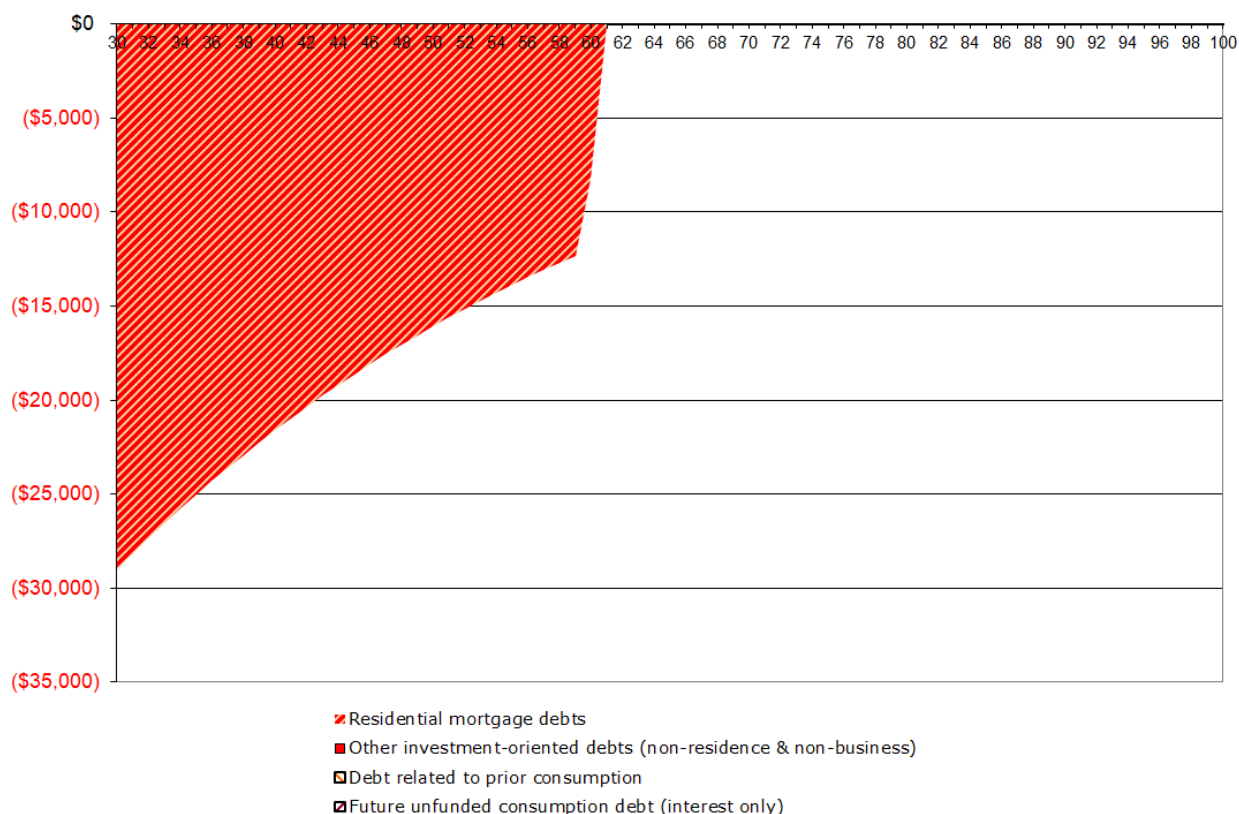
On the Debt Payments graphic, the first year debt payment would be \$28,988, and on the Debt Owed graphic the initial principal owed would be \$450,000. On debt-oriented graphics, instead of the lines being horizontal like on the Income and Expenses graphics, the lines will slope up to the right, until this debt is fully paid in 30 years.

Why? The reason is that whenever you have a fixed payment debt obligation, your payments in terms of real, constant purchasing power dollars are actually smaller and smaller as the years go by. You are paying the same nominal dollar amount each year, but that same dollar amount in nominal dollars gets cheaper to pay with the passage of time because of inflation. Note that in the background, VeriPlan is automatically adjusting real dollar debt payments and principal owed downward by the long-term average annual compounded CPI inflation rate, which has been very close to 3% when averaged from 1920s to the present.

Again, if you were looking at their projection model and navigated to the green-tabbed Graphics Data worksheet, the mortgage debt payments column would show the real dollar cost of their debt payments over 30 years. The real dollar debt payment cost of \$28,988 annually in the first year would decline to \$21,567 annually in year 10, to \$16,046 annually in year 20, and finally to \$8,181 in the 30th and final payoff year.

Personal Residence, Investment, and Consumption Debt Payments

(Real \$/year by age; Converted to real dollars with historical inflation or user's assumption.
Excludes rental and other property debts.)



Personal Taxes graphic with real, constant purchasing power dollars

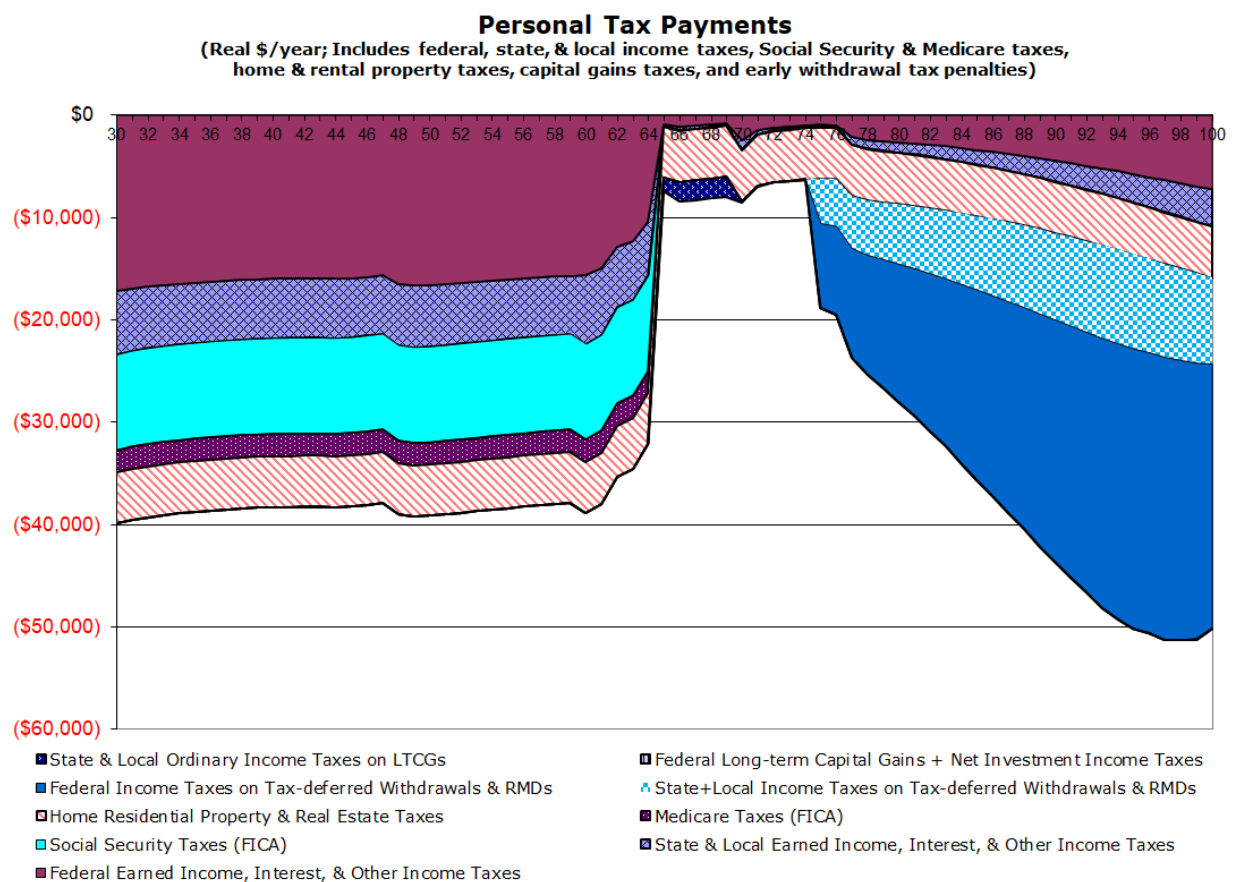
The legend at the bottom of the Personal Taxes graphic lists all the internal taxing models that are working automatically and simultaneously across the years within VeriPlan's projections. Most projections will show fluctuations over time in the real dollar taxes paid. When taxes fluctuate, you can look to your various inputs and assumptions and your cash flows to see the cause of these tax changes. If inflation were included in future projected income subject to graduated taxes, then tax payments would balloon as inflated dollars drive people into higher and higher tax brackets.

When you are projected to accumulate substantial assets (e.g. over \$1 million) in traditional tax-advantaged retirement accounts, you might note a substantial downward bulge in the solid blue area, which represents federal taxes on Required Minimum Distributions in retirement. While all tax numbers graphed across the years are tax payments made in real constant purchasing power dollars, RMD tax assessments can stand out.

The reason is not primarily associated with the difference between real dollars without inflation versus nominal dollars that include inflation. Instead, it is due to how federal income taxes on RMDs are calculated.

The equation to determine annual RMDs puts total traditional retirement assets into the numerator, and those investment assets usually appreciate over time. Next, the RMD equation divides these perhaps growing assets by a declining denominator associated with remaining life. The declining numbers for this denominator are found in what is called the IRS "Uniform Lifetime Life Expectancy and Distribution Period Table."

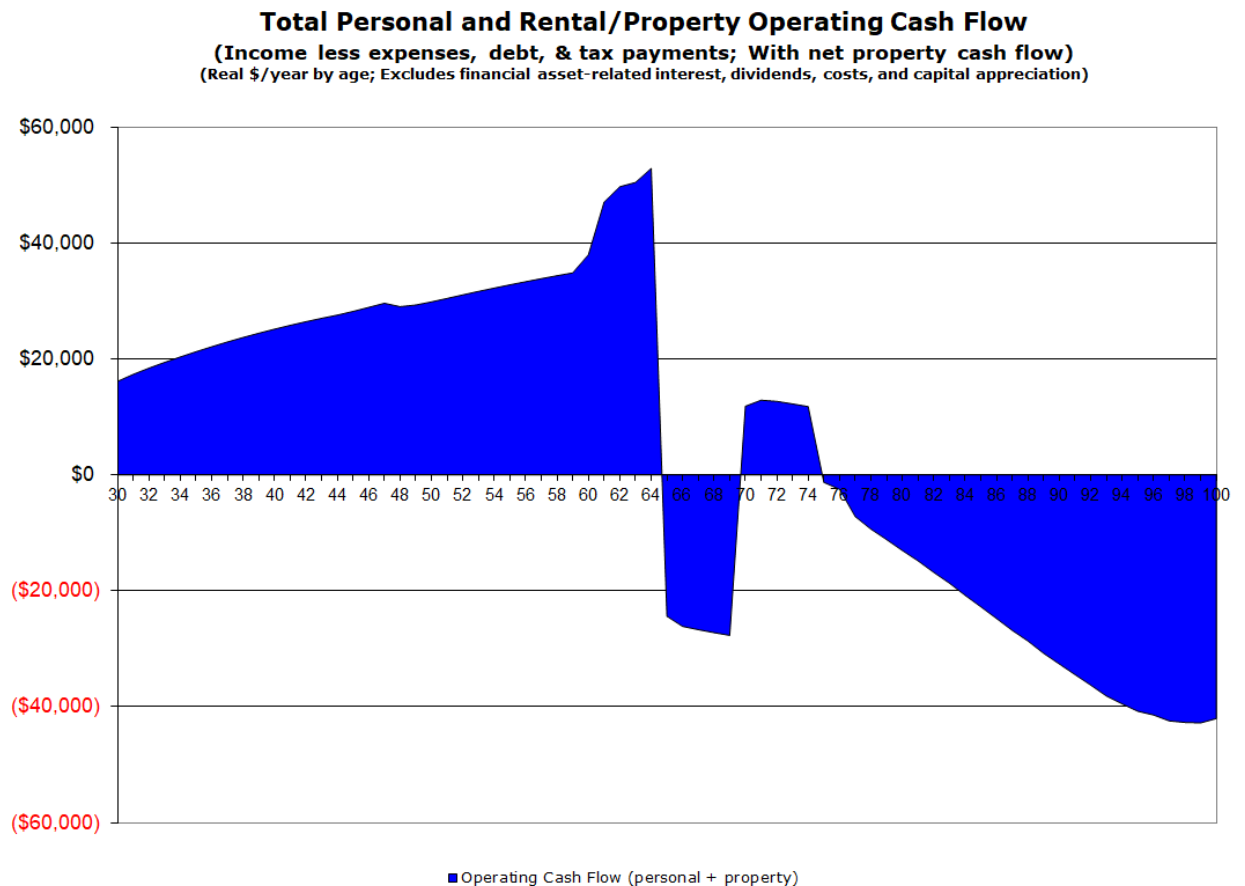
When traditional retirement accounts compound in value over time and are divided by a smaller and smaller number, taxable income subject to RMDs can grow, federal tax rates can rise, and resulting income taxes can ramp up. Because VeriPlan uses real dollars, you can better judge the true cost of RMD taxes and take actions beforehand that might reduce them.



Cash Flow graphic with real, constant purchasing power dollars

The cash flow graphic is the net of the Income, Expenses, Debt Payment, Personal Taxes, and Rentals+Property graphics combined. It will vary for all projections, but typically the real dollar numbers in one's working years are/should be mostly positive. This generates the savings needed to purchase investment assets to cover expenses, taxes, and debt payments during the subsequent negative income years that typically occur in retirement.

For this particular couple's Cash Flow graphic, real dollar cash flow rises in general from age 30 to 60, because their fixed nominal dollar debt payments are cheaper in real dollars over time. Then cash flow moves up more sharply after age 60, because they have paid off their mortgage. Net cash flow turns negative from 65 through 70, because they have stopped working and their expenses exceed their single Social Security check plus the pension payment. At 70, cash flow turns positive for a few years, because of the added income from their second Social Security check. After 75, aggregate cash flow grows increasingly negative, as RMDs increase and associated tax payments go up.



Total Assets graphic with real, constant purchasing power dollars

When one has positive cash flow and thus net savings, the Total Assets graphic will illustrate real dollar compounded financial asset growth. This graphic will also show the projected value of your real residential real estate, rental real estate, and other properties.

Your cash, bond, and stock asset allocation model will drive asset growth over the long-term. Debts are also graphed indirectly on this Total Asset graphic. While not directly visible, total debt outstanding in any year is represented by the amount that assets are pulled down below the zero dollar horizontal line.

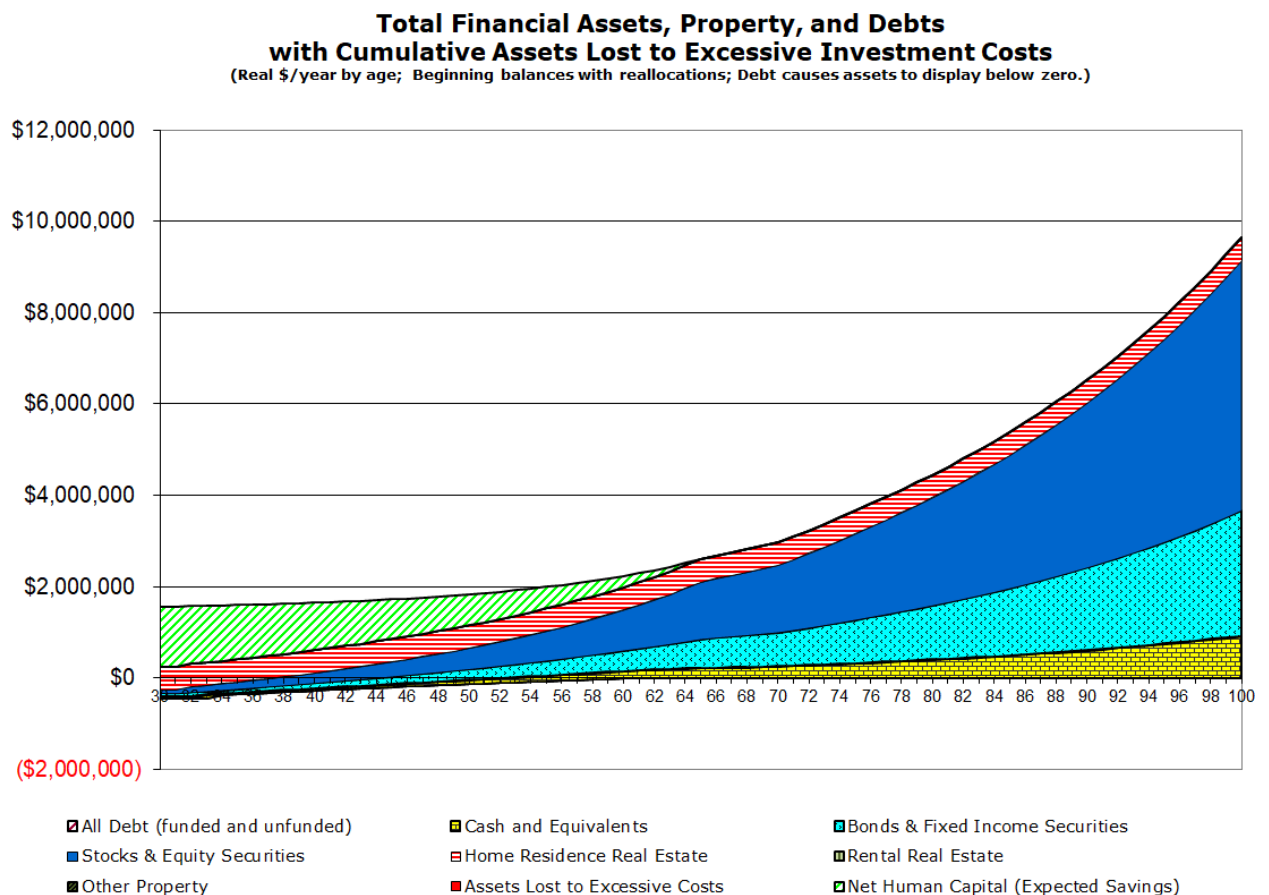
All dollar values across time on this Total Assets graphic are in real dollars. The long-term compounded historical CPI inflation rate has been removed from the long-term average, compounded total appreciation rates of the cash, bond, and stock asset classes. The details on the underlying data and assumption can be found (and are user adjustable) on the Risk & Returns worksheet.

There are two primary reasons why the lines on the Total Assets graphic are not horizontal like on the Income and Expenses worksheets. First, the working years are often called the accumulation years, and this is when family cash flow is/should be generally positive for savings to occur. Year after year, these savings add to and grow total assets held.

Second, historically the cash, bond, and stock asset classes have demonstrated over the long-term that on average, investment "risk premiums" have accrued to those who took investment risks and owned these assets economically. Regarding investment economics, see the yellow-tabbed Investment Costs worksheet for information on the hugely detrimental cumulative cost of excessive investment expenses. Avoid naively giving away to the financial services industry more of your hard earned returns than absolutely necessary.

The almost 100 year historical average return to cash has been relatively paltry at .3% compounded annually in real dollars above inflation. The total long-term historical compounded return to bonds has been much more substantial, averaging 2.7% annually in real dollars. The total historical compounded average return to stocks has been significantly greater at 7.0% annually in real dollars. (See the "Sequence of returns risk in retirement portfolios" article on the red-tabbed Retirement Planning worksheet for a detailed history of US cash, bond, and stock asset class investment returns with and without inflation.)

Since the Total Assets graphic is measured in constant purchasing power dollars, you can better understand your relative potential purchasing power in the future. If the lines on this graphic were instead nominal dollars including inflation, the curves would be steeper and the numbers increasingly larger. Yet, it would be a challenge to interpret their meaning, because the underlying unit of counting would be constantly shifting by the compounded rate of historical inflation.



2.6: Use VeriPlan's inflation differentiators carefully and sparingly

VeriPlan's projections use constant purchasing power dollars with the long-term compounded historical Consumer Price Index (CPI) inflation rate removed. Constant purchasing power dollars with inflation removed are known as "real dollars". In contrast, economists refer to inflationary dollars as "nominal dollars,," The purchasing power of nominal dollars is eroded by inflation over time. See the red-tabbed "How To Use" worksheet for a discussion of how to interpret VeriPlan's graphical and data output with respect to real, constant purchasing power dollar lifetime projection modeling.

VeriPlan's use of real, constant purchasing power dollars means that you do not have to consider inflation in your lifetime projections, if you believe that you largely will be subject to whatever future AVERAGE CPI inflation turns out to be. When you use real, constant purchasing power dollars you simplify the mental task of interpreting future values versus current values. Of course, VeriPlan supplies numerous tools that allow you to evaluate higher and lower inflation associated with modeling components should you need them.

With real, constant purchasing dollar projections, you do not have to make mental adjustments about the impact of inflation which tends to compound increasingly as the years add up. An inflationary dollar in ten years would different purchasing power than today. An inflationary dollar in twenty years will have different purchasing power compared to the dollar of today and that of ten years from now.

If a bottle of beer costs a dollar today and the nominal dollar price of beer rises cumulatively with the general rate of inflation over 40 years, for example, the nominal dollar price will keep changing. In contrast, a real (non-inflationary) dollar will still buy you a bottle of beer in 40 years, regardless of the listed price on the shelf at the time.

Because individuals can experience differential inflation, throughout VeriPlan you will also find numerous user inflation adjustment controls. **Please use these inflation adjustment differentiators carefully, sparingly, or not at all to avoid unreasonable significant distortions to your projections.** The best approach is probably to ignore any inflation adjustments, until you have developed a relatively thorough financial plan in VeriPlan. Then, you can use selective inflation controls as "what if" testing tools.

For example, a younger couple might plan for two children and may have added into VeriPlan \$10,000 per child annually from birth through college starting in three and five years. With two current incomes, they can see whether the model still works with these added expenses. To be realistic, perhaps they would model part-time work for one spouse for ten years when the children are young. If one spouse has realistic career prospects and might be able to increase earnings at a rate higher than inflation, then this is where VeriPlan's earned income inflation tool could be informative. Would a 1% or 1.5% annual real dollar income growth rate be realistic and how would affect the model?

Unexpectedly high future inflation rates, if sustained, are a concern for anyone. Nevertheless, accurately predicting future inflation is not within anyone's abilities. It is a generally futile exercise to model with jacked up inflation rates just to see what will happen to a projection model. Of course, increased expense inflation will have a negative impact, and VeriPlan will allow you to do this. Yet, this is not a solution to inflation.

Instead, historically a more effective solution to dealing with unexpected inflation has been found in holding at least a significant minority portion or a majority portion of investment portfolios in stocks and real estate. Public companies can re-price their goods and services in the face of increased inflation and stock markets revalue stocks that can cope with higher inflation. Rents and prices of real estate also tend to increase with inflation, as well.

On the contrary, increased and unexpected inflation tends to undercut the value of cash and bond assets that lacking inflation protection features. (Note that inflation protected bonds are not necessarily a solution. Bond inflation protection is not free, and the cost can be measured in the lower ongoing yields for these bonds relative to bonds without such inflation protection.)

For more information on the long-term general CPI inflation, see the yellow-tabbed Risk & Returns worksheet. Also, see the "Sequence of returns risk in retirement portfolios" article on the red-tabbed Retirement Planning worksheet for a better understanding of inflation and investment returns over the past almost 100 years.

2.7: Develop and clarify your financial goals

Developing a lifetime financial and retirement plan is much more than just putting numbers into a financial planning software tool. Comprehensive lifetime financial planning is an iterative process wherein you:

- a) establish financial goals and objectives,
- b) make assumptions about the future,
- c) model your lifetime finances in software, and
- d) evaluate your opportunities and constraints.

As you study your opportunities and limitations in light of your personalized financial projections, you will refine your goals and financial plan. With a better understanding of potential opportunities and constraints provided by your customized VeriPlan financial projection models, you will decide what you intend to change or not to change in your real-life regarding your financial behaviors going forward.

Your initial usage of VeriPlan should be thought provoking and the most labor intensive. You will consider your objectives, load and refine your data, and test alternative assumptions. During this process, you will move iteratively toward the development of the "baseline financial plan" that you intend to implement. VeriPlan aids you in this planning process by allowing you to model your alternatives very quickly and make better informed decisions, as it hides the millions of calculations needed to quickly develop lifetime financial projection scenarios that are customize to your situation.

Once you have established your baseline lifetime financial plan, your challenge will be to implement those decisions in real life. After some period of time (e.g. months or a year), you could then update your information in VeriPlan to see whether you are on track toward achieving your financial plan. All data and parameters in VeriPlan are user-changeable, so you can continue to use it without requiring software updates, upgrades, or maintenance contracts.

Refine your financial plan with more complete and accurate information

More complete financial profile information and planning assumptions will help you to develop a better lifetime financial plan. While the actual data entry does take some time, most of the time involves finding financial records and researching needed information. Few people already have well-organized financial information, and for many people, VeriPlan will provide the first consolidated picture of their financial affairs that they have ever had.

All input worksheets are divided into sections and at the top of each input worksheet there is a hyperlinked list of these sections. Reading these section headers, you can presume that you should make any needed entries in these input sections, unless a section title has "(optional)" or

"(informational)" at the end of it. Note, however, that even when a section is listed as "(optional)" you might want to make some entries or settings in these optional sections, since these sections could be important to fine-tuning your particular planning situation.

To make your financial data entries within workbook sections, either select the data entry cell directly by using your cursor or by tabbing between cells. Then, either type your information directly into that cell or into the Excel "Formula Bar" near the top of the screen. All standalone data entry cells or data entry cells in tables are outlined with a bold black line around them. All other cells are locked and are not user selectable. Some standalone cells and cells in tables may be outlined with solid or dashed lines, but are for information. If you cannot select a cell, it is informational and not user-changeable.

Once selected, every data entry cell has a "Moveable Data Entry Guidance Box" that will appear and provide instructions. Select and move these boxes with your cursor, if they are in your way. All data entry cells have error checking to prevent entering inappropriate data. If you enter inappropriate data, an error box will pop up with instructions on how to revise your input.

You should NEVER use cut-and-paste operations from one data entry cell to another. See the section of the red-tabbed Start Here worksheet titled: "Making inputs and changing settings" for more information on this important topic.

2.8: Evaluate alternatives with VeriPlan's Comparison Tool

Once you have loaded relatively complete financial data and set your assumptions, you can begin to evaluate alternative financial decisions. By comparing one VeriPlan projection scenario to another, which uses somewhat different data and/or assumptions, you can evaluate the relative desirability of these alternatives. Through an iterative process of evaluating alternatives, you can refine the lifetime financial plan that you intend to implement. In general, to determine whether personal financial "Strategy A" or "Strategy B" is likely to be preferable to you, compare two VeriPlan projection scenarios to see which yields a better long-term financial result.

VeriPlan is built on the Microsoft Excel spreadsheet engine. As with any other spreadsheet, any change that you make to one cell in VeriPlan will change the results of all other spreadsheet cells that are connected by the underlying logic. Therefore, spreadsheets do not automatically "save the state" of the model that existed just before the most recent change. Nevertheless, semi-

automated model comparisons are possible, if you first manually "save the state" of a projection model, before making further revisions.

The VeriPlan Comparison Tool consists of four orange-tabbed worksheets to the right of the green-tabbed "Graphics Data" worksheets. This comparison tool allows you to make comparisons between your projection models, if you follow these general instructions. Note that detailed instructions on how to do this are explained on VeriPlan's first orange-tabbed worksheet titled "How To Compare."

- 1) Develop a relatively complete initial projection model with all of your data and assumptions.
- 2) Manually select and copy all of the data that VeriPlan outputs from your projection model on the orange-tabbed "Copy From" worksheet and use Excel's "Paste Special" function to paste only the output data values from your initial model into separate orange-tabbed "Paste Values To" spreadsheet within VeriPlan.
 - a) Using this "Copy" and then "Paste Special -- values only" method will sever the connection between the underlying VeriPlan spreadsheet formula logic and the data that is output by VeriPlan.
 - b) This allows you to lock the "state" of the data values from your prior projection model.
- 3) After locking the prior state of the projection model, you continue to revise one or more assumptions and/or data inputs within VeriPlan to reflect any alternative financial strategy.
- 4) On the orange-tabbed "Plans Compared" worksheet, VeriPlan will automatically subtract the "live" data being output from your revised model from the "locked" data values of the prior baseline model. This allows you to review and evaluate the data output differences between any two lifetime projection models.

The differences between your current model and prior model are automatically displayed on the orange-tabbed "Plans Compared" worksheet. The "Plans Compared" worksheet uses the same format as the green-tabbed "Graphics Data" worksheet.

The red text above the column headers on the "Plans Compared" worksheet explains how to interpret positive and negative numbers in the groups of columns associated with a particular output graphic.

Note that this "Plans Compared" worksheet is the only part of VeriPlan that will show the differences between the two projection models. All the blue-tabbed graphics and green-tabbed data output worksheets will show the state of the most recent model and NOT the prior model that you copied for comparison.

In general, on the "Plans Compared" worksheet, when your subsequent changes to your projection model will cause differences in a particular column to increase, those numbers will be expressed as **positive numbers in black text**. Decreases will be expressed as **negative numbers in red text (within parentheses.)**

Using the Comparison Tool for external copying and linking

There is another use for VeriPlan's Comparison Tool features. You could build external spreadsheet logic in another workbook that will use VeriPlan's output data. Some sophisticated spreadsheet users might wish to develop external spreadsheets for specialized purposes and link those spreadsheets to VeriPlan's projection data output. This could be achieved by accessing the "Copy From" spreadsheet and selecting the entire sheet for copying or one you could select particular data output columns.

Then, open your external workbook and copy either the entire sheet or set of columns into a spreadsheet within that external workbook. If you used the "Paste Special - values only" method with the external workbook, then that data would be lack formatting and be static and unchanging. If you used the regular Paste function then the data copied could maintain the formatting, as well.

If you wish to have that external data be live and potentially update when the VeriPlan file is updated, you will need to use the Paste Link option. You can research this process online to understand how to maintain the link and keep the data synchronized over time. When you are linking data it is probably better to be selective in the data you wish to link rather than attempting to link the entire "Copy From" spreadsheet.

Interpreting differences between projection models

You should be careful when interpreting these "Plans Compared" numbers and think about how changes to your data and to your assumptions should have affected your model.

For example, increased income and increased expenses have the opposite effect on overall cash flow. When evaluating the differences between your two models, you should think:

- 1) I changed two assumptions in my model. I increased my income assumptions, and I see that the income column difference numbers are black indicating that income increased over the prior projection.
- 2) I also increased my ordinary living expenses assumption, and I see that the black expense column numbers show that the expense difference increased over the prior projection.
- 3) I also note that some of the income tax columns are also black, which indicates that higher income taxes would be paid on higher income.
- 4) Then, I note that the projected cash flow and financial asset column difference numbers are red, which indicates a negative difference. This means that my projected annual cash flow would decline, and my accumulated financial assets would not grow as fast or perhaps might even decline in the future. I can evaluate whether the effects are significant by looking at the cash flow and total assets graphics.
- 5) Therefore, on net, the positive effect of increased income would be overwhelmed the effects of increased consumption expenses and increased income taxes.

You should also be aware that just because the model difference comparison numbers in a particular column might initially increase or decrease in earlier projection years, that does not mean that those numbers necessarily will continue to increase or decrease in subsequent projection years. Other factors in the model can cause the model differences to narrow and sometimes even reverse from positive to negative or negative to positive in the same column.

By scanning across all of the columns on the "Plans Compared" worksheet you can better understand the interactions between various factors. Often "single assumption change" comparisons are easier to understand, so it is often helpful to change one setting or assumption and then change it back to the original number or setting and then to change something else to understand the impact of doing something different.

You can make as many of these "one-off" changes as you want without having to recopy the whole model, as long as you change the number back to what it was before, before making another one-off change. After getting experience with this comparison tool, you should develop a mental discipline about what changes you are comparing. Taking notes on a sheet of paper can

be helpful to avoid the situation where you evaluate model differences and then realize that you lost track of the changes that you had made.

With other model comparisons you do need to make multiple changes before evaluating the impact of those collective changes. One such example would be the future purchase or sale of real estate. You would first want to set up all appropriate assumptions on the yellow-tabbed "Property+Debt" worksheet, before looking at the differences on the "Plans Compared" worksheet.

For many comparisons, the projection with a significantly higher projected dollar amount at some future age(s) would often be the preferred strategy. Choose one or more future ages as your comparison benchmark age(s). However, you need to judge the magnitude of the projected financial advantage to decide whether the advantage warrants the effort in real-life required to achieve that advantage.

Note, however, that the highest projection value is not always the best answer when choosing between strategies. In particular, when you are evaluating a greater level of consumption, then projected future asset values may be lower rather than higher. Financial planning is not simply about running up your personal balance sheet until death. Instead, it is about your finances serving the needs of your family.

For example, you might be comparing your current housing situation with an alternative wherein you acquire a larger home. Various projected expense, tax, and investment factors will determine the cost and/or value of owning a larger home. If your family's projected aggregate future assets increase in relative terms, then you understand better the investment value of owning a larger home.

However, if projected aggregate future assets decline in relative terms, then you have a better understanding of the projected cost of consuming more housing over the years. Just because projected future assets might be lower due to higher housing consumption, you might prefer this alternative, because it means you expect to be happier with a larger and better home. Or, perhaps, the home is no better, but the public school district is superior and the benefit is a better education for your children, etc.

Section 2.9: Update your plan over the years

To refine your baseline financial plan, you simply keep making comparisons between alternative strategies and projections, until you have a refined lifetime financial plan that reflects your family's financial needs, desires, constraints, and intentions. Then, the real challenge becomes how to alter your real-life financial practices related to income, expenses, debts, taxes, and investing to conform to your financial planning intentions.

After you have used VeriPlan to develop your initial lifetime financial plan, you can update your plan periodically. All data inputs and parameters are user-updatable. VeriPlan can help you to evaluate monitor your progress and help you to evaluate future financial decisions.

Since VeriPlan allows you to change all financial data and all settings and parameters, it has no built-in obsolescence. After the passing of some months or a year, you could update your model with then-current data to check your progress. As new financial decisions arise in the future, you can update your model and evaluate those future financial decisions.

VeriPlan is a comprehensive, automated, and fully integrated lifetime cash flow and asset valuation tool that you can customize in detail to your particular financial situation. Therefore, it can help you to evaluate a very long list of financial strategies. When you compare strategies using different VeriPlan projection scenarios, it is important that you think clearly about the positive and negative financial characteristics of each financial strategy. As you would normally do, list those characteristics on a piece of paper and estimate any associated costs and returns. Then, plug those numbers into an alternative VeriPlan projection scenario and compare the projection results with your current baseline financial plan.

Also, please refer to the www.theskilledinvestor.com/VeriPlan/ website. You can find dozens of how-to articles by using the "Select Category" pull-down menu in the right sidebar under "Helpful Financial Planning Articles."

<https://www.theskilledinvestor.com/VeriPlan/>

Chapter 3: Retirement Planning worksheet

- 3.1: Overview of VeriPlan's retirement functionality
- 3.2: How VeriPlan projects your participation in IRAs and in Employer Defined Contribution Plans
- 3.3: Health care expenses in retirement
- 3.4: How the 50 states and DC tax Social Security and traditional retirement withdrawals
- 3.5: The longevity challenge in lifetime financial planning
- 3.6: Safe investment portfolio withdrawals to fund retirement
- 3.7: The origin of the 4% retirement withdrawals rule-of-thumb
- 3.8: Sequence of returns risk in retirement portfolios
- 3.9: Portfolio growth potential during retirement

This Retirement Planning worksheet, the adjacent red-tabbed Optimizations worksheet, and other worksheets within VeriPlan provide information that could be helpful to VeriPlan users. There are no parameters or user controls for you to set on either of these two red-tabbed worksheets. They simply provide potentially useful information for your family financial planning.

The VeriPlan lifetime projection software has been prepared for educational, informational, and decision-support purposes only, without regard to any particular user's investment objectives, financial situation, or means. You should not construe any of the information in VeriPlan to be financial or investment advice of any kind. You should not make this information the sole basis for any of your decisions. Consult with professional advisors concerning any contemplated transactions and your specific financial, investment, business, insurance, legal, tax and/or accounting situation. For more information, see the terms of the VeriPlan license on the red-tabbed "Start Here" worksheet.

3.1: Overview of VeriPlan's retirement functionality

Most of VeriPlan's retirement-related input functionality can be found on the yellow-tabbed Retirement and the Medicare worksheets. In terms of retirement savings plans, see the yellow-tabbed Tax-Advantaged Plans and Roth Analysis worksheets.

You can enter your retirement income entitlements from the U.S. Social Security Administration for one or both earner/users. You can decide whether you want VeriPlan to project automatically that your initial Social Security retirement benefits payments would be linked to the planned retirement ages of either earner/user. Alternatively, you can choose when Social Security payments will begin for either earner -- at any age from 62 to 70.

For married couples, Social Security provides a spousal benefit that can be 50% of the other's spouses full retirement age entitlement, but would be reduced when the spouse claimed his or her benefits prior to full retirement age. In some situations, this 50% spousal entitlement can result in a larger check that that spouse would receive on his or her own work record. Using the rules of the SSA, VeriPlan will automatically determine and project the highest benefit available based either on the individual's work record or the potentially reduced 50% spousal benefit.

For couples, two users can select to retire simultaneously or in separate years, when each reaches his or her planned retirement age

If you expect to have pension, annuity, and/or deferred compensation income, you can enter information about these retirement payments on the Retirement worksheet, control taxation, and direct deposits into taxable, traditional, and/or Roth accounts

Because of the uncertainty that surrounds the long-term funding viability of the U.S. Social Security system, you may scale back your Social Security retirement payment expectations on a percentage basis, if you would like to do so.

You can also adjust your expected ordinary living expenses in retirement and the growth rate of those expenses during retirement relative to the average rate of inflation.

The Retirement worksheet allows you to enter real dollar income decline assumptions, when working well beyond normal retirement age. This addresses the increasing difficulty that much older workers tend to have in maintaining their total real dollar earnings capacity.

The Tax-Advantaged Plans worksheet can help you with your retirement planning. The Tax-Advantaged Plans worksheet collects information about your employer-sponsored defined contribution plans. It also explains how VeriPlan projections automate the tax rules associated

with traditional IRAs and Roth IRAs. This worksheet also provides tools that allow you to control your projected annual contributions to traditional and Roth IRAs and employer-sponsored retirement plans

To a very great extent, VeriPlan has automated retirement investment planning by incorporating current tax laws and rules associated with tax-advantaged retirement incentive programs. The user has access to powerful "what-if" retirement planning controls, while VeriPlan hides the substantial complexity of the tax laws associated with personal and employer-sponsored defined contribution retirement plans.

How planned retirement ages affect projections

The retirement age settings you make on the Income worksheet will affect the wage and salary income and the actively-managed business income sources that you have listed on the Income worksheet.

The retirement ages that you set will cause VeriPlan to stop projecting any further earned income for Earner #1 or #2, independently of one another. For each earner's retirement age entered below, VeriPlan will project that his or her salary and actively-managed business income sources will cease at the end of the year immediately prior to the planned retirement age.

- * These retirement age settings will NOT affect any year-by-year income adjustments that you have entered for Earner #1 or Earner #2 in Section 4 of the Income worksheet.
- * These retirement age settings also will NOT affect any income sources that you entered on the as other income on the Income worksheet. Instead of these other income sources ending at retirement, on that worksheet, you are asked to indicate the number of years from the present that each of these other income source is expected to continue.
- * Concerning pension, annuity, and deferred compensation payments that you enter below on the Retirement worksheet, you are asked to indicate:
 - 1) which earner each pension or annuity applies to,
 - 2) the earliest age that each payment could be received, and
 - 3) whether or not a payment is triggered by retirement age.

If you indicate that any pension or annuity payment is related to retirement age, then the age entered will trigger VeriPlan to project payment income, if the age is equal to or greater than the minimum age required for that pension, annuity, or deferred compensation payment.

3.2: How VeriPlan projects your participation in IRAs and in Employer Defined Contribution Plans

VeriPlan automatically projects your contributions, income tax deductions, and income taxes for traditional IRAs, Roth IRAs, and employer-sponsored tax-advantaged employment plans, including both your personal and your employer contributions. Your inputs are made on the yellow-tabbed Tax-Advantaged Plans worksheet.

To the extent possible, VeriPlan has automated your lifecycle projections regarding the various employer plans and personal accounts that allow you to defer taxation or to avoid future taxation altogether by paying taxes on contribution that will become Roth assets.

VeriPlan has fully automated the projection of your IRA contributions, deductions, asset growth, withdrawals, and taxation, regarding traditional tax-deferred IRA accounts and after-tax Roth IRA accounts.

Your preferences Tax-Advantaged Plans worksheet will control your projected annual contributions from your positive net income and/or financial assets into tax-advantaged retirement plans, up to current annual legal limits of all plans into which you would be eligible to make contributions.

In addition, VeriPlan provides flexible contribution limitation controls, which allow you to set your preferences about how much of your future contributions would be invested into traditional retirement accounts versus Roth retirement accounts.

If you participate in any employer pension plans, which are known as 'defined benefit' plans (and not defined contribution plans), you should enter them on the yellow-tabbed "Retirement" worksheet.

The Financial Assets worksheet is where you input information about your CURRENT asset holdings in traditional or Roth tax-advantaged IRA or employer-sponsored defined contribution plans. Remember to properly code each entry that you make in the "When Taxable?" column. (Code traditional accounts as "0"; taxable accounts as "1"; and Roth accounts as "2".)

When you properly code your financial assets using the "When Taxable?" column, VeriPlan will automatically handle the segregation and separate projection of your assets in taxable, traditional retirement and Roth retirement accounts. Furthermore, VeriPlan will apply appropriate taxation automatically, when taxable events are projected to occur.

VeriPlan automatically projects your lifetime tax-advantaged contributions, tax deductions, associated tax payments, and tax- advantaged account withdrawals. It implements legal limits, when required, that may include limitations related to:

- 1) annual contribution maximums for types of tax-advantaged accounts on a dollar and/or percentage basis
- 2) the amount of your compensation or the amount of your adjusted gross income
- 3) age limits, including minimum ages, maximum ages, ages for catch-up contributions, and retirement ages
 - * Age-related IRA factors are documented
 - * Your retirement age settings on the retirement worksheet will determine when your earned income will cease.
 - * Thus, VeriPlan will use the retirement ages you plan for Earner #1 and #2, and it will terminate your contributions to employer-sponsored tax-advantaged accounts at those ages.

Terminology

Regarding terminology, VeriPlan may call 'traditional' tax-advantaged accounts such as IRAs, 401(k)s, etc. 'tax-deferred' or 'pre-tax' accounts. Generally, these traditional tax-advantaged accounts will defer income taxation, but will require future withdrawals that will be taxed at ordinary income rates during retirement after age 73 or age 73, depending up your current age.

VeriPlan may refer Roth IRAs and 'designated' Roth 401(k), 403(b), and 457 accounts as Roth 'after-tax' 'tax-initially-not-later' or 'tax-now-not-later' accounts. These are descriptive and NOT official terms. In effect Roth accounts are a subset of tax- advantaged accounts, but different rules apply, including the elimination of future taxation. Generally, deposits into these Roth 'tax-initially-not-later' accounts are made with after-tax compensation dollars, and,

thereafter, Roth assets are never taxed on their future appreciation, distributions, and withdrawals.

3.3: Health care expenses in retirement

The financial media has published scary stories about large cash lump sums that retired people may need to pay for health care during retirement. While these stories attract eyeballs, they are not helpful for long-term retirement expense planning. Cynics could think that such stories about large lump sums needed for retirement healthcare expenses could be designed to attract worried aging investment clients concerned about whether they will have saved enough.

In June 2021, Vanguard and Mercer Health & Benefits published a 21 page study that is worth reading. It is titled "Planning for health care costs in retirement." Mercer authors are Bailey, DeShelter, and Leming, and Vanguard authors are Weber, Youssef, and Young.

["Planning for health care costs in retirement - Vanguard - Mercer"](#)

https://personal.vanguard.com/pdf/ISGPLHC_072021.pdf

This helpful study points out that planning for health care in retirement should be thought of "as annual expenses personalized to an individual's health status, coverage choices, retirement age, and loss of any employer subsidies." It also points out, as other studies have, that total annual real dollar expenses including healthcare tend to decline rather than increase over the years of retirement. Total annual retirement expenses tend to decline, even as the health care portion of retirement expenses increases with age.

Without the details, this Vanguard Mercer health care expense whitepaper covers these topics:

- A) Health status and risk
- B) Medicare coverage and insurance choices
- C) Medicare Part B and Part D premiums, including Medigap and income-related premium surcharges (IRMAA)
- D) Effects of the loss of employer health care subsidies
- E) Differential expenses associated with US geography
- F) Range of health care costs depending upon health risk status, income, geography, and elective Medigap insurance coverage

G) Impact of historical health care inflation in excess of the average CPI

H) Long-term care expenses by type of need, frequency of need, duration of need, and cost of various types of long-term care

The following are some health care expense planning factors to take into account, as you develop your baseline lifetime financial plan in VeriPlan.

Automated Medicare and retirement healthcare expense projections

On the yellow-tabbed Retirement worksheet you will find that VeriPlan has automated the projection of Medicare Parts A, B, C, and D and other healthcare expenses in retirement. Because the Medicare system is complex, VeriPlan has provided expense defaults and descriptions of the various parts of the Medicare system.

You should note that you must first turn on this Medicare expense projection logic for it to be included in your projections. Then, you can either accept the default healthcare expense amounts provided or you can make adjustments for your particular situation and plans.

If you have not yet reached Medicare age, you can also indicate the total amount healthcare expenses that you have are included in your ordinary expenses on the Expenses worksheet. Once you reach Medicare age 65, VeriPlan will automatically replace your pre-retirement healthcare expenses with your settings for Medicare and other healthcare expenses in retirement. For couples with an age differential, half of these pre-retirement healthcare expenses will transition as each person reaches Medicare age.

When you turn on and use VeriPlan's Medicare and retirement healthcare expense functionality, your lifetime pre-Medicare and post-Medicare healthcare expenses will be graphed separately on the blue-tabbed Expenses graphic.

Medicare premium "Income-Related Monthly Adjustment Amounts" (IRMAA)

As part of its retirement healthcare cost functionality, VeriPlan has also automatically projects IRMAA premium surcharges for Medicare Part B and Part D. In any projection year when your modified adjusted gross income would be sufficiently high to pay individual IRMAA premium payments, VeriPlan will calculate IRMAA surcharges.

Overall retirement expenses tend to decline with age, even with the healthcare expense portion may increase

A section of the yellow-tabbed Retirement worksheet allows you to adjust your pre-retirement and post-retirement living expenses. VeriPlan's default setting is 100%, meaning that pre- and post-retirement ordinary living expenses would be the same. Because VeriPlan projects your taxes and savings separately, and you probably want to maintain the same standard of living, you do not need to adjust downward your living expenses at retirement. Your taxes may go down and you will tend to stop saving at retirement, but these factors will be handled automatically elsewhere in VeriPlan.

It is important to understand the impact of this default 100% pre-retirement versus post-retirement expense assumption. Because retirement expense studies have demonstrated that average annual expenses tend to decline with age during retirement, this means that VeriPlan's baseline 100% default expense assumption already tends to be conservative. If the average retiree's expenses decline, then projections that sustain 100% of pre-expenses should overstate actual future expenses. Thus, VeriPlan projection models with this 100% expense continuation assumption will tend to add a risk buffer.

The Retirement worksheet provides a method for you to test changes in overall expenses in retirement versus changes in healthcare expenses in retirement. VeriPlan provides two separate real dollar inflation adjustors on the Retirement worksheet. For example, you could set the "General (non-healthcare) Expenses" adjuster to negative one percent (-1%) to model overall expenses declining with age. Then, you could set the "Healthcare Only Expenses" adjuster to plus 1 percent (+1%) to model increasing healthcare expenses with age. Then you can evaluate the differential impacts on the blue-tabbed Expenses graphic.

3.4: How the 50 states and DC tax Social Security and traditional retirement withdrawals

VeriPlan's projections automatically take into account differences in the ways that the 50 states and DC apply their own income taxes to federally taxable Social Security income and traditional retirement account withdrawals and RMD income.

The yellow-tabbed Taxes input worksheet explains VeriPlan implements its logic. In general, some states are classified "no tax" states, because they do not tax Social Security retirement income and/or traditional retirement plan withdrawals. Some other states simply do not have a state income tax.

Of the states that do tax Social Security and retirement withdrawal income, some just follow the federal income taxation model. Other states will have exclusions and will not tax some dollar amount of the income on a per person basis. In addition, some states have minimum ages for qualifying for these exclusions. Furthermore, some states eliminate these exclusions, when federal Adjusted Gross Income (AGI) exceeds certain levels. AGI is gross income BEFORE deductions or exemptions.

At this writing, in effect, only nine states tax any portion of Social Security retirement benefits. VeriPlan automates the projection of state Social Security taxation for you.

In addition, VeriPlan automates the projection of state level traditional retirement account withdrawals and RMD income taxation for you. Because states may change their tax rules over time, the Taxes worksheet allows you to update your own state's tax rules for traditional retirement account withdrawals. If your state changes its taxation of traditional retirement account withdrawals and RMD income, you can make updates and VeriPlan will use your tax parameters instead.

This section lists our beginning of 2023 survey of the tax rules that the 50 states and DC applied to Social Security retirement income and traditional retirement account withdrawals and RMD income. This listing below is provided to make it easier for you to see how the 50 states and DC apply their own income taxes to federally taxable retirement income.

ALABAMA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$6,000 per person is excluded, if age 65 or over

ALASKA

This state has no state income tax

ARIZONA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

ARKANSAS

Social security retirement benefits are NOT taxed

Withdrawals and RMDs are subject to state income taxes

The first \$6,000 per person is excluded, if age 59 & 1/2 or over

CALIFORNIA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

COLORADO

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$25,000 per person is excluded, if age 65 or over

CONNECTICUT

Regarding Social Security retirement benefits, single filers with AGI of less than \$75,000 and married couples

AGI below \$100,000 do not pay state income taxes on Social Security benefits. 75 percent of benefits above those thresholds are tax-exempt.

Connecticut will be treated as a no tax state for retirement plan withdrawals and RMDs

State income taxes on withdrawals and RMDs are being phased out from 2023 to 2025

DELAWARE

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

FLORIDA

This state has no state income tax

GEORGIA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$65,000 per person is excluded, if age 65 or over

The first \$35,000 is excluded, if age 62 to 64

The first \$35,000 is excluded, if under age 62 and disabled

HAWAII

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

IDAHO

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

ILLINOIS

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are NOT taxed

INDIANA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

IOWA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are NOT taxed

KANSAS

Regarding Social Security retirement benefits, single and married filers with AGI up to \$75,000 are exempt from state income taxes on Social Security benefits. Above that regular taxes apply.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

KENTUCKY

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$31,110 per person is excluded

LOUISIANA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

MAINE

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

MARYLAND

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

Exclusions of up to \$34,300 per persons apply to employer plans but NOT IRAs

Employer plans are 401(a), 401(k), 403(b), and 457(b) plans

MASSACHUSETTS

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

ABOVE THE TAX BASIS OF THE ACCOUNT Since Massachusetts does NOT allow a deduction for amounts originally contributed to an IRA or Keogh, the distributions are NOT taxable until the full amount of contributions which were previously subject to Massachusetts taxes are recovered. VeriPlan automatically tracks tax basis. Make sure to enter the tax basis for all of your accounts on the Financial Assets worksheet.

MICHIGAN

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

MINNESOTA

Regarding Social Security retirement benefits, for 2022, single filers with AGI under \$64,670 could exclude \$4,260 of federally taxable Social security benefits. For

married couples with AGI under \$82,770 that exclusion was \$5,450. These rather small exclusions phase out at higher incomes.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

MISSISSIPPI

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are NOT taxed

MISSOURI

Regarding Social Security retirement benefits, from age 62 onward a single filer with an AGI under \$85,000 and married couples with AGI under \$100,000 are exempt. For AGI above these thresholds, there is a partial deduction.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

MONTANA

Regarding Social Security retirement benefits, Montana follows federal income rules, and taxes AGIs above \$25,000 for a single filer and \$32,000 for a couple.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

Up to \$4,640 per person is exempt for 401(k) and IRA accounts

Exemption is limited to federal AGI of \$40,980 (single filer)

Exemption is limited to federal AGI of \$43,300 (married, joint filers)

NEBRASKA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

NEVADA

This state has no state income tax

NEW HAMPSHIRE

This state has no state income tax

NEW JERSEY

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

NEW MEXICO

Social Security retirement benefit income is taxed above an AGI of \$100,000 for single filers and \$150,000 for couples.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$8,000 per person is excluded for age 65 or over

NEW YORK

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$20,000 per person is excluded for age 59 & 1/2 or over

NORTH CAROLINA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

NORTH DAKOTA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

OHIO

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

OKLAHOMA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$10,000 per person is excluded for age 65 or over

OREGON

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

PENNSYLVANIA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are NOT taxed for age 59 & 1/2 or over

RHODE ISLAND

Social Security retirement benefit income is taxed above an AGI of \$95,800 for single filers and \$119,750 for couples.

AGI exclusions apply to those who have reached full retirement age of 66/67.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$15,000 per person is excluded for full retirement age 66/67 or over

Exemption is limited to federal AGI of \$87,225 (single filer)

Exemption is limited to federal AGI of \$109,050 (married, joint filers)

SOUTH CAROLINA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$15,000 per person is excluded for age 65 or over

SOUTH DAKOTA

This state has no state income tax

TENNESSEE

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are NOT taxed

TEXAS

This state has no state income tax

UTAH

Regarding Social Security retirement benefits, the federal income calculation determines how much Social Security retirement income is taxable at the state level. Then, tax credits are used to reverse some state income taxation. AGI up to \$37,000 for single filers and up to \$62,000 for couples is effectively tax exempt. Above that 25% of Social Security income is excluded from taxation.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$15,000 per person is excluded for age 65 or over

A small tax credit is available

VERMONT

Taxes Social Security retirement income above an AGI of \$50,000 for single filers and \$65,000 for couples. There is a phase out for the next \$10,000 of AGI, and the remainder is taxed at normal state tax rates.

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$15,000 per person is excluded for age 65 or over

VIRGINIA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$12,000 per person is excluded for age 65 or over

Exemption is limited to federal AGI of \$62,000 (single filer)

Exemption is limited to federal AGI of \$87,000 (married, joint filers)

Exemption phases out dollar for dollar with federal AGI over those limits

WASHINGTON DC

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to DC income taxes

The first \$3,000 per person is excluded

WASHINGTON State

This state has no state income tax

WEST VIRGINIA

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$4,000 per person is excluded for age 65 or over

WISCONSIN

Social security retirement benefits are NOT taxed

Traditional retirement account withdrawals and RMDs are subject to state income taxes

The first \$5,000 per person is excluded for age 65

Exemption is limited to federal AGI of \$15,000 (single filer)

Exemption is limited to federal AGI of \$30,000 (married, joint filers)

WYOMING

This state has no state income tax

3.5: The longevity challenge in lifetime financial planning

How long will I live? How long will my spouse live? Will I/we have enough financial resources, if one or both of us lives a very long time?

Some long-term financial planning tools require assumptions about how long people will live. VeriPlan avoids these assumptions, by automatically generating real dollar cash flow projections through age 100, which is about 15 years past the average life expectancy of men and women. If you are already a senior citizen non-smoker in good health with a family history of extended longevity, there is, of course, a chance that you could live past 100. In this situation, you would probably like to project more substantial remaining assets at age 100.

If your projections indicate more than sufficient resources through age 100 and perhaps beyond, then earlier mortality for the average persons, would mean that VeriPlan projects and estimate of the size of one's estate. For married couples, when the first spouse predeceases the other, this typically means lower total family living expenses for the surviving spouse. Social Security income will be reduced, but the surviving spouse will continue to receive the larger of

the two monthly benefit payment that they had been receiving while both spouses were alive. Taxation will switch for married to single, which may mean that income taxes can increase, particularly if as a married couple they had significant traditional tax-advantaged assets subject to taxes on RMDs and those assets were inherited by the surviving spouse.

To give users a sense of projected total life expectancies and remaining life expectancies at various ages, VeriPlan provides the blue-tabbed Life Expectancy graphic. The data for that graphic can be found on the green-tabbed Graphics Data worksheet. This graphic provides US male and female average life expectancy and remaining average life expectancy. The underlying data is based upon the most recent Period Life Table published by the Social Security Administration.

For those who want to investigate longevity in more detail, you should note that the Society of Actuaries and the American Academy of Actuaries have developed a public website where users can input various age, gender, health, and smoking parameters to generate longevity outputs that include probability distributions. This "Actuaries Longevity Illustrator" website can be found at this link:

<https://www.longevityillustrator.org/>

You should read the website's description of how it works and the FAQ to have a better understanding of the output. One thing to note is that this is not a general purpose longevity tool across an entire lifespan. The tool assumes that 100% of people who use it will live to age 65. Thereafter, it provides longevity distributions differentiated by gender, health, and smoking. This means for example, that if you enter currently as an 18 year old male smoker in poor health, the system will still assume that all such persons will make it to age 65. Thereafter, the output probability distributions will be differentiated by the gender, health, and smoking factors.

3.6: Safe investment portfolio withdrawals to fund retirement

Those doing forward-looking financial planning must recognize that the future is completely unpredictable. The past is a unique historical thread that can be very instructive, but history lacks the future's increasing bands of uncertainty as one progresses forward into the future. Accumulating substantial assets by living within ones means and saving and investing is the

most effective approach to the uncertainty of the future. Assets enable choices, and without assets people remain chained to the labor wheel.

A key retirement question is when is it "safe enough" to break those labor chains, and rely on retirement income sources and investment portfolio withdrawals? There is no easy answer and the topic has been a hornet's nest in the financial media. It is better for prospective retirees and for those in retirement to understand this subject than to spend freely and hope for the best as the years go by.

I will summarize some key retirement withdrawal factors below. Nevertheless, it is worth spending your time to research and understand the topic more deeply. Written by Christine Benz, Jeffrey Ptak, and John Rekenthaler, Morningstar Research published "The State of Retirement Income: Safe Withdrawal Rates" on November 11, 2021. (Google the title in quotes with "PDF" appended.) This 59 page white paper provides a coherent summary of historical research on the topic and then it embarks on Morningstar's evaluation of various withdrawal methods. It is worth your time to journey through these 59 pages to understand alternative retirement withdrawal planning concepts. However, you should note that I do not necessarily endorse the particular conclusions that were reached by Morningstar.

On January 26, 2022 kitces.com published a counter-point titled: "Why High Equity Valuations and Low Bond Yields Won't (Necessarily) Break the 4% Rule" by Ben Henry-Moreland. This detailed article was a thoughtful reply to the Morningstar study referenced in the prior paragraph. This article questions some of Morningstar's modeling assumptions and methods. This article is also worth your time to read in detail, because it can increase your understanding of the topic. Welcome to one very informative version of the retirement income hornet's nest.

When Morningstar published their 2021 State of Retirement Income study referenced above, they said that annual updates would be published. Following through on that statement, on December 12, 2022, Morningstar published the second edition, titled The State of Retirement Income: 2022 with a subtitle of "A look at how higher bond yields, lower equity valuations, and inflation affect starting safe withdrawal rates." Shorter at 29 pages versus 59 pages, this 2022 report reviewed and updated the analysis done in the 2021 report, while it discussed the implications of 2022, which was a bad first year start for those retiring in 2021. Morningstar highlighted the impact of the "sequence of returns risk" that manifested in 2022. To understand

historical investment returns and inflation in the context of sequence of risk, see the major section below.

When evaluating Morningstar's retirement income reports, the reader should note the difference between using historical data, i.e. what actually did happen in the past (and was the basis of the Bengen safe withdrawal analysis -- see the major section below), and Morningstar's projection of investment assumptions about what the guess will happen in the future. This is just another form of rational guessing, even if it is dressed-up with Monte Carlo simulation methods that purportedly provide a probability distribution around the Morningstar's assumptions about future cash, bond, and stock investment asset class performance and inflation. Both approaches are shots in the dark for retirees trying to plan their retirement distributions from their portfolios. The year 2022 is a lesson in one year sequence of returns risk for retirees. 2022 is a proof the retirees cannot just set a fixed withdrawal strategy for 30 years, forget about reviewing that strategy, and just keep turning the crank. The good news is that this is not how most rational people tend to behave, especially those with an instinct for investment asset accumulation and long-range planning. When asset values decline and/or inflationary costs increase, that is an obvious signal that withdrawal strategies need to be reevaluated.

3.7: The origin of the 4% retirement withdrawals rule-of-thumb

Assuming that you will undertake the "homework reading assignments" of the section above, I will attempt to summarize some key points of this fraught topic. You may have heard of the widely discussed 4% safe portfolio annual withdrawal rule-of-thumb. In 1994, financial planner, William P. Bengen, published "Determining Withdrawal Rates Using Historical Data" in the Journal of Financial Planning. He addressed the question of how much, as a percentage, looking back historically that a retiree could have withdrawn annually from an investment portfolio without eventually running out of money. He found that portfolio withdrawal percentage to be close to 4%. Mr. Bengen subsequently published several updates and refinements to his analysis, and he is now retired.

Bengen dubbed this retiree withdrawal rate "SAFEMAX" or the maximum safe historical withdrawal rate. Using stock, bond, and inflation data from 1926 onward, he modeled what would have happened to the portfolios of those who retired in each year going forward from

1926. He tested various initial withdrawal percentages and increased those withdrawals by the annual rate of inflation each year.

Most of his initial paper assumed a 50% stocks and 50% intermediate treasuries asset allocation, although he did test the effects of higher and lower asset allocation percentages. Portfolios were rebalanced annually. Note that his analysis did NOT account for the impact of ordinary income taxes or capital gains taxes, nor for the impact of investment management costs and fees. (If you are not taking steps to minimize your investments costs and taxes, which can be large and excessive, you should note that excessive costs and taxes can cut significantly into your personal safe withdrawal percentage.)

Bengen's analysis for a 50% stocks and 50% bonds can be enlightening. For the 51 overlapping annual periods of retirement periods that began in 1926, all portfolios would have lasted over 50 years, if the initial annual withdrawal rate was 3% and if subsequent annual withdrawals were adjusted for subsequent inflation.

Bengen demonstrated that if the initial withdrawal rate was 4% with subsequent annual withdrawals adjusted for inflation, then in 41 cases portfolios would have lasted at least 50 years. Of the remaining 10 retirement periods with 4% initial withdrawals, all of these 10 portfolios would have lasted for at least 33 years. If the withdrawal rate was instead 4.24%, then in one of these retirement periods the portfolio would have been exhausted in 28 years. Thus was born the 4% "safe" retirement portfolio withdrawal rate rule-of-thumb.

Continuing with the 50%/50% asset allocation, Bengen showed that if the initial withdrawal was 5%, then in 20 of the retirement periods the portfolio would have lasted at least 50 years. However, in 31 of the other retirement sequences investment portfolios would have fallen short of lasting 50 years. Of the 31 periods that fell short, 14 would have lasted 30 to 50 years and 17 would have lasted 20 to 30 years with none falling short of 20 years. While you might suspect that most of the 5% withdrawal retirement periods that fell short of 30 years were affected by the Great Depression, but only 3 of the 17 periods were. The remaining 14 out of the 17 retirement periods portfolios that did not last 30 years with 5% withdrawals were actually undercut by the stagflation of the 1970s.

When Bengen moved the withdrawal rate for 50% stocks / 50% bonds portfolios up to 6%, they only 7 of the 51 retirement periods had portfolios lasted 50 years. Only 13 periods had portfolios that lasted between 30 and 50 years. The remaining 31 retirement periods saw

portfolios last under 30 years. Of these 31 6% withdrawal portfolios, 17 lasted between 20 and 30 years and the remaining 14 failed to last even 20 years.

In his analysis, Bengen also varied the stock to bond ratio of the asset allocation. Without the details, his research favored increased stock allocations versus bonds. He wrote: "Sorting this all out, I think it is appropriate to advise the client to accept a stock allocation as close to 75% as possible, and in no cases less than 50%. Stock allocations lower than 50 percent are counterproductive, in that they lower the amount of accumulated wealth as well as lowering the minimum portfolio longevity."

The summary above gives you a quick understanding on the origin and rationale for the 4% retirement withdrawal rule of thumb. You can and should read the Morningstar study and the counterpoint article referenced above. Furthermore, if you are so motivated, you can find Bengen's original 1994 paper and his update papers from 2012 and 2020 online. (See the references section for William Bengen on Wikipedia.)

3.8: Sequence of returns risk in retirement portfolios

Let's assume that you are approaching retirement and whatever your life circumstances have been, you have worked hard to accumulate \$100,000, \$500,000, or \$1,000,000, etc. Does this 4% rule-of-thumb above say that you should only take \$4,000, \$20,000 or \$40,000, respectively, out of whichever of these three portfolios you might hold? It took you years of hard work to build up your investment assets, and they seem to yield so little? There are several points to consider.

Bengen's analytic goal was to determine the historical maximum safe initial percentage portfolio withdrawal rate that would have ensured that retirees retiring in 1926, 1927, 1928, etc. could have withdrawn and still have their portfolio last at least 30 years in retirement. He was addressing a defensive strategy for retirees against what has become known as "sequence of returns" risk. Sequence of returns risk is the possibility that in the years soon after your retirement date, asset values could decline and not recover sufficiently to permit your investment portfolio to last long enough.

For example, consider the situation where you retire with a \$1,000,000 50% stocks / 50% bonds portfolio. You might decide to start withdrawing 5% and increase withdrawals by the rate of inflation. What happens if the stock market falls 50% while bonds fall 10% and the inflation rate is 4%? Initially, you took \$50,000 out and \$950,000 remained. Then, the stock half of the

portfolio (\$475,000) fell in value to \$337,500, while the bond half fell 10% to \$427,500 for a total portfolio of \$765,000.

If you increase your \$50,000 withdrawal in the second year by the 4% rate of inflation, you would take out \$52,000. In just one year, your effective rate of withdrawal would have jumped from 5% to 6.8%. If the markets recover in a couple of years, this might not be fatal to your retirement portfolio. However, if asset values are depressed for many years in a row, you could quickly erode the longevity of your portfolio.

To better understand historical sequence of returns risk, I encourage you to read carefully an extensive article with charts that I have published on one of my financial websites. This article analyzes cumulative stock, bond, and cash asset returns from 1929 to 2020 with and without inflation. This article can help you to understand US investment history. It will also help you to understand the cumulative, compounded asset class return numbers that underlie VeriPlan. These return numbers are also explained and are user-adjustable on the yellow-tabbed "Risk & Returns" worksheet.

[US average stock market return with bond and cash returns](https://www.financialplannerpasadena.com/us-average-stock-market-return-with-bond-and-cash-returns-2528.htm)

<https://www.financialplannerpasadena.com/us-average-stock-market-return-with-bond-and-cash-returns-2528.htm>

For those of you who would like the sequence of returns risk "Cliff Notes" summary for the website article above, here are three pairs (six) of that article's graphics showing what happened to US investment portfolios during the three most troublesome historical periods for individual investors. These three periods demonstrate different kinds of sequence of returns risks to retirees.

The following section will break explain the three periods from 1929 to 2019 where sequence of returns risk would have stressed retirees investment portfolios in different ways:

- A) 1929 to 1946 -- Stock market crash, Great Depression, and World War II
- B) 1969 to 1981 -- Escalation of inflation and increasing economic stagnation
- C) 2000 to 2019 -- Dot Com crash and recovery, the Credit Crisis, the Great Recession, and recovery

For each of these three periods, you will find two separate graphics:

- 1) cumulative inflationary dollar returns across the period, which are the lighter blue graphics, and

2) cumulative real, constant purchasing power, dollar returns across the period which are the darker blue graphics.

Each graphic, displays the cash, bond, and stock market return performance, plus the consumer price index (CPI) for the period.

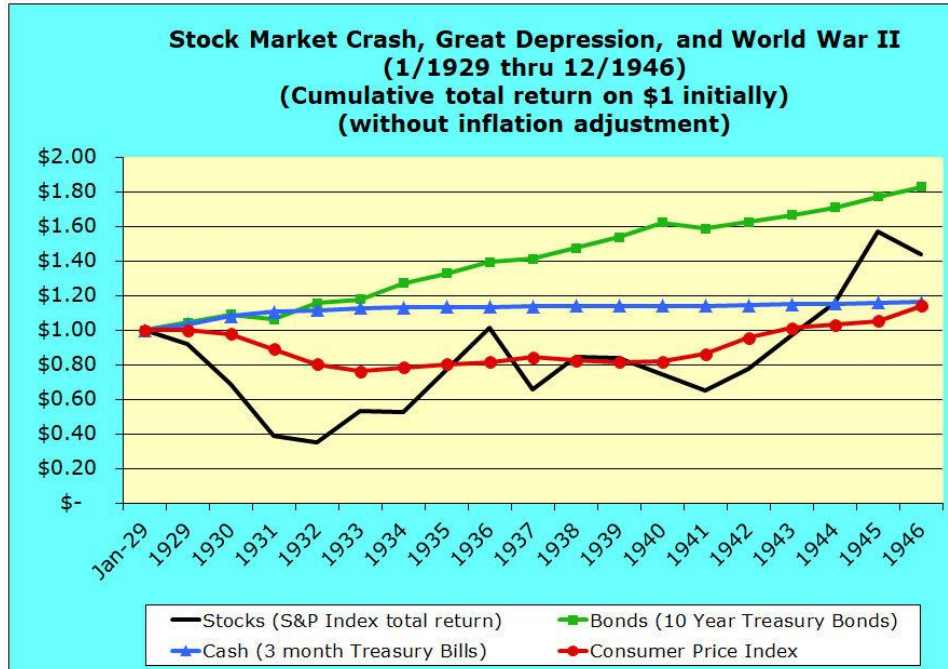
On each graphic, it is assumed that one dollar is invested into each of the three cash, bond, and stock asset classes at the beginning of each of these periods. Total returns by asset class are presented, which includes asset market value changes plus reinvested interest and dividend payouts. Returns are gross and do not include any taxes or investment expenses.

Concerning inflation, in the three lighter blue inflationary dollar graphics, the CPI line is red and may move upward or downward over time reflecting inflationary or deflationary periods, respectively. On these inflationary graphics, the stock, bond, and cash cumulative return lines will also include this inflationary and/or deflationary component.

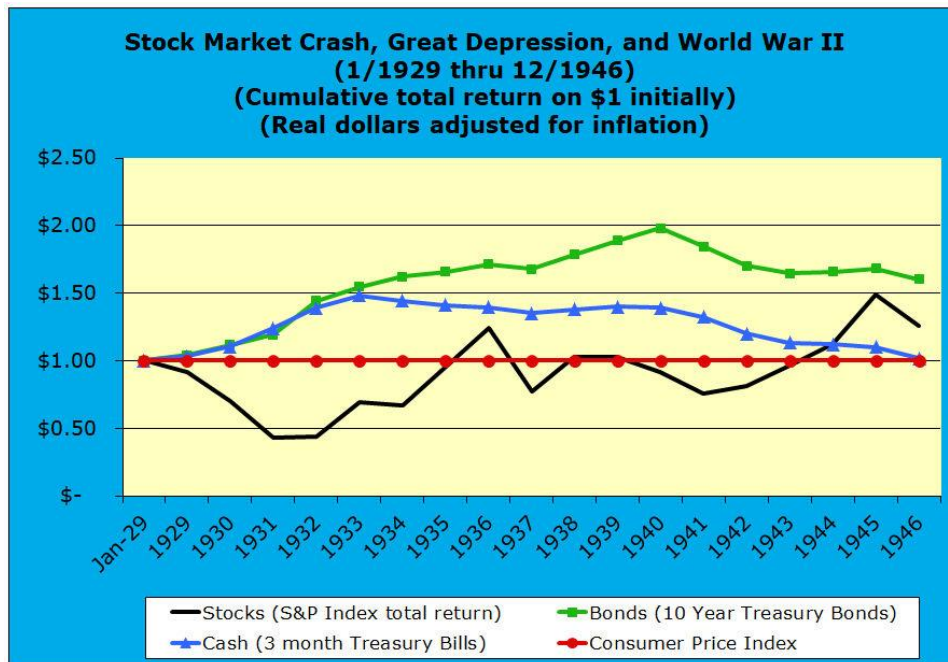
On the other three darker blue real dollar graphics, the CPI inflationary component has been removed from the data. Therefore, in all three of the real dollar graphics the CPI line is still red, but it is a flat line across the years. In addition, cumulative inflation has been extracted from each of the cash, bond, and stock lines. Thus, the cash, bond, and stock reflect constant purchasing power over time without inflation.

While most people might expect that the most threatening period to a retiree would have been stock market crash of 1929 and Great Depression, this not necessarily the case. The worst sequence of returns that retirees faced were during the stagflation of the 1970s. If you evaluate the three pairs of inflationary dollar and real dollar graphics above you will see that they have different characteristics.

Stock market crash, Great Depression, and World War II 1929 to 1946 using inflationary dollars



Stock market crash, Great Depression, and World War II 1929 to 1946 using real dollars



Of the small portion of the US population with retirement investment assets, the crash of 1929 and the Great Depression were most threatening to those who held investment portfolios that were very heavily weighted toward stocks. Students of investment history might note that

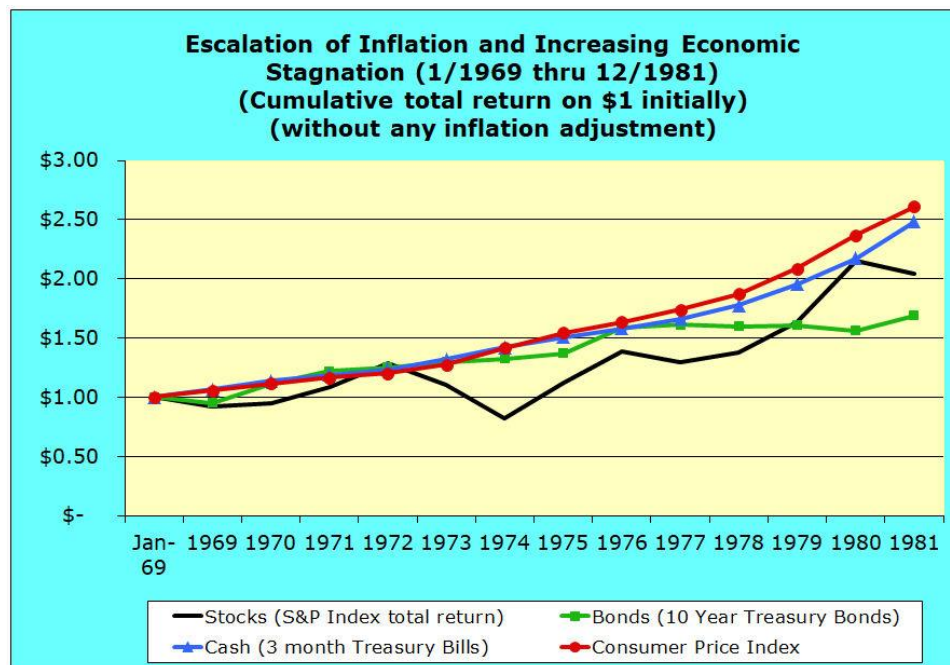
the inflationary graphic above shows "only" a 60%+ cumulative drop in stock values from 1929 through 1932, when in fact the drop from peak (August 1929) to trough (July 1932) measured on the Dow Jones index was a fall of almost 90%.

The reason is that this is an annual investment returns data series with a beginning of calendar year measurement point. The Dow Index began 1929 very close to 300 and rose 27% to a peak of just over 380 in August 1929, before crashing. This highlights that sequence of returns risk can be higher than annual data might demonstrate. In fact, there was a 27% value difference between the person who retired with \$100,000 in stocks at the beginning of 1929 and another who retired with \$100,000 in August 1929. It was horrible for both, subsequently, but worse for one.

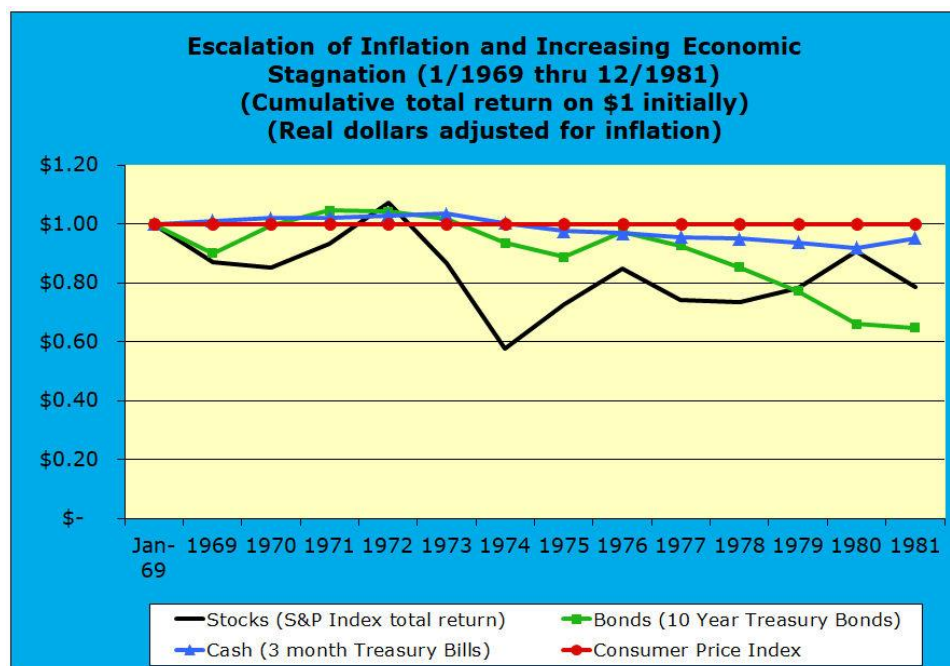
If we compare the 1929 through 1946 inflationary dollar versus real dollar graphics above, certain things can be instructive from a portfolio management standpoint. If we assume that a retiree held a 50% bonds and 50% stocks portfolio in 1929, two factors would partially cushion the blow of the collapse in stock market values. First, notice the roughly 20% deflation between 1929 and 1932. During that period the US government did effectively nothing to counter the economic collapse. In "normal" times with low inflation, people will buy what they need and might consume a bit more, if they think prices might be higher later. With deflation it is the opposite. People with money tend to buy the minimum and wait for prices to fall before buying more. That is a recipe for economic slowdown and at its worst, depression.

When you evaluate the darker blue 1929 to 1946 real dollar graphic, you see that at the beginning of the Great Depression, deflation softened somewhat, the decline in stock market values from the standpoint of purchasing power. More importantly, adjusting for deflation demonstrates that bonds and cash held their value and increased their purchasing power similarly from 1929 through 1933. After that the bond and cash lines diverge with bond value purchasing power doubling from 1929 to 1940. In effect, this is how a more balanced 50% stocks and 50% bonds portfolio might have survived the Great Depression despite the horrible fall in stock values initially. One should note, however, that the US was significantly less wealthy 90 to 100 years ago, and only a small portion of the population would retire with any kind of substantial portfolio. In addition, in 1929 nobody thought that Social Security might pay some of the bills in retirement, as many stood in bread lines.

Escalation of inflation and increasing economic stagnation 1969 to 1981 using inflationary dollars



Escalation of inflation and increasing economic stagnation 1969 to 1981 using real dollars



When you evaluate this next pair of graphics above covering the stagflation of the 1980s, you can begin to understand why William Bengen's research demonstrated that this period was the most damaging to retirees across his entire 1926 to 1994 study period. For those who retired during the 1960s, increasing inflation undermined stocks, bonds, and cash in real dollar terms. The stock market decline was not as significant as in the Great Depression, but in the 1970s bonds also fell in value in real dollar terms. The Great Depression real dollar bond values rose to counter some of the stock market decline. Furthermore, this whole stagflation mess dragged on for a decade, until the Federal Reserve Bank finally acted to crush inflation by putting the economy into a steep recession in the early 1980s.

These two graphics covering the 1969 to 1981 period are also a demonstration of why long-term financial planning software should present information in real, constant purchasing power dollars rather than in inflationary dollars. If you look at the lighter blue graphic above, the cash, bonds, stock, and CPI inflation lines generally move upward from 1969 to 1981. When graphics move upward to the right, the general mental impression is that things are increasing and getting "better."

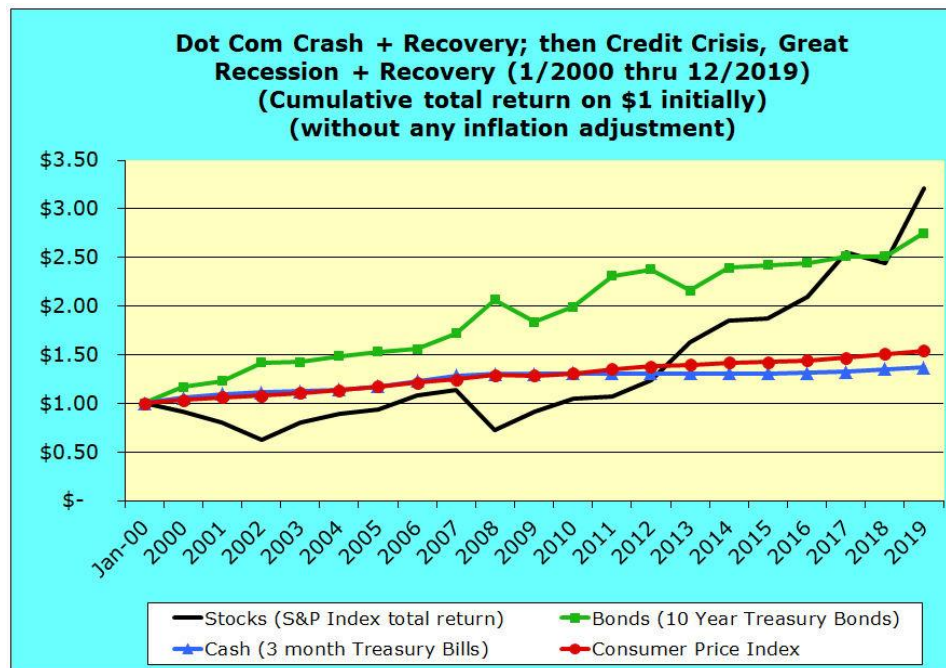
However, the red cumulative inflation line dominates the cash, bond, and stock lines from 1969 to 1981. This inflationary graphic forces the viewer to make mental adjustments to understand the impact of inflation. Why force this rather difficult mental conversion activity on the user? The darker blue real dollar graphic, removes the inflationary component for the cash, bond, and stock lines, which makes analysis much easier.

The darker blue real dollar graphic for 1969 to 1981 demonstrates that uncontrolled inflation across the period undermined both diversified and undiversified portfolios. Cash held its own from 1969 to 1974, but then slipped somewhat in value. Stocks and bonds both fell in value initially, while bonds recovered first and followed by stocks which recovered by 1972. Those retirees holding investment portfolios would have hoped in 1972 that the worst was over. I was not.

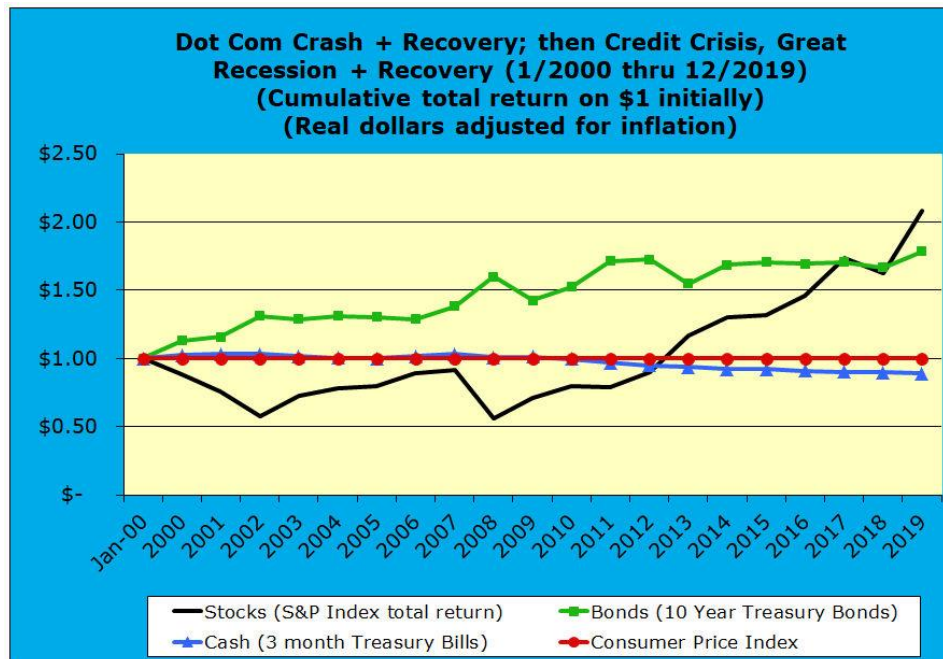
From 1972 to 1976, market value declines were even worse for both bonds and stocks, as inflation continued. Stock values recovered to around 80% by 1976, and they stagnated thereafter. From 1976 through 1981 bonds slumped in cumulative value almost 40% in real dollar terms, which is not at all what investors expect from bonds. Nevertheless, this is what can happen to bonds in the face of grinding inflation, especially when the central bank finally wakes

up and raises interest rates aggressively. When interest rates rise quickly and substantially, markets will adjust the value of existing lower interest rate bond portfolios downward significantly.

Dot Com crash and recovery, the Credit Crisis, the Great Recession & recovery 2000 to 2019 using inflationary dollars



Dot Com crash and recovery, the Credit Crisis, the Great Recession & recovery 2000 to 2019 using real dollars



This third pair of inflationary and real dollar graphics above for 2000 to 2019 will be more familiar to readers. During the first decade through 2009, two significant crisis events threatened retiree portfolios: A) the Dot Com stock market crash and B) the Credit Crisis and Great Recession. The worst for retiree portfolios was the Credit Crisis of 2008. In a panic, Congress passed TARP funding legislation that helped to stabilize the economy, but funding was not sufficient to stimulate rapid economic recovery. The Federal Reserve Bank flooded liquidity into the economy and the financial markets, which likely prevented another depression. That was a form of "good news," however the subsequent economic recovery was long and slow.

From an investment assets standpoint, the second half of the 2000 to 2019 period began effectively at the end of March 2009, when stock market values bottomed out and a tepid stock price recovery began. During these two decades, inflation was not a significant factor, and cash underperformed inflation -- particularly in the second decade. Thus, the lighter blue inflationary dollar graphic and the darker blue real dollar graphics for the period are similar.

The 2000 to 2009 period had more similarity to the Great Depression than to the stagflation of the 1970s. Similar to the Great Depression, bond values rose to counter much of the declines in stock values from 2000 to 2002 and during 2007 and 2008. A retiree, with a balanced stock and bond portfolio, could have weathered the Dot Com crash, Credit Crisis, and Great Recession.

Subsequently through 2019, both stocks and bonds increased in value and significantly bolstered retiree portfolios.

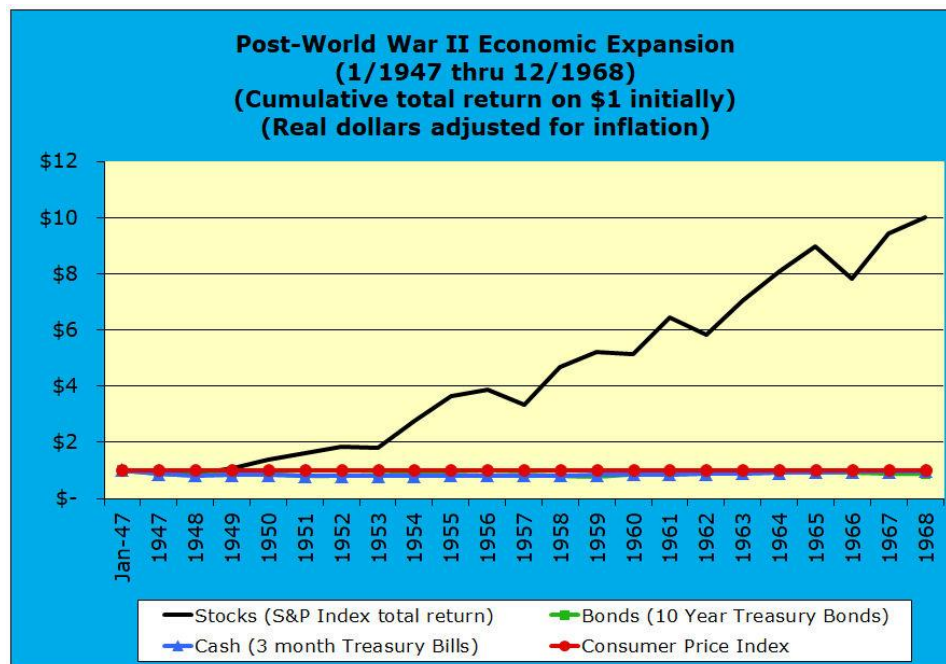
3.9: Portfolio growth potential during retirement

The previous section focused on how sequence of returns risks can threaten retirement portfolios. If you focus only on the three historical periods detailed above, you will have a highly distorted view of US investment history. The source article for the graphics above, also covers:

- A) the post-World War II economic boom from 1947 through 1968 and
- B) the stock and bond bull markets as from 1982 through 1999.

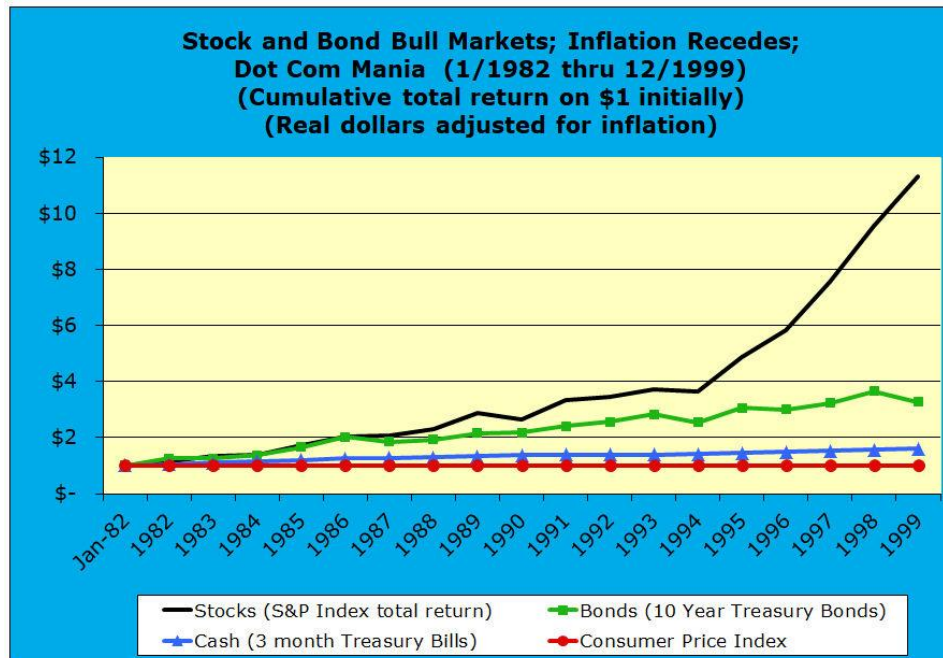
The 38 years in these two historical periods were the flip-side of sequence of returns risk on steroids. Retirement portfolios that held a majority portion in stocks grew dramatically during these years.

Post-World War II Economic Expansion 1947 to 1968 using real dollars



In terms of real, constant purchasing dollars, one dollar held in stocks in 1947 was worth ten real dollars by 1968 -- a tenfold cumulative real return over 20 years. In contrast, one dollar in either cash or bonds in 1947 was worth close to just that same single constant purchasing power dollar by 1968.

Stock and Bond Bull Markets and Dot Com Mania 1982 to 1999 using real dollars



One real dollar invested in stocks in 1982 was worth over eleven real dollars by 1999 -- greater than a tenfold cumulative real return over 17 years. Over that same period, one dollar in bonds grew in value to over three real dollars, while one dollar in cash grew to about one and one half dollars in real constant purchasing power terms.

Sequence of returns risk is potentially bad news for retirees and a very important phenomenon for retirees to understand. On the other hand, the good news is that more often than not retirement portfolios grow. If a retirement portfolio was managed historically with a "conservative" withdrawal strategy, such as the 4% withdrawal rule-of-thumb, more often that portfolio would have grown significantly during retirement.

Retirement investment portfolio growth is normal and many cases necessary. Even if a retiree is not faced with a poor sequence of returns in their first decade of retirement, returns could be poor during parts of subsequent decades. Portfolio growth in the early years will help weather those bad patches.

For perspective, from 1928 through 2021 diversified US stocks had a cumulative annual real dollar total return of 6.97% and diversified US bonds had compounded growth of 2.67%. (See the Risk & Returns worksheet for the most recent compounded total return information.)

Therefore, on average historically a 50% stocks / 50% bonds portfolio has returned a compounded 4.82% annual real dollar return from 1928 through 2021. $[(6.97\% \text{ times } .5) + (2.67\% \text{ times } .5) = 4.82\%]$ That compounded rate of return is above the 4% withdrawal rule-of thumb.

On average historically a 75% stocks / 25% bonds portfolio has returned a compounded 5.90% annual real dollar return. $[(6.97\% \text{ times } .75) + (2.67\% \text{ times } .25) = 5.90\%]$. That compounded rate of return is significantly above the 4% withdrawal rule-of thumb.

With a 4% initial withdrawal rate historically, even a 50% stocks and 50% bonds cost and tax efficient portfolio could have grown. A 75% stocks and 25% bonds portfolio has an even greater chance of growing.

Modest with initial withdrawal rate percentages, can be larger effects. Withdrawing 4% initially is focused on ensuring that retirees not to run out of money before their lives runs out. In addition, over the years many retirees have found that that they become richer with age permitting a substantial legacy for family heirs and/or for charity.

William Bengen's 1994 study included charts with the residual values of a retirement portfolio at the 20 year point. If 50% stock / 50% bond retirement portfolios started at \$1M with a 4% annual withdrawal increased by inflation, then after twenty years of withdrawals, 25 of the retirement year portfolios still had \$1M in assets and two of those portfolios exceeded \$2M. The remaining 26 portfolios fell below \$1M in value after 20 years, with almost all of them above \$500,000 in value.

When Bengen changed the asset allocation to 75% stocks / 25% bonds, asset accumulation increased significantly. Starting at \$1M with a 4% annual withdrawal increased by inflation, after twenty years of withdrawals, 34 of the retirement year portfolios still had at least \$1M in assets. 16 had between \$1M and \$2M in asset value, 13 had between \$2M and \$3M in asset value, and 5 has between \$3M and \$4M in asset value. The remaining 17 retiree portfolios fell below \$1M in value after 20 years, with almost all of them above \$500,000 in value.

Chapter 4: Optimizations worksheet

- 4.1: Lifelong tax savings from investment portfolio asset tax location
- 4.2: Early retirement health care expenses and ACA tax subsidies before Medicare
- 4.3: Social Security retirement claiming age considerations
- 4.4: Spending traditional retirement assets, while delaying Social Security payments
- 4.5: Compound growth factors
- 4.6: Tax-exempt municipal securities and VeriPlan's return assumptions
- 4.7: VeriPlan's financial viewpoints
- 4.8: Scenario planning for an uncertain future
- 4.9: VeriPlan's design and discounted cash flow modeling

This Optimizations worksheet, the adjacent red-tabbed Retirement Planning worksheet, and other worksheets within VeriPlan provide information that could be helpful to VeriPlan users. There are no parameters or user controls for you to set on either of these two red-tabbed worksheets. They simply provide potentially useful information for your family financial planning.

The VeriPlan lifetime projection software has been prepared for educational, informational, and decision-support purposes only, without regard to any particular user's investment objectives, financial situation, or means. You should not construe any of the information in VeriPlan to be financial or investment advice of any kind. You should not make this information the sole basis for any of your decisions. Consult with professional advisors concerning any contemplated transactions and your specific financial, investment, business, insurance, legal, tax and/or accounting situation. For more information, see the terms of the VeriPlan license on the red-tabbed "Start Here" worksheet.

4.1: Lifelong tax savings from investment portfolio asset tax location

Optimizing your investment portfolio for asset tax location

When you optimize your investment portfolio for "asset tax location" you can reap lifelong tax savings benefits -- assisted by VeriPlan.

When held in taxable accounts, bond and cash financial assets earn interest that is subject to federal graduated ordinary income tax rates, as well as perhaps state and local income taxes. On the contrary, when held in taxable accounts for at least one year, both transactions and qualified dividends on stock or equity assets are subject to much lower federal long-term capital gains (LTCG) tax rates. When cash, bonds, or stocks are held in traditional tax-advantaged retirement accounts, withdrawals are always subject to graduated ordinary income tax rates at the federal, state, and local levels.

Simply put, in deciding on the "location" of your financial investment assets, the question is whether you should hold your stocks, bonds, and/or cash in taxable accounts or in traditional tax-advantaged retirement accounts. There is academic research consensus on that answer. To the extent that your relative asset account balances allow while taking into account your overall asset allocation strategy, you should prefer to hold your stock or equity assets in your taxable accounts, and you should prefer to hold your cash and bond fixed income assets in your tax-advantaged accounts.

The primary reason is that federal long-term capital gains tax rates historically have been substantially lower than ordinary income tax rates. Even though stocks on average tend to appreciate more quickly than bonds, taxation on individual stocks and on passively-managed stock index fund investments often can be deferred for a very long time. In addition, when capital gains taxes must be recognized on stock asset transactions and on qualified dividends, those gains and dividends will be subject to lower federal LTCG tax rates, if those stock assets have been held for at least one year. If held for less than one year, federal ordinary income tax rates would apply instead.

In contrast, interest earnings on cash and on taxable bonds will always be subject to higher ordinary income tax rates, if held in taxable accounts. Furthermore, cash will never have long-term capital gains, and LTCGs on taxable bonds are infrequent and relatively small in comparison to their ongoing taxable bond interest yields.

Furthermore, because historically stocks have appreciated significantly more than bonds or cash, asset tax location optimization has side benefits. Historically bonds have had lower total returns than stocks. Therefore, when bonds are held in traditional retirement accounts, those tend

to experience lower growth over time compared to the stock assets held in taxable accounts. (You are still getting the stock growth on your stock asset allocation. It is just showing up in your taxable accounts,)

Lower growth in traditional retirement account balances means lower Required Minimum Distributions (RMDs) and thus lower federal, state, and local income taxes on those RMDs in retirement. On the contrary, stocks held in taxable accounts have tended to grow faster, but only a portion of that growth is subject to lower federal LTCG taxation, which much of the appreciation remains untaxed for years to come.

Additional good news is that once you make the upfront effort to adjust your investments to optimize for asset tax location, you can benefit year after year going forward. Once your cash, bonds, and stocks are in their more tax-advantageous places, dividends and interest earnings are typically reinvested in the same places. This naturally helps to maintain optimal tax location.

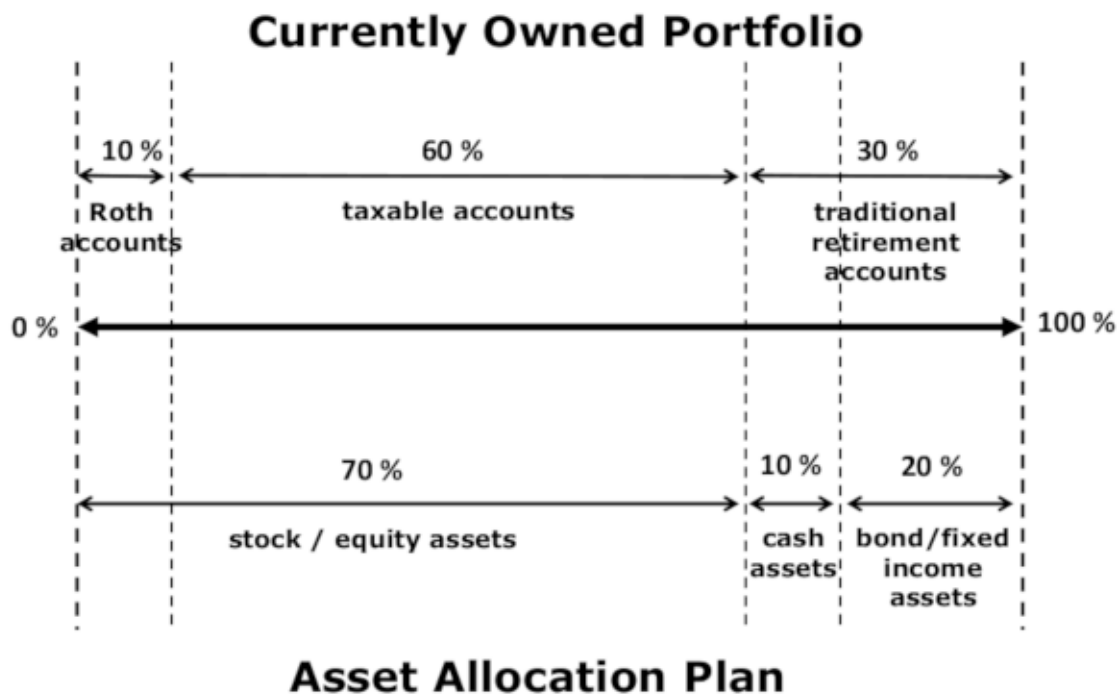
Once your investments are properly located, portfolio rebalancing adjustments done (perhaps) annually can maintain your tax location optimization. VeriPlan's "Current Portfolio Rebalancing Tool" found in the bottom half of the yellow-tabbed Asset Allocation worksheet can assist you in performing tax location aware portfolio rebalancing, whenever you need to do so.

Your personal ability to benefit from optimizing your investment portfolio for asset tax location will depend upon:

- A) the relative sizes of your taxable investment accounts versus your traditional retirement accounts and
- B) your cash, bond, and stock asset allocation strategy.

An example of investment portfolio asset tax location

Asset Tax Location Example



This graphic provides an example of a situation where an asset allocation strategy is fully aligned with the ratio of taxable versus traditional retirement account assets. This particular situation allows the portfolio to be fully optimized with respect to asset tax location.

Your asset allocation decisions and your asset location decisions can be mapped onto a line that goes from 0% to 100%. First, total the cash, bond, and stock financial assets that you hold in your taxable, Roth retirement, and traditional tax-advantaged retirement accounts. Then, determine the percentages that are in each of these three account types.

In this example, assume that you presently hold:

- * 10% of your total cash, bond, and stock financial assets in Roth retirement accounts
- * 60% of your total cash, bond, and stock financial assets in taxable accounts
- * 30% of your total cash, bond, and stock financial assets in traditional tax-advantaged retirement accounts

Using the 0% to 100% central line illustrated in the graphic, mark the range from 0% to 10% as your Roth tax-advantaged retirement assets. Mark from 10% to 70% as your taxable assets,

which equals 60% of the total. Finally, mark from 70% to 100% as your traditional tax-deferred retirement assets, which equals 30% of the total.

Next, in reference to this same line 0% to 100% central line, we will overlay your asset allocation strategy percentages. Let us assume that you have chosen an overall asset allocation of 70% to stocks and equity assets, 20% to bonds and fixed income assets, and 10% to cash and cash equivalents.

Along this 0% to 100% line, your individual stocks, equity mutual funds, and stock ETF assets would be assigned to the left hand side of this line or from 0% to up 70%. Because bonds tend to be higher yielding than your cash, you would assign your bond and fixed income assets to the right-hand side of this line.

Since you have decided that you want to have a 20% bond asset allocation, then your bonds would fill in the range from 80% to 100%. Finally, your cash would fill in the space in the middle that remains between equities and bonds. In this case, your cash would be “located” from 70% to 80% along this line.

What is the overall result? Of your 70% allocation to stocks/equities, 60 percentage points would fill up your taxable accounts entirely and the other 10 percentage points would be invested into your Roth retirement accounts.

For the remaining 30% of your total assets, which are traditional tax-advantaged assets in the 70% to 100% range of this line, these would be where you put your bonds and cash. Therefore, your 20% fixed income asset allocation and your 10% cash asset allocation would be held in your traditional tax-advantaged retirement accounts.

Now, the question is why? From a decision-making standpoint, think of these ordering principles in this tax location optimization framework:

A) Bonds/fixed income and asset tax location

Your bonds always go to the right into traditional tax-advantaged retirement accounts to the extent that your asset balances can accommodate your bonds. Compared to cash or stocks, bonds provide higher ongoing returns that would be taxed as ordinary income, if they were instead held in taxable accounts. When you hold your bonds in your traditional tax-advantaged retirement accounts, you do not pay current taxes. Instead, taxes on bond earnings can be deferred for decades, and then are only taxed (at ordinary income rates), when you need to take a withdrawal

to raise cash or you are required to take RMDs to be taxed in retirement. Furthermore, because total bond returns tend to be lower than total stock returns, your RMDs and corresponding ordinary income taxes would be lower in retirement, as well.

Note that if your particular bond percentage allocation exceeds your dollar holdings in traditional tax-advantaged retirement accounts, then some of your bond allocation inevitably must be pushed into your taxable account holdings. Earnings on that "excess" portion of your bond allocation in taxable accounts would be subject to ongoing federal, state, and local ordinary income taxes. Those with high overall income subject to ordinary income taxes might consider holding municipal bonds for this taxable portion of their bond holdings. Nevertheless, on an ongoing basis such high income persons should reevaluate whether the tax benefits potentially afforded muni bonds sufficiently compensate for muni bond's typical lower pre-tax interest earnings.

B) Stocks/equities and asset tax location

While the acquisition of Roth assets during working years may not be tax efficient (see the Roth Analysis worksheet), once you do have assets in Roth retirement accounts, those assets and the appreciation on those assets will not be taxed in the future. Therefore, the first place to "tax locate" stock or equity assets is to fill up your Roth accounts with stocks.

Because equity assets historically have appreciated more quickly than bonds or cash, it is preferable for your stock assets to be in Roth accounts, which would not be subject to future taxation. You would prefer for your Roth accounts to grow more quickly.

Once your Roth accounts are filled with equity assets, the rest of your equities should be held in taxable accounts to the extent possible. Again, the reason is that realized appreciation on stocks and qualified stock dividend payouts are taxed at very favorable long-term capital gains tax rates at the federal level. Furthermore, unless there is a transaction event, unrealized LTCGs are deferred into the future often for decades. In certain circumstances, those appreciated capital assets may pass to heirs with a step-up in tax basis, and LTCG taxes will never be paid.

In contrast, if stock or equity assets are held in traditional tax-advantaged retirement accounts, they lose these federal LTCG tax advantages. Yes, of course, ordinary income taxes will be deferred, but higher stock asset growth rates will mean higher RMDs in retirement with those capital gains taxed at ordinary income tax rates.

Just like excess bonds that will not all "fit" into traditional tax-advantaged retirement accounts, some people will have excess stock holdings that will not "fit" into their taxable accounts. This tends to happen with those who have saved substantial amounts in traditional tax-advantaged retirement accounts and also have higher percentage allocations to stocks. In that circumstance, their taxable accounts will be filled by their stock holdings, and the excess must be held in their traditional tax-advantaged retirement accounts.

C) Cash and asset tax location

The cash allocation tends typically is the smallest proportion, and it tends to have the lowest yield. Nevertheless, cash earnings are subject to federal, state, and local ordinary income taxes when held in taxable accounts. Therefore, if there is room in traditional tax-advantaged retirement accounts after all bonds have been placed there, then the cash allocation should be placed in in your traditional tax-advantaged retirement accounts to the extent that it will fit. The cash that does not fit would be held in taxable accounts. In essence, cash is the little asset that gets pushed around in the middle after bonds and stocks take their "tax location" optimization positions to the right and left, respectively.

Using "offsetting transactions to rearrange your holdings for asset tax location purposes

Setting up your overall portfolio for asset tax location purposes is largely an up-front process. Maintenance over the years, just involves rebalancing and VeriPlan's "Current Portfolio Rebalancing Tool" can help you do this.

Normally, making the portfolio changes needed to implement asset tax location optimization should not involve significant up-front tax payments. You are not going actually move asset between different account types. The assets are going to stay within the accounts where they already are. Instead, you would make a series of off-setting transactions to get where you need to be. No taxable withdrawals from traditional tax-advantaged retirement accounts are required to get the job done.

If currently you are "tax location inefficiently" holding bonds in taxable accounts and stocks in traditional tax-advantaged retirement accounts, you would simply replace the stocks in those retirement accounts with bonds. Selling stocks inside traditional tax-advantaged retirement accounts and buying bonds instead will not involve current taxation.

A corresponding and reverse set of transactions would need to occur in taxable accounts. You would sell the bonds in taxable accounts and buy stocks instead. Except in unusual situations, which can occur, selling bonds in taxable accounts usually does not involve significant taxation. Most of bond taxation is ongoing associated with bond interest earnings.

It is possible to have a short- or long-term capital gain on bond sales, if the sales price is higher than your tax basis. This would typically occur if you had acquired bonds in the past with much higher interest rates than the current market interest rate for bonds of similar risk and similar remaining duration. In that case, you typically would have a modest capital gain on the sale. If held for at least a year, then long-term capital gains at the federal level and ordinary income taxes at the state and local level would be due. Such a tax event would not be a good reason to defer making the change, because the bonds will keep generating taxable income that would be added to your other current ordinary income.

[View several informative tax and LTCGs videos on my YouTube channel](#)

<https://www.youtube.com/channel/UC57zNEajNe0r9mAbC9D5dfQ>

4.2: Early retirement health care expenses and ACA tax subsidies before Medicare

Don't retire before Medicare without understanding how to get low cost health insurance

It is increasingly rare to benefit from low cost employer health insurance coverage after retirement. In particular, early retirees can face substantially higher health insurance premium and out-of-pocket costs prior to Medicare beginning at age 65.

The good news is that the Affordable Care Act of 2010, as amended (AKA Obamacare) can help early retirees with low taxable income. Furthermore, early retirees who own assets for retirement in taxable asset accounts, traditional retirement accounts, and even Roth retirement accounts may be able to manage their taxable income prior to age 65 and maximize the premium tax credit benefits of Obamacare.

To manage taxable income after early retirement and before Medicare, one needs to understand the ACA "modified adjusted gross income" (MAGI) rules. ACA health insurance "premium tax credit" (PTC) tax credit subsidies are related to the number of persons in a family (household size) and the forward expected household income (MAGI) for the year of family

health insurance coverage. The PTC is not a tax deduction, but a dollar for dollar tax credit. PTC tax credit subsidies through the IRS can be quite substantial and are available to families with from 100% to 400% of the federal poverty level (FPL).

In addition, the rules vary by the state of residence, so one also needs to understand the impact of your state's particular rules. For example, in the state of California, families with expected incomes below 138% of FPL are eligible for Medi-Cal, which is the state's version of Medicaid. If instead, you wish to have the lowest cost "Silver 94" ACA insurance policy which enables much wider access to medical care facilities, your expected family income needs to be within 138% and 150% of the applicable FPL. A "Silver 94" health insurance plan can cost very little with the federal ACA PTC subsidy. California recently has added an additional tax subsidy to make some health insurance policies have zero cost. In addition to very low or no premium insurance charges, these low cost policies also come with lower out-of-pocket maximums.

Understanding beforehand the ACA rules and any variations specific to your state could allow you to claim a level of anticipated income that would qualify you for lower cost family health insurance costs when you sign up. Health care insurance brokers associated with your state health insurance exchange can be helpful in this process, but not every such broker may have a sophisticated understanding of the rules and or be willing to help.

To find knowledgeable and helpful broker, you might wish to interview several, until you find one with in-depth knowledge. Also, it may be better look for a knowledgeable health insurance broker outside of the busy annual open enrollment period. Professional health insurance brokers are compensated by the state ACA exchange and should not charge you a fee for their services. You should understand that ACA market fees paid to brokers can vary significantly from state to state, so the more you understand the more likely you are to find a competent and helpful broker.

The next step is to ensure that your actual taxable income for a particular year will be close to the level that you had expected. Otherwise, when you later file your federal income taxes for that year and your actual income is higher, you will have to pay back some or all of the PTC subsidy that you were given during the year. The reverse is also true. Lower actual taxable income will increase your PTC tax credit when you file and you could get additional money back from the IRS.

This tax filing reconciliation process involves including a completed Form 8962 "Premium Tax Credit (PTC)" with your federal income tax return. Form 8962 and the instructions for Form 8962 are available at [irs.gov](https://www.irs.gov). Early in the calendar year when you will file your income taxes, your state's ACA health insurance marketplace will send you a Form 1095-A "Health Insurance Marketplace Statement" for the prior year. You should read it Form 1095-A and the instructions and make sure that your ACA market has provided accurate figures to you regarding your health insurance coverage and your PTC subsidies for the year. You will use the information on Form 1095-A to complete the Form 8962 that you file with your tax return. You do not file Form 1095-A with tax return, but instead you keep it with your tax records.

How does an early retiree manage their expected taxable income for the coming year so that their actual taxable income at tax filing time will be close? This all depends upon the ACA "modified adjusted gross income" (MAGI) rules. Over the years, the University of California (Berkeley) Labor Center has maintained a concise PDF summary of ACA MAGI rules found here:

<https://laborcenter.berkeley.edu/modified-adjusted-gross-income-under-the-affordable-care-act/>

In addition, you can and should read IRS publications from [irs.gov](https://www.irs.gov) to understand the details. For an overview, read IRS Publication 5187, "Affordable Care Act: What You and Your Family Need to Know." IRS Publication 5187, "Premium Tax Credit (PTC)" provides details on the PTC and includes worksheets. Form 8962, "Premium Tax Credit (PTC)" and Form 8962 instructions explain the tax filing process.

As an example, let us assume that a California couple of the same age (62) both retired near the end of the calendar year (2022). Near the end of 2022, they are signing up for 2023 health insurance through the Covered California health insurance marketplace. For a family of 2, 100% of the federal poverty level for 2023 is \$18,310. To qualify for a Silver 94 health insurance plan they would target income above 138% of FPL and below 150% of FPL or between \$25,268 and \$27,465. Therefore, they would choose about \$26,500 and state that that is their expected ACA MAGI income for 2023.

This couple has no earned income expected for 2023, but they have been preparing for early retirement and have an array of assets held in A) taxable accounts with a significant tax basis, B) traditional tax-advantaged retirement accounts, and C) Roth accounts. This couple has also implemented asset tax location optimization across their portfolio and hold their bonds in

traditional retirement accounts and stocks in taxable accounts and in Roth accounts. They also have planned for several years of \$80,000 per year living expenses held in cash in taxable accounts as a bridge to when they qualify for Medicare in three years.

Their portfolio is also cost efficiently invested in very low cost and broadly diversified index mutual funds, which tends to limit the level of unnecessary ongoing taxable capital gains distributions. Furthermore, they have decided to maximize the largest of their Social Security checks by that spouse waiting until age 70, while the other spouse will claim Social Security retirement benefits sometime after Medicare age. Since Social Security retirement income counts under ACA MAGI, they avoid that and both their checks keep increasing with this deferral.

So, how do they generate \$26,500 in ACA MAGI income for the year? First, they understand how much unavoidable income they might receive in the coming year related to interest on cash held in the taxable account and related to short- and long-term capital gains distributions related to stock index funds in taxable accounts. The later they wait in the year, the better they will be able to estimate likely interest and capital gains distributions. They live their lives and wait until near the end of the calendar year. If expected interest and capital gains distributions total \$6,500, then they need to recognize an additional \$20,000 in taxable income under the ACA MAGI rules. In the interim, they pay all of their living expenses using the cash held in taxable accounts. Since the tax basis of cash is 100%, no additional taxable income is generated by spending cash in taxable accounts to cover living expenses.

Later in the year this couple could make a choice between two options:

A) They could take a \$20,000 distribution from their traditional retirement accounts.

Under ACA MAGI rules that would bring their taxable income up to \$26,500 for the year. Since ACA MAGI is modified adjusted gross income before the standard deduction, when they file taxes their income will be \$26,500 and their 2023 standard deduction will be \$27,700, and they would owe nothing in income taxes. Since they had been paying their living expenses out of tax cash, they would deposit the untaxed cash from the traditional retirement plan distribution into a taxable bank account, replenishing cash.

B) They could instead do a \$20,000 Roth conversion of assets from a traditional retirement account. Under ACA MAGI rules Roth conversions count as a taxable distribution and that would bring their taxable income up to \$26,500 for the year.

Since ACA MAGI is modified adjusted gross income before the standard deduction, when they file taxes their income will be \$26,500 and their 2023 standard deduction will be \$27,700, and they would owe no income taxes. They would now have \$20,000 more in their Roth accounts.

By using the strategies above, this couple would have good quality ACA health insurance coverage for the year and their premium payments would be near zero. In contrast, if they had not planned and instead withdrew money from traditional retirement accounts to cover living expenses, they would have had to withdraw over \$90,000 to cover planned living expenses and income taxes on the withdrawals. They would also find that their expense budget did not include around the perhaps \$20,000 needed to pay for health insurance that was not subsidized either by an employer or by the ACA. They would have to slash other expenses or withdraw even more money and pay even more income taxes.

Because of ACA tax credits can exceed \$20,000, their value tends to dominate the trade-off between ACA tax credits and the value of doing additional Roth conversions prior to age 65 and Medicare. After age 65 and Medicare tends to be the sweet spot for doing Roth conversions for most people. Furthermore, you should note that if you retired early and you did not plan adequately for covering living expenses from cash or other taxable stock assets with a high tax basis, then using Roth assets can be a way of preserving ACA tax credits. Roth distributions are not taxable and do not count under ACA MAGI. This all depends upon individual circumstances, but an early retiree can spend Roth assets without driving up Obamacare MAGI and losing tax credits. Then after 65, that person might be able to restore some Roth assets through subsequent conversions.

A note on being careful with Roth conversion amounts and ACA premium subsidies: For example, if you have no taxable income and \$40,000 in deductions, you could do a Roth conversion of \$60,000 and have only \$20,000 of that be potentially subject to federal income taxes. However, the ACA premium tax subsidy system is based upon "modified adjusted gross income," which ignores any tax deductions. For ACA calculations, the entire \$60,000 will be considered income -- not just the \$20,000.

4.3: Social Security retirement claiming age considerations

When you approach your 60s, an understanding of the Social Security retirement system is important in making a more optimal retirement benefit claiming decision. Grabbing the first available monthly Social Security check at age 62, just because it is there for the taking, could be a highly sub-optimal financial decision. Some retirees misunderstand the adequacy of Social Security funding and think that they should take a bird in the hand at age 62. They think there might not be two or even one bird left in the bush, if they delay beyond age 62. That is not likely to be the case.

Even though the average age of Social Security claiming has gradually increased, it is still relatively low. In 1998, the average claiming age was 63.5 and it had risen to 64.9 by 2021. From the 2022 SSA Statistical Supplement, Table 6.B5.1, here are the 2021 claiming percentages by age: 62 (27.2%), 63 (6.5%), 64 (7.3%), 65 (11.5%), 66 -- regular claiming, mostly in the Full Retirement Age (FRA) month (18.8%), 66 -- disability conversions, which convert in the FRA month (14.9%), 67 to 69 combined (5.6%), and 70 (8.2%), which total 100%.

The Social Security system has been designed to promote fairness within a particular age cohort. An age cohort is everyone eligible for Social Security retirement benefits who reaches age 62 in the same month and has the choice of accepting benefits between 62 and 70. The lowest lifetime benefits are obtained in the month one reaches 62 and the highest monthly benefits accrue to those to wait until 70. Because Social Security retirement benefits receive Cost of Living Adjustments (COLA), a larger check also means larger COLA adjustments during retirement. Inflation protection can be quite valuable with retirement income or any income for that matter.

Of course, waiting until 70 means no check between 62 and 70. Thus, one needs alternative financial resources to pay the bills while delaying the receipt of Social Security payments. For each year of delay in claiming payments from Full Retirement Age (between 66 and 67) up to age 70, the monthly retirement check increases by 8% per year in real dollar terms. Thus, the monthly payment base for cost-of-living protection will also increase in tandem. Between age 62 and Full Retirement Age, the annual payment increases at a similar rate, but the calculation is different.

Social Security's age-related retirement payments breakeven point

To implement the concept of fairness within an age cohort, there is a breakeven point at age 84, when one compares the smaller check starting at age 62 to the larger check starting at 70 (and all those potential checks for the ages in between). In effect, the Social Security system is set up so that retirement payments are neutral for a single taxpayer with a life expectancy of 84 who could accept payments either before or after full retirement age and who would otherwise receive a 3% real dollar rate of return on invested assets.

Delaying the claiming age for the first Social Security retirement payment is an unusually attractive financial proposition for those who understand it, and can afford to take advantage of it. Since the breakeven point is roughly the average life expectancy, there will be winners and losers in the choice of claiming age. Those who delay claiming, but die early would not yet have reached the breakeven point, but in death that is unlikely to matter to them personally. On the contrary, the other half who delayed payments and live beyond the breakeven point will enjoy higher monthly Social Security income and greater inflation protection.

For single people with health problems that make survival until age 84 questionable, perhaps accepting payments before age 70 might make sense – even if that person has alternative financial assets to draw up until they reach 70. Others who have alternate financial resources that allow them to wait from one up to eight years beyond age 62 for their first payment might do better -- sometimes far better. For healthy, non-smoking, and more affluent men and women who have reached age 65 already, their individual life expectancy could be much higher than age 84. See the section titled "Longevity -- A fundamental challenge in lifetime financial planning" on the red-tabbed Retirement Planning worksheet.

Married couples' joint life expectancy favors claiming the largest check at age 70

For married couples, the life expectancy of the longest surviving spouse is the key consideration. Social Security claiming strategies need to take into consideration joint life expectancies, and among a couple that has already reached 65, the joint life expectancy of the longest-to-survive spouse could easily be into his or her 90s. In addition, if the spouse happens to be significantly younger, then the joint life expectancy of the surviving spouse could be even longer. The SSA's "Thinking of Retiring?" document states: "one in four 65-year-olds will live to age 90 and one in ten 65-year-olds will live to age 95."

After claiming is complete for both spouses on the basis of individual work records and/or spousal benefits and while both spouses live, a married couple will receive two monthly Social Security checks. Once one of them dies, the surviving spouse will have the right to continue receiving the largest of the two checks that they had been receiving, and the smaller check will go away.

For married couples, this is why it can make sense to delay claiming as long as possible up to age 70 to maximize the check of the spouse with the highest earning record. Since the breakeven age is modeled on a single lifespan, a married couple's joint longest-to-survive spousal age is likely to be much greater.

The claiming age decision for the lower earning spouse is more complex

For couples, the choice of claiming age for the spouse with the lower earnings record tends to be more arbitrary. There are Social Security claiming optimization applications available to license for a fee, but it is not clear whether they are really necessary, once a decision has been made to maximize the largest of the two potential checks.

Some of the complexity of the couple's claiming decision was eliminated after 2015. The US budget compromise enacted into law at the end of 2015, eliminated certain provisions, such as “claim and suspend” and “spousal benefits only” that had been used to enhance Social Security payments for couples.

Now, a spouse cannot receive spousal benefits, while simultaneously delaying his or her own benefits to accrue delayed credits. At whatever age one spouse claims benefits, he or she is “deemed” to be entitled to the maximum benefit from either the personal work record or as a spouse, but only if the other spouse has already claimed benefits. This means the lower earning spouse can claim benefits at an earlier age based upon his or her work record only, if the higher earning spouse has not yet claimed. The personal work record of the lower earning spouse will determine the benefits paid either until the other spouse claims benefits or perhaps for the remainder of their life.

In a later year, when the second higher earning spouse claims benefits, the lower earning spouse will receive the greater of either:

- a) the payment the lower earning spouse has been receiving based on his or her own work record adjusted for the personal age of claiming, OR

- b) a 50% spousal payment based on the Full Retirement Age payment entitlement of higher earning spouse, which will be reduced by a calculated factor, if the lower earning spouse claimed before his or her own personal Full Retirement Age.

Simple, huh? Note that if you have reached your preferred claiming age and intend to claim benefits, you should, of course, confirm with the SSA the actual rules that are being applied to you. Seek professional advice, if you need to. As a reminder, this discussion is informational and is not to be construed as financial or investment advice of any kind.

VeriPlan implements the logic summarized above automatically, so you can use various claiming ages and assumptions to make comparisons. Because VeriPlan assumes that both spouses would live to age 100, to make comparisons first set up your baseline model. Then, use VeriPlan's Comparison Tool to change and compare alternatives. One key will be to inspect any differences at various ages, focusing probably on the 80s. As usual, nothing is that simple to interpret. Near the end of this article are some links to webpages that analysis other factors related to the claiming decision. For example, the SSA model assumes a 3% real dollar compounded return on invested assets, and your asset allocation model return assumptions in VeriPlan will affect the breakeven age and may differ from the SSA's modeling assumptions.

Deciding the claiming strategy of the lower income spouse

The following discusses how the lower income spousal claiming rules mentioned above might impact claiming age. (To simplify, note that the following discussion assumes both spouse are the same age.) Whenever a spouse claims before their own Full Retirement Age there is a lifelong reduction in benefits paid up to the point that the first spouse dies. If the lower earning spouse claims before their personal FRA on their own work record their payment is reduced. If their spousal payment might be larger than their own payment, that spousal payment is based on the other spouse's FRA age dollar benefit, but would also be reduced by the earlier claiming of the lower income spouse.

In either case, claiming before the lower income spouse's FRA means a reduced benefit. If that is an important consideration, then wait to claim until at least the lower income spouse's personal FRA, and there will be no reduction.

After the lower income spouse reaches his or her personal FRA age, then the comparison differs. The lower income spouse will be entitled to 50% of the higher earning spouse's dollar

benefit at the FRA of the higher earning spouse. However, that 50% spousal payment will not begin to be paid, until the higher earning spouse claims, perhaps at age 70.

If the lower earning spouse delays claiming beyond the personal FRA age, then those benefits will grow. So, the tradeoff will depend upon the potential payments. If no matter what, the 50% spousal benefit will be higher at age 70 than the payment of the lower earning spouse, then delaying the claim does not buy anything. The lower earning spouse could claim personal benefits at his or her FRA (assuming that is close to 67) and would receive three years of Social Security benefit payments, before getting switched to the 50% spousal benefit. Therefore, if a much lower earning spouse would switch to spousal payments at 70, claiming at personal FRA would seem sensible.

However, the lower earning spousal claiming age decision becomes less clear, when the lower earning spouse's work record earnings are closer to that of the higher earning spouse. If the difference in their earnings records is smaller, then if one spouse waits until 70, the other spouse would make a claiming decision similar to a single person. They could take benefits earlier and receive a reduced payment until the first spouse dies. They could delay payments beyond personal FRA and receive higher payments and higher COLA inflation protection. If both spouses live beyond the breakeven point, then waiting was an increasingly better decision. If one spouse dies earlier, at least they had maximized the largest check by waiting until 70.

What if you think you have claimed Social Security retirement benefits too soon?

The SSA used to allow a multi-year Social Security "do-over," but that option is no longer available. In December of 2010, this "do over" was restricted to a one-time exercise and only within a one-year period after having initially started benefits. This is achieved by withdrawing one's application for benefits. All payments already made to you and to family members must be repaid. Then, you can apply at a later age for recalculated, higher benefits.

Another Social Security provision allows you to suspend your benefit payments and earn delayed retirement credits, while you are not receiving benefit checks. According to the SSA website, "if you have reached full retirement age, but are not yet age 70, you can ask us to suspend your retirement benefit payments. By doing this, you will earn delayed retirement credits for each month your benefits are suspended which will result in a higher benefit payment to you. ... If you voluntarily suspend your retirement benefit and you have others who receive

benefits on your record, they will not be able to receive benefits for the same period that your benefits are suspended." You will also receive higher dollar COLA inflation adjustments, because of the larger check.

Other financial opportunities arise with delayed Social Security claiming

Those who delay payments have the opportunity to draw down, much more tax-efficiently, a greater amount of assets held in traditional tax-advantaged employer-sponsored plans and in IRA retirement accounts, during the period between when they stop working and age 70. Taxation of Social Security retirement benefits is discussed on the yellow-tabbed Taxes worksheet. If you delay taking the largest of your Social Security benefits until age 70, then you can draw down much more of your traditional retirement assets and not have to pay income taxes on Social Security benefits.

Drawing down traditional tax-advantaged retirement plan and IRA assets in this "income gap" period can significantly reduce Required Minimum Distributions (RMDs) after age 73 or 75, depending upon which initial RMD age may apply to you. (See the RMD section of the yellow-tabbed Taxes worksheet for details.) Drawing down tax-advantaged accounts can have other benefits, such as reducing or eliminating future Medicare IRMAA subsidy reductions, if your future retirement income would have been higher.

Roth conversions are a similar strategy that can be done more tax-efficiently, when the Social Security claiming for the largest check is delayed until 70. If a person has other high tax basis assets to live on, they can also reduce future RMDs by doing a series of low income tax Roth conversions instead. See the yellow-tabbed Roth Analysis worksheet.

Finally, Michael Kitces published a May 1, 2012 Advisor Perspectives commentary titled "The Asymmetric Value of Delaying Social Security Benefits" that is worth reading. He summarized his observations this way: "In addition, delaying Social Security not only hedges longevity, it also hedges two other adverse scenarios that are otherwise harmful to the retiree: unexpectedly high inflation and unexpectedly low returns. ... the true value of delaying Social Security is a triple-benefit of hedging longevity, poor returns, and high inflation, because of the asymmetrical way that delayed higher benefits compound in the later years. It won't necessarily win for every client, but as any good hedge would, it wins the most in the times the client will need it the most."

This links to "The Asymmetric Value of Delaying Social Security Benefits" by Michael Kitces:

<https://www.advisorperspectives.com/articles/2012/05/01/the-asymmetric-value-of-delaying-social-security-benefits>

4.4: Spending traditional retirement assets, while delaying Social Security payments

During lifetime projections, when there some years of negative cash flow, VeriPlan will assume that cash, bond, and stock financial asset withdrawals will be taken first from taxable accounts, next from traditional tax- advantaged retirement accounts, and lastly from Roth tax- advantaged retirement accounts. However, sometimes withdrawing assets from traditional retirement accounts would be preferred over using taxable assets first. The early years of retirement can be one of those periods.

In the early years after retirement, a retiree might spend taxable account assets and the associated taxes paid could be very low. Yet, a tax optimization opportunity could be missed to instead draw down traditional retirement assets. One does not need to wait until Required Minimum Distributions (RMDs) after age 73 or 75 to begin withdrawing from traditional tax- deferred retirement accounts. (The RMD starting age that will apply to you depends upon your current age. See the RMD section of the Taxes worksheet.)

Drawing down some traditional tax-advantaged retirement account assets sooner can reduce both future RMDs and the income taxes on those RMDs. Furthermore, if a retiree has accumulated substantial traditional retirement account assets and/or has additional retirement income sources, they might eventually become subject to costly reductions in Medicare insurance subsidies, which are known as IRMAA. While IRMAA is really a reduction in Medicare insurance premium subsidies for high income persons, it feels just like a tax increase.

Several factors can play into this decision, including

- A) the initial acceptance age of Social Security retirement benefits between ages 62 and 70
- B) whether one has optimized the overall investment portfolio for asset tax location
- C) how healthcare insurance will be funded prior to Medicare, when retirement is early
- D) how much taxable account assets one has that carry a relatively high tax basis
- E) if one might also prefers to convert some traditional retirement assets into Roth assets

Delaying Social Security

Regarding drawing down traditional tax-advantaged account assets while delaying the age that Social Security payments are first taken, the benefits are relatively obvious. The later one accepts the initial Social Security retirement check between age 62 and 70, the larger that Social Security check grows to be. Since Social Security checks also receive cost of living adjustments (COLA), a larger check is repeatedly more valuable. COLA inflation protected retirement income is valuable. Inflation protection is not often found with other retirement income payments.

When Social Security retirement benefits are deferred to or toward age 70, more traditional retirement account dollars can be withdrawn without those withdrawals causing more of your Social Security retirement income to become taxable. (For more information see the part of Section 4 of the Roth Analysis worksheet titled: "Your federal income taxes may not increase smoothly". That section discusses how other income can affect taxation of your Social Security benefits and can also affect Medicare IRMAA insurance subsidy reductions.)

If you are already receiving Social Security payments, you might think this is a lost opportunity, and it could be for some persons. However, if you did wait until your Social Security full retirement age to start your personal benefits, you may be able to suspend payments and resume them later. In the interim, you would not have Social Security income that could be exposed to taxation. While you suspend your payment, you will earn delayed payment credits. Thus, your delayed check would also grow larger, when you could resume payments up to age 70.

You might have heard about certain Social Security "do over" strategies, but these tactics no longer exist. At the end of 2010, the Social Security Administration eliminated the "do-over" strategies of repaying all Social Security payments and restarting payments at a higher level. In December 2010, the Social Security Administration began to restrict do-overs to under one year during the first year of benefits with no repeats.

Asset tax location optimization

An optimal lifetime "tax location" strategy can influence the relative balances of taxable and tax-advantaged account assets that would be held by the time one retires. See the first article on

the Optimizations worksheet for detailed information on optimization with respect to asset tax location.

Relative asset class growth rates are the key point, when asset tax location is applied to traditional retirement accounts and RMDs. In general, tax location optimization puts slower growth bonds and cash in traditional retirement accounts, while avoiding ordinary income taxes. Therefore, account balances grow slower and reduces RMDs and taxes. You do not lose the growth, it just shows up more in your taxable and Roth account assets.

Conversely, stocks, which have historically appreciated much more, are held in taxable accounts and in Roth retirement accounts. In taxable accounts, stocks benefit from being taxed at much lower federal long-term capital gains tax rates. And, stock appreciation in Roth accounts is not taxed at all.

Paying for healthcare insurance, when retiring before Medicare

Early retirement health care insurance before Medicare, is a "gotcha" area to be aware of. This is discussed in detail in the section of the Optimizations worksheet titled: "Early retirement health care expenses and ACA tax subsidies before Medicare."

To summarize the Affordable Care Act subsidies subject, ACA insurance can be very inexpensive, but higher taxable income reduces ACA subsidies. Withdrawals from traditional retirement accounts count as income, which reduces the ACA tax subsidies. Therefore, early retirees need taxable assets with a high tax basis to live on, so that taxable income can be reduced.

Roth Conversions

Some of the motivations to pay lower taxes earlier in retirement, while reducing future RMD taxes and IRMAA costs are shared motivations for doing Roth conversions. The focus of this article was the opportunity is to draw down traditional retirement account assets to pay for living expenses.

With Roth conversions, the goals are similar, but the assets from traditional retirement accounts into Roth accounts and not into spending. Therefore, to do Roth conversions one does need more taxable account assets with a higher tax basis to pay living expenses. The red-tabbed Roth Analysis worksheet covers these trade-offs in detail, so look there for more information.

4.5: Compound growth factors

On the Internet, attributing accurate quotations to a particular person about the value of compound interest and compound investment growth is a fool's errand. Buffett, Bogle, Einstein, etc. all have supposedly praised compounding to the heavens. The value of compounding is clear to experienced individual investors, as well as famous ones.

The real question is "how does one benefit from compound investment growth? The elements of success are: 1) an underlying economic value proposition for the asset that is sustained over time, 2) a personal investment in the asset, 3) time and persistence (a lot of it), and 4) preservation of your interests to avoid giving away returns through excessive expenses or unnecessary taxation.

The graphic below provides a compound growth factor table that can be helpful in understanding compound real dollar investment growth varied by different growth percentages and ten-year holding periods. Most calculators have a "y to the x" function that you can use to calculate compound growth factors for any growth rate and period. An example of how to use this table would be if you have an initial \$10,000 investment and wish to estimate how that asset might appreciate at a 5% annual real dollar growth rate over 30 years. The 5% compound growth factor after 30 years is 4.32. Multiply \$10,000 times 4.32 to project a value of \$42,300.

Compound Growth Factors

Multiply the initial value by the appropriate growth factor

Source: Any calculator's "y to the x" function; e.g. $1.06^{30} = 5.74$

Annual Real Dollar Growth %	After 10 Years	After 20 Years	After 30 Years	After 40 Years	After 50 Years
1%	1.10	1.22	1.35	1.49	1.64
2%	1.22	1.49	1.81	2.21	2.69
3%	1.34	1.81	2.43	3.26	4.38
4%	1.48	0.11	3.24	4.80	7.11
5%	1.63	2.65	4.32	7.04	11.47
6%	1.79	3.21	5.74	10.29	18.42
7%	1.97	3.87	7.61	14.97	29.46
8%	2.16	4.66	10.06	21.72	46.90

Because VeriPlan uses real, constant purchasing power dollars with inflation removed, the illustrative chart above stops at 8%. There is not much point in speculating about higher compounded annual return percentages, when stocks tend to be the high return / high risk asset class. A 100% US stock portfolio has averaged long-term close to a 7% compounded real dollar return. Few people could or should tolerate the fluctuations involved in holding a 100% stock investment portfolio for decades.

How might you interpret the long-term compounding potential of an initial investment? In historical real dollar terms, a 60% stocks, 30% bonds, and 10% cash "balanced" investment portfolio held long-term and rebalanced annually averaged close to 5% annually on a weighted average, compounded real dollar return basis. Therefore, \$10,000 invested at the outset might have grown on average to \$43,200 over 30 years, according to the 4.32 compounding factor in the table above.

However, the real dollar return on this balanced portfolio is prior to investment costs and taxes. The sad fact is that the average investor has paid total investment costs of between 1% and 2% annually, and across all these investors they could only have achieved the market return on

average. Some did better and some worse, but the expenses they paid to the industry did not buy better returns. These 1% to 2% average fees were the cost of participation -- particularly the high cost of participation to more active investors. Adding to this drag is taxes on portfolio returns and transactions. There are more and less tax efficient ways to manage portfolios, but too often tax-efficiency is neglected.

Thus, it might be more reasonable given these average investment costs and taxes to shave two percentage points off the 5% real dollar balanced portfolio return. Instead of 5%, you would use the 3% line in the table above. You will find that the compounding factor is 2.43 after 30 years. Due to the drag of excessive costs and taxes, the \$10,000 grew to only \$24,300 rather than \$43,200 -- a huge difference of \$18,900! The total growth potential above the initial \$10,000 was \$33,200, but the average investor gave away \$18,900 or 57% of that potential growth over 30 years!

This is why cutting investment costs to the bone and paying attention to investment tax-efficiency is so important. Excessive investment costs can be huge and most of these costs are avoidable. Improving investment tax efficiency requires attention, but it is not difficult. For more information on cutting costs and taxes, see the yellow-tabbed "Investment Costs" worksheet and the red-tabbed "Optimizations" worksheet.

4.6: Tax-exempt municipal securities and VeriPlan's return assumptions

Some cash and fixed income investment assets are not subject to federal and/or state income taxes. Known as tax-exempt municipal securities, these securities may be issued by a variety of entities and their tax-exempt status is related to whether they provide a significant public benefit. Normally, the pre-tax yields of municipal bonds are lower than their fully taxed alternatives. Bond market prices respond to supply and demand for different types of government debt that may or may not be subject to taxation at varying levels.

Rational investors in higher tax brackets buy these tax-exempt bond market securities, because they expect to achieve a higher net return after their income taxes are taken into account. Buyers of these debt instruments adjust their demand in relationship to the tax advantages that they expect. The lower average pre-tax yields paid by these markets reflects the improved after-tax returns anticipated by these high income tax bracket buyers.

Optimize for asset tax location, before evaluating a possible muni advantage

Tax-exempt municipal bonds have a "sweet spot" only for certain investors. Higher income investors in higher tax brackets might achieve a better after tax return. In addition, more appropriate investors would tend to be those with an asset allocation strategy that is skewed more heavily toward bonds and cash, and who own relatively more taxable assets and relatively fewer traditional tax- advantaged retirement assets.

Also, just because municipal bonds might be tax advantageous in some projection years with higher earned income, these bonds might be less lucrative in other years following retirement. That is why municipal bonds are one type of investment asset not to "set and forget" and habitually hold in one's portfolio.

The decision to hold municipal bonds would rationally follow other portfolio optimizations, in particular, optimizing for asset tax location. Asset tax location optimization is explained in detail at the top of this worksheet. For example, the case for muni bonds would be weak, if a high income earner in high tax brackets held 50% of assets in taxable accounts and 50% in traditional tax- advantaged accounts and also had a strategic asset allocation of 50% cash and bonds and 50% stocks.

Asset tax location optimization would mean holding all these bonds and cash (except for transactional cash) in traditional retirement accounts -- where they are already not taxed in the near-term. Taxable bonds would be preferred over munis in retirement accounts, because of their generally higher returns. Equities would be held in the taxable accounts, where they would benefit from lower long term capital gains tax rates, especially if stock holdings were more passive and long-term.

Instead, if this investor held muni bonds in their taxable accounts, they might could in some years after income taxes were considered. However, the lower long term capital gains tax rate advantage would be lost permanently on all of the stock assets held in traditional tax-advantaged accounts. Furthermore, long-term historical stock returns have far outpaced historical bond returns. Thus, stock asset balances in traditional tax advantaged accounts would tend to balloon unnecessarily. This would drive up RMDs and associated income taxes later in retirement.

VeriPlan projections use taxable bond / fixed income asset class returns

VeriPlan's projections use historical, taxable asset class rates of returns, even if you hold tax-exempt assets. If your future high taxable income situation might provide the opportunity, in some projection years you might achieve better than projected results by holding tax-exempt securities. However, the reverse could also be the case, if your tax savings do not overcome the market's normal discount on tax-exempt fixed income securities.

Regarding asset taxes, VeriPlan's standard projection method is to project pre-tax cash, bond, and equity asset class returns for taxable assets. VeriPlan projects pre-tax returns based on the compounded historical asset class returns, which are discussed on the Risk & Returns worksheet. VeriPlan then reduces these total returns by the taxes that would apply in each projection year based upon your particular tax situation at the time.

VeriPlan taxes any asset yields that must be recognized for tax purposes in the current year. It defers taxes on yields, when allowable. VeriPlan uses your current federal, state, and local variable and/or flat tax rates, and it takes into consideration projected deductions, tax basis, and other tax related items that you enter on the Financial Assets, Taxes and Tax-Advantaged Plans worksheets.

For your cash and bond/fixed income assets, VeriPlan taxes their total projected yields each year, if these assets are held in accounts that are subject to current taxes. No short- or long-term capital gains or losses are assumed on cash or fixed income assets. In practice, only fixed income assets could have any capital gains or losses. However, capital gains and losses on fixed income assets are usually a relatively small part of total yields, and these capital gains and losses tend to cancel out over time, as interest rates trend downward and upward.

Using this approach, VeriPlan's projection methods avoid concerns about whether you should own taxable and/or tax-exempt fixed income assets. VeriPlan only requires that you supply the current fair market value of the bond assets that you hold. Coupon rates, current yields, and taxability considerations regarding your current holdings are not required. While you would be able to provide such details for your current holdings, there is no way that you could estimate the taxable versus tax-exempt composition of your bond portfolio holdings years ahead.

VeriPlan's after-tax projection results on taxable assets should be comparable to the net results achieved from buying lower return tax advantaged bonds and then paying lower taxes -- if you were to hold tax-exempt instruments appropriately, which many individual investors do not. In fact, VeriPlan's approach may be advantageous, because VeriPlan projects capturing net after-

tax returns on taxable market yields across your lifecycle that are in line with your evolving future tax situation.

Instead of assuming that you will always hold some lower yielding tax-exempt bonds, that may or may not be beneficial, VeriPlan projects that you will always have access potentially to the bond market's higher taxable returns. If your tax rates are low, you will do better. If your tax rates are higher at points, VeriPlan will assess higher tax rates. Each year in the future, you will always have the option to purchase tax-exempt bonds, when they are financial appropriate. If you do, periodically evaluate that decision to insure you will continue to benefit on an after-tax basis.

How VeriPlan projections tax stock/equity assets

Regarding stock and equity assets, differences in taxability are less important. Federal, state, and local governments can issue debt, but cannot issue equity ownership shares. You simply cannot directly buy ownership of the government. (The subjects of lobbying, money equals speech, campaign financing, etc. are beyond the scope of this commentary.) In effect, all equities are similar from a taxability standpoint. For example, the qualified dividend paid by one corporation is taxed the same as the qualified dividend paid by another.

Of course, there are tax-exempt equity buyers, such as pensions and trusts, which are not subject to the same taxes as individuals. Overall, the actions of these tax-exempt investors can affect market values. Nevertheless, their impact on equity prices tends to be general rather than heavily skewed toward selected types of equities, as in the bond markets.

Concerning the stock and equity asset class, VeriPlan's method of projecting pretax returns and then taxing returns according to your projected tax situation is the appropriate model for individual investors. Using the right-hand columns in each row of your stock/equity entries on the Financial Assets worksheet, you can control current year distributions taxed as either ordinary income or long-term capital gains. Then, VeriPlan will tax these proportions of your expected returns that you expect to receive in the current year.

Any remaining unrecognized returns for the current year will be deferred, whether or not they are held in a taxable or tax-deferred account. These deferred returns will only be taxed as long-term capital gains in the future, if they must be withdrawn from a taxable account. When the appreciated equity assets are withdrawn from a tax-deferred account, VeriPlan will assess ordinary income tax rates rather than long-term capital gains rates.

Remember to enter your current tax basis for the assets you own. Then, taxes on asset withdrawals will be projected appropriately. Also, take the time to enter your investment costs. Then, you can analyze their projected long-term impact. Excessive investment costs can be huge, and you could give away too much of your future returns unnecessarily.

4.7: VeriPlan's financial viewpoints

The design of VeriPlan is based on durable findings from the financial planning and investment research literature. In the rough and tumble world of personal financial planning and investing, you are much better off with a stable belief system or point-of-view that keeps you focused and on track.

Explicitly or implicitly, every financial tool has a point-of-view. If you use a personal financial decision support tool like VeriPlan, you should understand and agree with its point-of view.

VeriPlan can generate lifetime projections, which are hypothetical illustrations that model any family's financial affairs. VeriPlan's functionality reflects a belief that, if they could, individuals would follow scientifically-grounded, savings-conscious, risk-adjusted, cost-effective, and tax-efficient financial planning and investment strategies. VeriPlan's simple premise is that you want to get the most out of your money. While this objective is a 'no-brainer,' successful results must flow from appropriate, well-constructed strategies implemented conscientiously over a lifetime.

Because of the importance of a financial point-of-view, this *VeriPlan User Manual* includes these viewpoints, which are discussed elsewhere in this book. Follow the links provided below.

These viewpoints underlie the design of VeriPlan. The links take you to other sections of this book.

THE PROBLEM: [Straight answers about personal financial and investment planning are hard to find.](#)

THE SOLUTION: Follow only financial and investment strategies that are: a) scientifically grounded, b) completely passive, c) thoroughly diversified, d) savings conscious, e) risk adjusted, f) cost effective, and g) tax efficient.

- 1) [Your financial and investment strategies should have a scientific basis](#)

- 2) [Your personal earnings, expenditures, and savings are the most important determinants of your family's long-term financial wealth](#)



- 3) [There is no such thing as risk-free money from investing for individual investors](#)
- 4) [You need to allocate your financial assets in a manner that reflects your relative tolerance for investment risk.](#)
- 5) [You need to stay in the securities markets to earn market risk premiums](#)
- 6) [Build asset buffers to protect yourself from market volatility](#)
- 7) [You should always completely diversify your portfolio](#)
- 8) [Own investment funds and not individual securities](#)
- 9) [Spending your valuable time on the wrong financial activities is just plain bad for you](#)
- 10) [Passive, index-oriented investment strategies tend to be superior, because they narrow the range of outcomes, and therefore, they reduce the total investment risk associated with your portfolio](#)
- 11) [Unfortunately, you cannot reliably identify beforehand professional investment managers who will deliver superior performance in the future, and you cannot hire them at a price that is lower than their potential value-added](#)
- 12) [Never invest solely because of superior past performance](#)
- 13) [Tax-advantaged investing is very good for most people at most times](#)
- 14) [Excessive visible and hidden investment costs can unnecessarily and dramatically reduce the potential value of your portfolio](#)

- 15) [Direct and indirect costs advisory costs and the expected value of the strategies that you are encouraged to use will determine your total return from advisory services](#)
- 16) [If financial behavior control is difficult for you, then carefully hire a good advisor](#)
- 17) [Do not ignore other risks that could destroy your best-laid financial plans](#)
- 18) [Your portfolio assets are simply your evolving estate. You need to prepare appropriately for the day, when your assets become your estate](#)
- 19) [Nobody and no tool can predict the future](#)

4.8: Scenario planning for an uncertain future

NOBODY CAN PREDICT THE FUTURE. VeriPlan's PROJECTIONS ARE HYPOTHETICAL IN NATURE, DO NOT REFLECT ACTUAL INVESTMENT RESULTS, AND ARE NOT GUARANTEES OF FUTURE RESULTS.



VeriPlan's lifetime projections are hypothetical illustrations. VeriPlan mathematically computes its projections from your personal financial data inputs and from your adjustable settings on its various tools. This *VeriPlan User Manual* provides you with details about how its projections are developed.

VeriPlan's projections model your financial affairs and your intentions regarding the future. As internally coherent scenarios, VeriPlan's projections incorporate:

- * your projected earnings, expenses, savings, debts, and assets

- * long-term historical returns and risk premiums for the cash, bond, and equity asset classes
- * a model of your current federal, state, and local taxes
- * measurements of your investment costs

To develop a wide range of more pessimistic and more optimistic projection scenarios, VeriPlan allows you to adjust realized historical return rates both proportionately and arbitrarily. This scenario planning capability helps you to evaluate how you might manage over the long-term, if future asset returns were to deviate consistently from the long-term historical trend.

The future is fundamentally unpredictable. Nobody can predict what will happen. You should not develop any false comfort that you can predict the future, nor should you expect that any financial tool can predict it for you. VeriPlan neither predicts nor forecasts. Furthermore, VeriPlan does not assess probabilities about the future, which is another form of prediction. While probabilistic features could be added, VeriPlan does not provide probability assessments primarily due to the very significant potential of user misunderstanding.

VeriPlan's lifetime graphics and data tables show coherent projection scenarios for your particular data. We hope that you will find them to be useful in your financial planning. However, we can give you no assurance whatsoever that your future financial affairs will turn out to be anything like the projections that VeriPlan develops for you.

Despite the future's unpredictability, you still have significant control over your financial destiny. You can quickly use VeriPlan to generate a wide range of personally customized projection scenarios. You can judge whether you would be able to manage in each scenario and whether you would be satisfied doing so. You can adjust present-day behaviors in ways that would permit you to prosper under as wide a range of VeriPlan's outcome scenarios as you would like.

If you behave financially now in manner that increases your ability to manage wider range of VeriPlan's illustrative scenarios, then you may have more financial choices as you move through life. Over time, if things turn out better than you had anticipated in your financial planning, then you could gradually ease up on your self-imposed constraints.

On the contrary, if you live in a more profligate manner financially, you still might get lucky and skate by. However, the future might turn out to be significantly less rewarding than you now expect. If you do not constrain yourself as you move through life, then you could be forced to cut

back much more severely in the future. In some circumstances, recovery would simply be impossible, and your desired lifestyle could slip out of reach in the future.

This is simply tortoise and hare logic. The tortoise won the fabled race in a slow and steady manner. The hare could have won easily, but wasted too many opportunities along the way. In the end, the hare just got too far behind. Both made important personal choices as the race proceeded. For more information on this subject, prefer to the Risk & Returns worksheet.

4.9: VeriPlan's design and discounted cash flow modeling

Introduction

VeriPlan is a family-focused lifetime cash flow projection modeling tool for personal financial decision support. This article compares VeriPlan with discounted cash flow modeling methods taught in business management courses and used in businesses to evaluate potential investments.

Those with a business management background might ask how VeriPlan's cash flow projection methods compare to a discounted cash flow view of a family's financial lifecycle. While there are differences, VeriPlan can be reconciled with discounted cash flow modeling methods. However, because VeriPlan is fully integrated and automated, it does much more.

VeriPlan automatically develops a full range of lifecycle projection scenarios for any combination of assumptions and for any period of years between the initial age of Earner #1 and age 100. In contrast, discounted cash flow models tend to be static and focus on only one period of years for analysis.

When professionally-managed businesses evaluate potential projects, investments, and other ventures, a ten year discounted cash flow model typically will be developed. Discounted cash flow models project estimated future cash flows into the future with an increasingly wide band of uncertainty.

To estimate the net present value of a planned venture, discounted cash flow valuation methods adjust current and future positive and negative cash flows by a valuation-discounting factor. Financial judgments about the potential success or failure of a project pivot primarily on management's views regarding the likelihood that the projected cash flows would materialize as planned.

The values of all future cash flows are discounted to the present by a cost of capital discount rate. This discount rate is usually the cost of capital, and it may or may not also include an added project risk factor. Alternatively, a range of different cash flow scenarios will be developed to calibrate the expected risk. Then, each of these scenarios would be discounted using the same cost of capital without any added risk factor.

A flexible, automated, and adaptable financial decision support tool

VeriPlan is a highly automated projection engine that uses constant purchasing power dollars. In effect, as its discount rate, VeriPlan begins with long-term historical compounded annual CPI inflation. Then, VeriPlan adds projected annual asset class returns, while taking into account needed asset additions and withdrawals associated with positive or negative family cash flow.

When projected financial asset holdings are positive, annual asset class returns are projected using the long-term non-inflationary risk free rate of return plus historical financial asset class securities market risk premiums. Total gross annual returns are reduced by taxes and investment costs to project net returns. VeriPlan allows the user to adjust VeriPlan's rate of return assumptions either systematically or arbitrarily.

While VeriPlan's methods have similarities to discounted cash flow modeling, it uses distinct financial projection methods. At its core, VeriPlan is an automated, customizable, and changeable cash flow modeling engine. It can instantly develop coherent financial lifecycle scenario projections for individuals and their families. Projections are based on a user's description of their current financial situation and on their financial planning intentions for the future.

In modeling key factors that affect personal financial success, VeriPlan's projections:

- * use real, constant purchasing power dollars that extract general CPI inflation,
- * project net annual family profit or savings after expenses, debts, and taxes, and
- * grow portfolio values by user-adjustable historical real dollar asset class risk premiums that are net of both capital gains taxes and user-adjustable investment costs.

VeriPlan's implied annual discount rate equals historical CPI inflation. Historical average real dollar asset class risk premiums, which securities markets historically have paid, are the expected investment return on retained assets.

In the face of the fundamental uncertainty of the future, VeriPlan draws strength from its full integration and instantly updatability by the user. Users can control any values and assumptions related to projecting annual income, expenses, savings, taxes, and debts. They can adjust projected asset return rates, investment costs, and taxes. Every variable in VeriPlan is integrated with all other logically impacted variables.

By using real dollars versus nominal or inflationary dollars, VeriPlan projects a constant purchasing power consumption value for assets retained in any projection period. In addition, when the user might expect that certain inflationary factors might change at a rate different from the core inflation rate, VeriPlan allows the user to make relative inflation adjustments. Examples include adjusting percentage growth rates relative to inflation for earned income, ordinary expenses, and major planned expenses.

By adopting a real dollar modelling framework, it is not necessary to use explicit inflation assumptions for most of VeriPlan's calculations. However, in a few circumstances an explicit inflation assumption is required. In these situations, VeriPlan uses the compounded or geometric long-term historical U.S. CPI inflation rate for the past ninety plus years, which has averaged very close to 3%.

For example, future repayments on current debts would be made in nominal dollars. Therefore, VeriPlan first converts future debt repayments into real dollars using this 3% inflation assumption. Then, it joins these negative cash flows with the other negative and positive cash flows in VeriPlan.

VeriPlan provides a variety of fully integrated real dollar projection methods related to income, living expenses, debts, and taxes. These user-adjustable parameters model financial factors over which most individuals can exert reasonable control throughout their lives. While still uncertain in many respects, human initiative means that people usually can exercise substantial control over future earned income and expenses. This is the family equivalent of a professionally managed business entity.

Users can make ongoing adjustments to income, expenses, and savings throughout their lives, as may be required. While employment can be interrupted involuntarily, tax rates might change, and other risks materialize, most people usually will have significant control over these income and expense levers, which are very important to personal savings rates and financial success and failure. Through intelligent and proactive personal financial planning, people can

make ongoing adjustments that can increase the likelihood that they will have a sustainable living standard throughout their lives.

A VeriPlan user can re-evaluate the plausibility of assumptions and test the effects of using different assumptions. Evaluating the plausibility of each VeriPlan input parallels the cash flow estimation process that is required to develop a discounted cash flow model for a business project or investment proposal.

If businesses evaluate a project with similarities to other projects that they previously managed successfully, then they can develop cash flows that are more detailed. They might reasonably have increased assurance that these modeled cash flows would be controlled as anticipated. Furthermore, upon implementation, initial project plans are always adjusted in light of new positive and negative information.

VeriPlan is very similar in that projections can be updated easily to reflect new information and new decisions. VeriPlan avoids planned obsolescence and can change, as personal planning needs change. Because important projection assumptions such as tax rates and investment returns are all user-updatable, VeriPlan can remain a relevant financial decision support tool for years

Overview of VeriPlan's asset valuation system

Projected annual cash flows are net of projected income, expenses, debts, taxes, and investment costs. VeriPlan automatically maintains the user's lifecycle asset allocation strategy using one of five user selectable methods. It automatically rebalances across asset classes at the beginning of each projection year. Taxes are projected automatically based upon the user's current federal, state, and local tax regime, including other taxes, exemptions, deductions, and any tax basis.

VeriPlan uses this general investment portfolio returns model

At the end of each projection year, VeriPlan automatically rebalances cash, bond/fixed income, and stock/equity financial assets according to one of five selectable asset allocation methods provided, that allow parameter adjustments. The first rebalancing occurs at the end of the first projection year.

This permits the user to understand clearly how the current portfolio may deviate from their chosen lifecycle asset allocation model. It provides ample time to rebalance the current, real-life

financial asset portfolio during the first year in a cost-efficient and tax-efficient manner. If portfolio changes are made more quickly, the user can simply update asset entries on the Financial Assets worksheet to reflect these asset purchases and sales.

Driven by projected net annual savings or dis-savings, asset additions or withdrawals are applied automatically to financial assets annually in accordance with the chosen asset allocation method. Preferences for taxable assets, traditional retirement assets, and Roth retirement assets are automated following the different rules that apply to these accounts.

Gross investment returns are projected using long-term historical asset class risk premiums. Gross projected returns are reduced automatically by the investment cost structure of the current portfolio or by alternative settings for maximum investment costs the user is willing to pay.

Federal, state, and local income taxes and other taxes, deductions, and asset tax basis are managed automatically. Total taxes are assessed according to variable projected taxable income. Any short-term and/or long-term capital gains taxes that would be payable on withdrawals or fund distributions are assessed automatically. In years when projected net income or cash flow would be positive (negative), these cash flows are reinvested (withdrawn) automatically.

Residential real estate, rental real estate and other property may lack current and objective fair market values that can be measured from real-time securities markets, and these assets are bought and sold infrequently. Interests in limited partnerships, hedge funds, and other alternative private capital investments may not have any resale market and may be subject to significant lockup periods and sales disincentives. Similarly, if one has an actively-managed private business, it could take years to prepare to sell.

Therefore, VeriPlan treats real estate and other valuable property differently from the more liquid cash, bond/fixed income, and stock/equity financial asset classes. For non-publicly traded property and other assets, VeriPlan bases projections on the user's judgmental estimates of current fair market values and growth rate prospects for these assets. Then, VeriPlan automatically projects future values for property and other assets. Projected appreciation is reduced by the debts, taxes, business expenses and other costs that the user indicates.

All net cash flows related to earned income, withdrawals, living expenses, debt payments, ordinary taxes, and financial asset capital gains distributions are added to or taken from cash, fixed income, and equity financial asset classes. Real estate property and other assets are assumed to be held perpetually, unless the user plans a future property sale or purchase.

VeriPlan provides automatic facilities for the future purchase or sale of residential real estate, rental real estate, and other valuable properties. These features automatically manage associated transactions related to down payments, debts, ordinary and capital gains taxation, depreciation, tax basis, and other business factors, including purchase and sales fees.

VeriPlan generates a series of multi-period projections

Discounted cash flow modeling methods provide a single valuation estimate for an arbitrary number of years. VeriPlan provides an annual series of values across one's potential lifecycle and across all the assets held in the various asset classes. VeriPlan's lifecycle projections are akin to a chained series of annual net present value calculations discounted at the inflation rate and growing or declining in real dollar terms based on investment class risk premium returns.

For each additional year of age, VeriPlan effectively projects another scenario, which models terminal asset values cumulatively from the present out to that projection age discounted by the rate of inflation. These projection series are conveniently presented by VeriPlan's graphics and corresponding data worksheets.

Cumulative securities market asset class returns are added to the portfolio at each age, based upon long-term historical risk premiums, which can be adjusted by the user for scenario planning. Each of these annual asset class projections are valued net of reinvestments, investment costs, and taxes for the cash, fixed income, and equity asset classes. For the property and other asset classes, each of these values are net of reinvestments and ongoing investment costs, but are gross with respect to capital gains taxes and sales disposition charges, unless a sale is projected and then proceeds are net of capital gains taxes, expenses, and debt payoffs.

Future asset returns and uncertainty

Because VeriPlan and discounted cash flow projection methods are not predictive, users of either must cope with uncertainty and risk. Future securities market values for any individual's accumulated assets are entirely beyond one's personal control. Future securities markets will deliver whatever the then-current consensus on asset values may be. The markets will care absolutely nothing about what one may have hoped would happen.

Discounted cash flow models suffer from the same inability to peer into the future and to model what actually will happen. Neither VeriPlan's projection methods nor discounted cash

flow modeling methods can reliably anticipate uncertainties. Just as the securities markets have minds of their own, business management competence may matter less, when new technologies, new competitors, governmental actions, and other factors invalidate the assumptions that were made to develop a discounted cash flow model.

Both VeriPlan's methods and the discounted cash flow method must find other ways to cope with uncertainty. Some business organizations increase their discount rates to discount more heavily future cash flows for unknown risks. Instead, however, it is much preferred that business planners develop a range of scenarios to model risks through alternate cash flow outcomes.

Rather than systematically underestimate the potential value of all projects with an excessively heavy discount rate, business managers should instead evaluate a range of scenarios to account for potential risks. Similarly, the VeriPlan user should test a range of assumptions to evaluate potential risks.

A flexible financial decision analysis tool for personal financial planning

Because VeriPlan instantaneously develops a revised projection, after each user change, VeriPlan can be a highly productive personal decision support tool. By automating the lifetime projection process, VeriPlan allows users to focus on analyzing the financial strategies that matter to their families.

Every VeriPlan input or control can be adjusted to produce a new scenario instantly. VeriPlan's graphics and data tables inform users, so that they might think about how to manage, if particular projection scenarios were to materialize. The VeriPlan Comparison Tool facilitates projection comparisons that differ by one variable or many. A user can evaluate any number or range of projection scenarios, until they are satisfied with their plans.

In effect, VeriPlan puts the do-it-yourself user in full control. VeriPlan provides the necessary tools to rapidly develop coherent projections. It helps assess how current financial and investment practices might play out across a lifetime. It allows the user to understand the decisions required now for the family "venture" to be solvent and profitable across a lifetime under varying circumstances.

VeriPlan's approach can generally be reconciled with the discounted cash flow modeling approach. However, VeriPlan delivers far more automated, sophisticated, customizable, rapid, and flexible projection scenario generation capabilities.

Chapter 5: Income worksheet

- 5.1: Set the number of "earner/users," to determine your federal tax filing status
- 5.2: Select your initial/current and planned retirement ages
- 5.3: Current annual earned income
- 5.4: Make year-by-year adjustments to your projected earned income
- 5.5: Enter other income that is taxed at ordinary income tax rates
- 5.6: Change income growth rates relative to average inflation
- 5.7: Future gifts, inheritances, non-spouse beneficiary RMDs, and the receipt of new assets in the future



5.1: Set the number of "earner/users," to determine your federal tax filing status

VeriPlan is a lifecycle projection model for 1 or 2 "earner/users" from 18 to 100 years old. VeriPlan develops projections for 1 single or 2 married "earner/users." This selection also determines whether VeriPlan will use the "Single" or "Married, Filing Jointly" income tax rates and rules.

Do you want VeriPlan to develop lifecycle projections for 1 or 2 'earner/users'?

2	<< Enter "1" for one a "Single" VeriPlan earner/user; Enter "2" for two married VeriPlan earners/users filing taxes jointly
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The number of Earner/Users sets the tax filing status

If you enter 1 user, then VeriPlan will automatically set your income tax filing status to "Single." If you enter 2 users, then VeriPlan will automatically set your income tax filing status to "Married, Filing Jointly."

If you indicate only 1 earner/user, then VeriPlan will ignore any income information that you may enter regarding a second earner/user on this income worksheet. VeriPlan must do this to develop projections that properly apply the appropriate tax filing status. If you still do enter income information for a second user, then VeriPlan will display red letter warnings.

Developing separate projections for unmarried earners living in the same household:

If you wish to model two unmarried earner/users living in the same household, you should develop two separate single user projection models. Because of the tax laws, it would not be appropriate to combine the earnings of unmarried couples into a single VeriPlan projection, unless both intend to marry each other soon.

5.2: Select your initial/current and planned retirement ages

Enter Initial and Planned Retirement Age(s)

* If two people, usually the primary family earner would be Earner #1

18	<< Enter the initial/current age of Earner/User #1 (A whole number from 18 to 100) *
	* This Initial Age must be less than or equal to your Planned Retirement Age.
	* Earner/User #1 does not have to have wage or salary income and could be living on ot
67	<< Enter the planned retirement age of Earner #1
	Name of Earner/User #1 (optional)
18	<< Enter the initial/current age of Earner/User #2 (A whole number from 18 to 100) *
	* This Initial Age must be less than or equal to your Planned Retirement Age.
	* Earner/User #2 does not have to have wage or salary income and could be living on ot
67	<< Enter the planned retirement age of Earner #2
	Name of Earner/User #2 (optional)

The unit of time in VeriPlan for all projections is one year. VeriPlan's graphics will begin at the initial age of User/Earner #1 and present data through age 100. All output data tables use the age 18 through age 100 range.

VeriPlan accepts initial ages between 18 and 100. Initial ages must be less than or equal to the retirement ages. If you are already retired, enter the same initial age and retirement age above.

For a married couple, either person could be designated as Earner/User #1. If it is anticipated that a particular person would retire at a later date than the other, then that person retiring later would usually be designated as Earner #1. Otherwise, it is recommended that the major earner be designated as Earner/User #1.

Each person will be referred to an "Earner," but an "Earner" does not have to be traditionally employed and receive a paycheck. If only one person has earned income, then that person should certainly be designated as Earner/User #1. VeriPlan does not require either person to have any earned income. One or both could live on other income or asset-based income sources.

5.3: Enter your current annual earned income

Your gross pre-tax earned income is the baseline for your lifetime earned income

This section collects information about current income that you earn as an employee or as a working business owner. (There are optional sections below on this worksheet to adjust your projected income year-by-year and to add other kinds of income that would be taxed as ordinary income.)

Earner #1: Determine Earner #1's gross annual pre-tax employment and working business owner's income

Earner #1's current annual employment income (wage, salary, bonus, commissions, tips, etc.)

<< Enter Earner #1's ANNUAL wage and salary income

* Your ANNUAL W-2 Gross earnings AFTER your reported income has been REDUCED by any PERSONAL current annual contributions you made to EMPLOYER-SPONSORED tax-deferred retirement programs.

Earner #1's current annual net self-employment business income

\$0 << Enter Earner #1's ANNUAL self-employment business income

- * Your ANNUAL Schedule C and/or K-1 Gross earnings AFTER your reported income has been REDUCED by any PERSONAL current annual contributions you made to EMPLOYER-SPONSORED tax-deferred retirement programs.

Earner #1's -- total PERSONAL contributions in the past year to CURRENTLY TAX-DEDUCTIBLE employer retirement plans (both employee and self-employed plans) that reduced Earner #1's reportable income subject to federal income taxation.

\$0 << FOR EARNER #1, Enter the most recent annual pre-tax PERSONAL CONTRIBUTIONS made to employer-sponsored employee tax deferral accounts or to self-employed retirement programs, WHICH REDUCED TAXABLE INCOME

- * Do Not include pension payments or the effects of personal IRA contributions.
- * If you made Roth contributions into employer sponsored plans, those contributions did not reduce your reported income.

\$0 <<< Earner #1's TOTAL GROSS ANNUAL PRE-TAX
Baseline Earned Income (Not a user entry.)

Earner #2: Determine Earner #2's gross annual pre-tax employment and working business owner's income

If there is no Earner/User #2, then VeriPlan will ignore any entries for Earner #2 below. VeriPlan determines whether there is an Earner/User #2, by checking your answer to the question: "Should VeriPlan develop lifecycle projections for 1 or 2 "earner/users"?" above on this worksheet.

This is your current answer to this question:

2 << 1 for one VeriPlan earner/user; 2 for two VeriPlan earners/users

Your answer cannot be changed here. Instead, you can change it above on this worksheet.

Earner #2's current annual employment income (wage, salary, bonus, commissions, tips, etc.)

\$0 << Enter Earner #2's ANNUAL wage and salary income

* Your ANNUAL W-2 Gross earnings AFTER your reported income has been REDUCED by any PERSONAL current annual contributions you made to EMPLOYER-SPONSORED tax-deferred retirement programs.

Earner #2's current annual net self-employment business income

\$0 << Enter Earner #2's ANNUAL self-employment business income

* Your ANNUAL Schedule C and/or K-1 Gross earnings AFTER your reported income has been REDUCED by any PERSONAL current annual contributions you made to EMPLOYER-SPONSORED tax-deferred retirement programs.

Earner #2's -- total PERSONAL contributions in the past year to CURRENTLY TAX-DEDUCTIBLE employer retirement plans (both employee and self-employed plans) that reduced Earner #2's reportable income subject to federal income taxation.

\$0 << FOR EARNER #2, Enter the most recent annual pre-tax PERSONAL CONTRIBUTIONS made to employer-sponsored employee tax deferral accounts or to self-employed retirement programs, WHICH REDUCED TAXABLE INCOME

- * Do Not include pension payments or the effects of personal IRA contributions.
- * If you made Roth contributions into employer sponsored plans, those contributions did not reduce your reported income.

\$0 <<< Earner #2's TOTAL GROSS ANNUAL PRE-TAX
Baseline Earned Income (Not a user entry.)

Total Family Annual Gross Pre-tax Earned Income

\$0 <<< Earner #1's & #2's Total Family Annual Gross Pre-tax
Baseline Earned Income (Not a user entry.)

Notes about your self-employment income:

Self-employment, FICA, and Medicare taxes:

When you enter any annual pre-tax actively-managed / self-employment income in the bold border box above, VeriPlan will automatically project and apply self-employment taxes and tax deductions related to this income. Your self-employment income will be taxed at two-times the personal tax rates for FICA (Social Security) and Medicare subject to any applicable income limitations. Also, a 50% income tax deduction is allowed for these self-employment tax payments, which VeriPlan manages automatically. Both these self-employment taxes and deductions would be reported on your Form 1040, Schedule SE. For your regular employment income reported above, VeriPlan will automatically project and apply personal FICA and Medicare taxes at one-times these tax rates, subject to income limitations, and there is no allowable deduction for these personal tax payments. You can find user-adjustable FICA and Medicare tax rates and income limits on the Taxes worksheet.

New actively-managed businesses:

Regarding working business owner income, use your best judgment, but do not assume that any new enterprise will generate substantial net income, until there is some proof. If your business provided negative income in the past year or has averaged a loss over several years, enter zero rather than a negative number. If you expect that your self-employment income will grow in the future, use the yearly table in Section 5 below to project your expected future self-employment income.

Passive income:

If you receive income from a private entity in which you are a passive owner and not an active manager or employee, then that passive income should NOT be entered below. Instead, if that income is taxed at ordinary income tax rates, then you should enter that income on the Income worksheet as part of the "royalties, partnerships, S Corporations, and trusts" other income category. Other income that might be derived from your active labor, such as income from rental real estate, should instead also be entered on the Income worksheet.

Notes about your tax-deductible contributions to employer-sponsored tax-advantaged retirement plans during the past year

Enter only the amount of your personal contributions that reduced your reportable income that was subject to current income taxes. If you made any contributions that did not reduce your

taxable income, then DO NOT include those contributions in this section. If your employer made any contributions to your account (matching or otherwise), DO NOT include those contributions in this section.

Use the average for the last two or three years, if you also used this averaging method to determine your annual wage, salary, bonus, and business income above on this worksheet.

This information will be added to the taxable income you reported in this section. When combined, your taxable employee earnings, taxable self-employment earnings, and this tax-deductible contributions information will establish your total baseline gross earned income prior to these employment-related tax deferrals, which reduced your current taxable earned income.

Such employer tax-advantaged deferral plans would include: 401(k) plans, 403(b) plans, the Thrift Savings Plan for federal employees, SEP_IRA employer plans, SIMPLE employer plans, 501(c)(18)(D) plans, Section 457 plans, other qualified and non-qualified deferred compensation plans, tax deferred executive compensation programs, etc.

- * DO NOT include any withdrawals, loans, or rollovers related to any of these various plans.
- * DO NOT include any contributions made to the new "Designated Roth 401(k), Roth 403(b), or Roth 457 employer plans, since Roth contributions are taxed in the current year, and therefore they are measured the taxable income amounts your reported above in Section 2.
- * DO NOT include any personal contributions into traditional IRAs and/or Roth IRAs, which would have been made from your own IRA accounts in the past year. Note that future personal deposits into A) traditional tax-advantaged employer retirement plans, B) Roth employer retirement plans, C) traditional personal IRAs, and Roth personal IRAs will be projected for your automatically by VeriPlan, according to the methods described on the Tax-Advantaged Plans worksheet.

How to find your annual income information

For most people the easiest way to find your most recent annual taxable income is to refer to your IRS 1040 return and to employer and self-employment income reports such as W-2, Schedule C, and K-1 forms. Therefore, you can look on your federal income tax returns to find this information and make entries into VeriPlan.

Because IRS Form 1040 lines combine income from multiple earners and/or multiple employers, the most reliable way to understand each earner's gross taxable annual income and any reductions in reportable income due to contributions to employer retirement plans is to look at annual W-2 statements from employers. Annual W2's from employers include both taxable income and employee contributions to retirement plans that reduce taxable income.

For married couples, each of the two Earner/Users earners could have employment income (wages, salary, bonuses, etc.) and/or working business owner income. Working business owner income would be considered self-employment income by the U.S. Internal Revenue Service and could be earned through a variety of ordinary income tax pass-through entities, such as sole-proprietorships, partnerships, some LLCs/LLPs, S Corporations, etc.

Use either your federal income tax return data from the most recent year or for an average of the last two or three years, whichever you believe is most representative of your current "steady state" annual income. If your sources of wage and salary income and/or your working business owner income has fluctuated significantly, use an average for several years rather than just the most recent year.

VeriPlan will project that each earner's wage and salary income and actively-managed / self-employed business income listed on this worksheet will continue, until retirement and then will cease. Either earner can set his or her planned retirement age, using the retirement worksheet. VeriPlan manages retirement age differences automatically. If there are two earners, the retirement worksheet also allows a selection of simultaneous retirement or for each earner to retire in different years, when he or she reaches planned retirement age.

The table below on this worksheet allows you to make annual positive and negative adjustments to the projected pre-retirement income of either earner. You may want to make such adjustments to reflect planned events, such as, unpaid sabbaticals, large non-recurring bonuses, working part-time, returning to school, and other situations.

Furthermore, you can use this annual earned income adjustment facility to test the impact of unplanned events on your lifecycle financial plan. Such an unplanned event could be involuntary unemployment at any point for either earner. For example, you could test the lifecycle impact of one earner losing employment involuntarily several years prior to planned retirement age.

If you have other income sources that also would be taxed at ordinary income tax rates, but which are 1) not wage and salary income, 2) do not result from your active management of a

business, and/or 3) will not cease upon you retirement, then DO NOT enter those income sources on this worksheet. Instead, VeriPlan offers several other worksheets for you to enter your other income sources:

- A) Enter pensions and annuities on the retirement worksheet
- B) Enter retirement income from the U.S. Social Security Administration on the retirement worksheet

You also do not need to be concerned about income from or yields on the various financial investment assets that you will list on the financial assets worksheet. VeriPlan will automatically project net returns, reinvest/withdraw, and tax your asset returns, as appropriate, throughout your full lifecycle projections. Various other VeriPlan worksheets and tools explain how VeriPlan does this. No asset related income should be entered on this worksheet.

How this information is used to develop your projections

VeriPlan removes the current tax effects of your current participation in tax-advantaged employer-sponsored plans, because your participation level and resulting income tax reduction during the past year may not be indicative of what you plan to do up until you retire. Once VeriPlan establishes your projected gross family earned income baseline without any current tax reduction benefits from tax-advantaged plans, this baseline earned income can be used to model and project automatically various levels of future participation in tax-deductible employer-sponsored retirement plans that you might chose.

VeriPlan's tax-advantaged accounts worksheet allows you to control your projected tax-deductible participation in tax-advantaged employer-sponsored plans, across your projected working lifetimes, including:

- A) modeling the effects of higher and lower participation in such programs relative to your projected net cash flow in future years,
- B) controlling and projection your level of contributions into traditional 'tax-deferred' versus Roth 'tax-now-but-not-later' plans, and
- C) testing the impacts of a variety of tax-deferral strategies on your lifecycle wealth.

You may notice on your income, savings, and tax projection graphics and data tables that the numbers for the initial projection year will be lower, similar to, or higher compared to subsequent years. These initial differences may display as either slopes or spikes at the

beginnings of your income, savings, and tax projection graphics. When your projection settings for your future participation in employer tax-advantaged programs differs from the information that you enter into this section of this worksheet, these differences may cause variations in the first year of your graphics.

VeriPlan automatically takes into account a myriad of factors affecting your contributions, including legal limits, earnings sufficiency, tax deductibility, and whether you have positive cash flow and/or available taxable asset account funds to transfer into your tax-advantaged accounts to pay for your contributions. These factors can also cause future dips or spikes in your projection graphics.

5.4: Make year-by-year adjustments to your projected earned income

VeriPlan users may anticipate that they will begin to receive additional salary or working business owner income at some point in the future or that their income received might increase or decrease substantially. This section allows you to make positive and negative adjustments to your projected salary and working business owner income. This section also allows you to change projected rates of real income growth relative to inflation on a yearly basis.

The input table in this section allows you to enter year-by-year positive and negative earned income adjustments, including different annual real dollar growth rates.

The table below allows you to make annual positive and negative adjustments to the projected pre-retirement income of either earner. You may want to make such adjustments to reflect planned events, such as, unpaid sabbaticals, large non-recurring bonuses, working part-time, returning to school, and other situations.

Furthermore, you can use this annual earned income adjustment facility to test the impact of unplanned events on your lifecycle financial plan. Such an unplanned event could be involuntary unemployment at any point for either earner. For example, you could test the lifecycle impact of one or both earners losing employment involuntarily several years prior to the planned retirement age.

See the section below the table for two examples about how to use positive and negative entries in the table below to model part-time work before and after retirement.

How to enter your income adjustments into the table

In the table below, two bold border user data entry columns are provided for Earner #1:

>>> A <<< Your Positive and Negative Adjustments to Other Income IN CURRENT DOLLARS

>>> B <<< Relative growth for Column A (annual % change above or below inflation)

Two similar columns, which operate the same, are provided for Earner #2:

>>> C <<< Your Positive and Negative Adjustments to Other Income IN CURRENT DOLLARS

>>> D <<< Relative growth for Column A (annual % change above or below inflation)

In Column A (or C), you could enter positive or negative dollar amounts for each year.

VeriPlan projects each of your annual dollar entries independently of your entries in other years.

If you do not wish to make an entry for a particular year, then the dollar amount should be zero.

See Section 3 below for examples about how and why to use these annual income entries.

In Column B (or D), you can enter your expected real dollar rate of growth or decline (above or below inflation) for this source of other income. In Column A (or C), simply enter your current dollar estimates for any year into future that you want to model. VeriPlan will automatically use any differential inflationary growth rate that you have entered into Column B (or D) to adjust and project this real dollar income, however far into the future it may be. If there is no dollar entry in Column A (or C), then any relative real dollar growth rate in column B (or D) will be ignored.

This data entry chart is set up to support users of any age between 18 and 100. While you could make entries into Columns A, B, C, or D for ages when Earner #1 would be over 100 years of age, VeriPlan will ignore these entries. Your entries will be ignored, when the light beige rows indicate "Over Age 100"

Negative annual income adjustments cannot exceed total annual earned income.

In the table below, you are allowed wide latitude in the positive and negative annual adjustments that you may enter. However, if you enter any negative annual adjustment that exceeds the total projected earned income for an earner for that year, then VeriPlan will automatically limit your adjustment. The result will be zero total earned income for that earner in that year. **In that situation, the user data entry box will turn red.**

Input table for your earned income adjustments

Only the bold border columns below are user-adjustable. The others are automatically generated.

All projected dollar figures in this table are real dollars, which include your inflationary growth adjustments.

You may "copy-and-paste" to copy a single entry vertically, BUT ONLY between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE WITHIN THE SAME COLUMN.

Be careful! Other copy-and-paste operations that are NOT between VERTICALLY CONTIGUOUS CELLS of the SAME DATA TYPE in the SAME COLUMN COULD HARM YOUR CURRENT WORKING PLAN FILE. Always back up your plan periodically with different file names on your hard disk drive. A corrupted file will be obvious by looking at the output graphics and data tables. If your file becomes corrupted, then roll back to your most recently saved file without the operations that corrupted the file. Hard disk storage is essentially free, so ALWAYS use a changing file naming convention, so that you do not keep overwriting the same file on disk.

[NOTE: FOR SPACE CONSIDERATIONS IN THIS USER MANUAL, THE ACTUAL VERIPLAN TABLE HAS BEEN DIVIDED IN TWO VERTICALLY AND ONLY THE COLUMNS RELATED TO EARNER #1 ARE DISPLAYED. ALSO, MOST OF THE ROWS HAVE BEEN REMOVED.]

Project on Year	...when the age of Earner #1 is:	Earner #1 Annual Salary and Working Business Owner Income	ENTER Your Positive and Negative Adjustments to Income IN CURRENT DOLLARS	ENTER Your Relative growth for Column A (annual % change above or below inflation)	Your Positive and Negative Adjustments to Column A after Column B inflation adjustment	Earner #1 Total Adjusted Income
1	18	\$0	\$0	0.00%	\$0	\$0
2	19	\$0	\$0	0.00%	\$0	\$0
3	20	\$0	\$0	0.00%	\$0	\$0
4	21	\$0	\$0	0.00%	\$0	\$0
5	22	\$0	\$0	0.00%	\$0	\$0
6	23	\$0	\$0	0.00%	\$0	\$0
7	24	\$0	\$0	0.00%	\$0	\$0
8	25	\$0	\$0	0.00%	\$0	\$0
9	26	\$0	\$0	0.00%	\$0	\$0
10	27	\$0	\$0	0.00%	\$0	\$0

You should use the bold border data entry columns above to make any adjustment to income that would be taxed at ordinary income tax rates. It would not be appropriate or necessary to enter any capital gains on this table. Any returns on assets which are potentially subject to capital gains taxes should instead be entered on one of the various worksheets related to financial assets and investing.

Positive and negative income adjustments in the table above are treated as if they are proportional adjustments to both your regular employment income and your actively-managed self-employment income. Therefore, any adjustments that you make will be proportionately

taxed regarding FICA, Medicare, and self-employment tax rates that would apply to your combined employment and working business owner income.

Modeling future changes to your salary or actively-managed income sources

The two examples below illustrate how to use adjustments in the table above to model part-time employment either before or after retirement. These examples could apply either to Earner #1 or #2 or to either salary or actively-managed business income. For simplicity, the two examples below will be for the salary income of Earner #1.

Example A: Part-time earned income AFTER retirement

Additional sources of anticipated earned income may not begin until some years into the future. For example, Earner #1 might be 57 years old now, he might plan to work 5 more years, and then he intends to semi-retire at age 62. He might want to set 62 as his projected retirement age in VeriPlan to trigger various events, such as fixing the relative expense level for retirement, beginning to receive Social Security payments, etc. However, he might also want VeriPlan to project that he would still work part-time for one-half of his salary for another 4 years from ages 62 to 65, after having retired at age 62.

This situation can be modeled by making these entries into VeriPlan:

- * DO NOT change any of the regular income entries on this worksheet and DO NOT change Earner #1's planned age 62 retirement age on the retirement worksheet. With these settings, VeriPlan will automatically stop projecting income earned income at the end of age 61.
- * Enter one-half of Earner #1's CURRENT annual salary income, as a POSITIVE dollar amount in the age 62, 63, 64, and 65 lines of Column B in the yearly table above.
- * Look up the relative real income growth rate that was entered for Earner #1's career income growth in Section 3 above. Enter that same growth rate in the age 62, 63, 64, and 65 lines of Column C.

With these entries, VeriPlan will project four more years of half-salary income growing at the same rate of real income growth.

Example B: Part-time earned income PRIOR TO retirement

This second example will use the same assumptions as the example above, except that Earner #1 has decided to change his retirement age from 62 to age 66. He wants to retire at age 66 to set retirement expense levels at a later age and to delay accepting Social Security payments. Doing so would qualify him for higher Social Security payments, and he would avoid paying higher taxes on both his part-time earned income and his Social security income between ages 62 and 65. As in the example above, he would still plan to work full-time for 5 years through the end of age 61 and then plan to be semi-retired and to work part-time for 4 years from ages 62 to 65 at one-half salary.

For VeriPlan to model and project this situation, do the following:

- * Change Earner #1's projected retirement age to 66 on the on the retirement worksheet, but do NOT change the current income on this worksheet.
- * (These settings would mean Earner #1 would receive full compensation until retirement at age 66. However, the next two steps will halve this income for the last 4 years.)
- * Enter one-half of Earner #1's CURRENT annual salary income, as a NEGATIVE dollar amount in the age 62, 63, 64, and 65 lines of Column B in the yearly table above.
- * Look up the relative real income growth rate that was entered for Earner #1's career income growth in Section 3 above. Enter the same growth rate in the age 62, 63, 64, and 65 lines of Column C.

By using a negative income entry for 4 years in Step 2 and the same income growth rate in Step 3, these entries will fully offset one-half of the regular full-time income that VeriPlan will project for ages 62, 63, 64, and 65 in Step 1.

5.5: Enter other income that is taxed at ordinary income tax rates

In this section, you can enter your 'other income' sources, which are taxed at ordinary income tax rates. These other income sources would include the categories of income below. Your inputs for these other income sources should be found on your IRS 1040 form and listed as:

Alimony

Other Gains

Rental Real Estate

Royalties, Partnerships, S Corporations, and Trusts

Farm Income

'Other' Income Sources

The other income entries that you make on this worksheet are in addition to any recurring sources of income that are taxed at ordinary income tax rates. Please read the information carefully on this worksheet and in this *VeriPlan User Manual* to avoid making entries that would duplicate income that you have reported elsewhere in VeriPlan.

Use the first part of this section to enter information about the current other income sources that you expect you will continue to receive for some number of years into the future.

The second part of this section provides a table that allows you to enter year-by-year positive and negative other income adjustments, including different annual real dollar growth rates.

For each of your other income sources, you may enter on this worksheet:

- * the dollar amount
- * the years from the current year that you expect to receive this type of other income, and
- * the expected real percentage growth rate above or below inflation.

For your inspection after you make your inputs, VeriPlan presents summary projections of your other income sources in the adjustments chart that follows below.

In addition to such recurring sources of other income that you might currently receive, VeriPlan also allows you to make both positive and negative other income entries for any projection year. Each of these annual entries can be projected to grow at different positive and negative real dollar growth rates relative to the rate of inflation. This powerful ability to make positive and negative dollar and growth rate entries for each year allows you model and adjust any future other income source that you expect to receive.

Some of your other income sources are derived from assets, which have a measurable fair market value that you can estimate. Assets with a discernible fair market value might include rental real estate properties, assets that pay royalties, partnerships, S Corporations, trusts, and farms. This worksheet can be the appropriate place to enter the income from those assets, if the income is taxed at ordinary income tax rates.

However, the underlying value of the assets from which you may derive this other income should be entered elsewhere in VeriPlan. Usually, you would enter the fair market value of these underlying assets on either the property and debts worksheets. When you enter fair market values

for these assets on the property and debts worksheet, you will be asked to project a real rate of appreciation in the value of those assets. When you do so, include only the expected rate of increase to the asset's value or projected sales price. Do not include any of the annual income or yield that you enter on this worksheet. Doing this is similar to separating the total return on common stock into a retained capital gains portion and a paid-out dividend portion.

How to enter other recurring income you are already receiving and expect to receive for some years

If you already receive annually recurring income from other income sources, use the bold border user data entry boxes below to indicate:

A) the dollar amount

B) the years from the current year that you expect to receive this type of other income, and

C) the expected real percentage growth rate above or below inflation.

* If you do not have income in a particular category, leave the dollar amount as a zero.

* Enter 0% (zero%) for any income source that is expected to grow with rate of inflation.

* Note that all dollar figures are real (non-inflationary) or constant purchasing power dollars. Even very small negative or positive growth percentages can compound significantly over the years.

Exclude any payments that are not expected to continue regularly, such as tax refunds or unemployment payments.

* Do NOT include any projected income from asset sources such as "Taxable Interest", "Dividends", or Capital Gains/Losses. VeriPlan automatically calculates growth rates, taxation, tax basis carry-forward, new investments, reallocations, and withdrawals for cash, fixed income, and equity assets.

* Do NOT enter below any expected retirement income. There are separate retirement income entries on the retirement worksheet for income sources such as pensions, annuities, and Social Security.

Other compensation that may have been paid to you in the form salable assets should NOT be included here. Such assets should instead be listed separately on the property and debts worksheet.

Alimony (Form 1040) [Include any other child support or separate maintenance payments]

Alimony (Form 1040) [Include any other child support or separate maintenance payments]

\$0	<< Enter the current ANNUAL amount for this income source
100	<< Enter the number of years expected [If perpetual, enter 100.]
0.00%	<< Enter expected real dollar rate of growth or decline (above or below inflation) for this source

Other Gains {and (losses)} (Form 1040) {Enter ONLY GAINS that are expected to recur regularly}

Other Gains {and (losses)} (Form 1040) {Enter ONLY GAINS that are expected to recur regularly}

\$0	<< Enter the current ANNUAL amount for this income source (Enter ONLY "Other Gains," but not losses)
100	<< Enter the number of years expected [If perpetual, enter 100.]
0.00%	<< Enter expected real dollar rate of growth or decline (above or below inflation) for this source

Rental real estate, royalties, partnerships, S Corporations, trusts, etc.** (Form 1040)

Rental real estate *, royalties, partnerships, S Corporations, trusts, etc.** (Form 1040)

\$0	<< Enter the current ANNUAL amount for this income source
100	<< Enter the number of years expected [If perpetual, enter 100.]
0.00%	<< Enter expected real dollar rate of growth or decline (above or below inflation) for this source

* DO NOT INCLUDE any income from Rental Properties that you have listed in Section 4 of the "PROPERTY+DEBT" worksheet. If you have other recurring rental real estate income from investment securities, enter the annual taxable income total above and this income will be combined automatically with any taxable income from Section 4 of the PROPERTY+DEBT worksheet.

** DO NOT INCLUDE any personal employment income that should instead be included above in Sections 2, 4, or 5 of this worksheet. Such employment income could be income payments from partnerships, pass-through S-Corps, LLCs, and other business entities that provide a paycheck to you.

Farm income (Form 1040)

Farm income (Form 1040)

\$0	<< Enter the current ANNUAL amount for this income source
100	<< Enter the number of years expected [If perpetual, enter 100.]
0.00%	<< Enter expected real dollar rate of growth or decline (above or below inflation) for this source

Other income (Form 1040)

Other income (Form 1040)

\$0	<< Enter the current ANNUAL amount for this income source
100	<< Enter the number of years expected [If perpetual, enter 100.]
0.00%	<< Enter expected real dollar rate of growth or decline (above or below inflation)

How to enter your year-by-year adjustments to your other income sources

In the table below, two bold border user data entry columns are provided:

>>> A <<< Your Positive and Negative Adjustments to Other Income IN CURRENT DOLLARS

>>> B <<< Relative growth for Column A (annual % change above or below inflation)

In Column A, you could enter positive or negative dollar amounts for each year. VeriPlan projects each of your annual dollar entries independently of your entries in other years. If you do not wish to make an entry for a particular year, then the dollar amount should be zero.

In Column B, you can enter your expected real dollar rate of growth or decline (above or below inflation) for this source of other income. In Column A, simply enter your current dollar estimates for any year into future that you want to model. VeriPlan will automatically use any differential inflationary growth rate that you have entered into Column B to adjust and project this real dollar income, however far into the future it may be. If there is no dollar entry in Column A, then any relative real dollar growth rate in column B will be ignored.

This data entry chart is set up to support users of any age between 18 and 100. While you could make entries into Columns A or B for ages when Earner #1 would be over 100 years of age, VeriPlan will ignore these entries. Your entries will be ignored, when the light beige rows indicate "Over Age 100"

Input Table for your Other Income adjustments

Only the two bold border columns A and B below are user-adjustable. The others are automatically generated.

All projected dollar figures in this table are real dollars, which include your inflationary growth adjustments.

You may "copy-and-paste" to copy a single entry vertically, BUT ONLY between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE WITHIN THE SAME COLUMN.

Be careful! Other copy-and-paste operations that are NOT between VERTICALLY CONTIGUOUS CELLS of the SAME DATA TYPE in the SAME COLUMN COULD HARM YOUR CURRENT WORKING PLAN FILE. Always back up your plan periodically with different file names on your hard disk drive. A corrupted file will be obvious by looking at the output graphics and data tables. If your file becomes corrupted, then roll back to your most recently saved file without the operations that corrupted the file. Hard disk storage is essentially free, so ALWAYS use a changing file naming convention, so that you do not keep overwriting the same file on disk.

[NOTE: FOR SPACE CONSIDERATIONS IN THIS USER MANUAL, COLUMNS FOR THE FIVE TYPES OF OTHER INCOME THAT ARE IN THE ACTUAL VERIPLAN TABLE HAVE BEEN REMOVED. ALSO, MOST OF THE ROWS HAVE BEEN REMOVED, AS WELL.]

		>>> A <<< >>> B <<<			
Projecti on Year	...when the age of Earner #1 is:	ENTER Your Positive and Negative Adjustments to Other Income IN CURRENT DOLLARS	ENTER Your Relative growth for Column A (annual % change above or below inflation)	Positive and Negative Adjustments to Column A after Column B inflation adjustment	Total Other Income Sources (Sum of the light beige colored columns)
1	18	\$0	0.00%	\$0	\$0
2	19	\$0	0.00%	\$0	\$0
3	20	\$0	0.00%	\$0	\$0
4	21	\$0	0.00%	\$0	\$0
5	22	\$0	0.00%	\$0	\$0
6	23	\$0	0.00%	\$0	\$0
7	24	\$0	0.00%	\$0	\$0
8	25	\$0	0.00%	\$0	\$0
9	26	\$0	0.00%	\$0	\$0
10	27	\$0	0.00%	\$0	\$0
11	28	\$0	0.00%	\$0	\$0

NOTE: Rows 11 to the end of the table have not been included in this User Manual.

An example of making year-by-year changes to your projected "other" income sources

This section provides a detailed example of how to use the other income adjustments table in the section above.

VeriPlan users may already receive income from other income sources and may expect that this income would continue steadily for a period of years. These users can simply make positive dollar entries above, and VeriPlan will project that this other income will continue for a certain number of years and will grow at a fixed rate relative to inflation.

However, other users may anticipate that they will begin to receive certain other income sources at some point in the future or that the amount of income received may increase or decrease substantially. This year-by-year other income worksheet also allows you to model other income that you have not yet begun to receive, and you can use the techniques described here to reduce or increase future payments from your other income sources. You can also use combinations of the recurring and ad hoc entries to achieve your modeling objectives.

Example: Future expected changes to passive limited partnership income.

In this example, you receive \$20,000 per year currently in passive limited partnership income that you normally enter on IRS Form 1040. Therefore, it is appropriate to enter this income above on this "other" income worksheet. However, you expect that you will continue to receive this \$20,000 in passive partnership income for 15 more years, after which it will increase to \$50,000 per year for year 16 and then drop by \$10,000 per year until this income source terminates at the end of 20 years.

You can model this example in VeriPlan using the following entries:

Enter \$20,000 per year as a POSITIVE dollar amount on the Rental real estate, royalties, partnerships, S Corporations, trusts, etc. line above. Enter 20 years as the period to receive this income. Enter any appropriate real dollar growth adjustment that may be necessary. For your future reference, write a note about your entries in the bold border notes box provided.

Using Column B, make the following current dollar adjustment entries:

- * add \$30,000 in year 16
- * add \$20,000 in year 17
- * add \$10,000 in year 18
- * make no adjustment in year 19
- * subtract \$10,000 in year 20

For each of these years, enter into Column B the same real dollar inflation adjustment that you used above in step 1. For your future reference, write a note about your entries in the bold border notes box provided below the table.

Alternatively, you could have made entries for twenty years into Columns A and B. The recurring user data entries by the five types of other income simply help to automate data entry for current income sources that you expect to recur for years.

Tax considerations related to "other" income

The tax discussion below is general and high level, and it is intended to inform you about how VeriPlan projects taxes, when you use the techniques described on this worksheet. You should evaluate your personal income projection needs and decide the most appropriate way to model any of your delayed, reduced, or increased future "other" income, given any special tax situations that you may have.

VeriPlan treats the five "other income" categories in the table above in a similar manner. Any income entered across these five categories will be combined as cash flows, will contribute to your ordinary income, and will be taxed at your then-current federal, state, and local ordinary income tax rates.

Therefore, it would not be appropriate to use these techniques to model situations that involve long-term capital gains taxation. In such situations, you instead should focus on developing appropriate estimates of the current fair market value of your property and other assets on the asset related worksheets.

VeriPlan will project the net capital asset value of your property and other assets according to your assumptions on the property and debts worksheet. Projected values for your assets on the property and debts worksheet will be gross with respect to taxation.

However, some of your property on the property and debts worksheet may produce ongoing rental, royalty, partnership, or other income that is taxable to you at ordinary income tax rates. This worksheet would be the appropriate place in VeriPlan to enter such other income, if it is taxed at ordinary income tax rates and it is not actively-managed earned income. If you would report this income on the lines of the IRS 1040 form that VeriPlan lists above, then this worksheet is the appropriate place to model them in VeriPlan. Such income is usually considered "passive" from a tax standpoint. If you want to project that some of this passive income would be

delayed or reduced, then the techniques described here can be applied. (Again, check the tax laws. If you have these types of other income, you probably already know that the tax rules can be nightmarishly complex.)

In other circumstances, you may receive income from your property and your other capital assets that is considered actively-managed income. The tax treatment can be different for such income sources. For example, if you receive actively-managed income, as an owner of a partnership or sole proprietorship business, then such income may flow through from that entity into your Form 1040 and be taxed to you as ordinary income. However, when you receive active business income, that income should not be entered on the table immediately above, but instead should be entered into VeriPlan on the near the top of this worksheet, as actively-managed business income and would directly affect some other aspects of VeriPlan, such as the level of your living expenses in retirement.

5.6: Change income growth rates relative to average inflation

Most people do not need to adjust earned income relative to general inflation and should NOT use this adjuster.

In this section, you can adjust the income growth rates for Earners 1 and 2 ABOVE OR BELOW THE RATE OF INFLATION. Your earned income may or may not increase or decline in future years relative to inflation. This section allows each user to project separately adjust the real dollar growth rate of their future income through age 65. Your adjustments will apply to a particular earner's combined wage and salary income and actively managed business income. If you expect your wages will not keep up with inflation, you would enter a small negative adjustment. If, on the other hand, you are confident that your wages will grow at a rate exceeding inflation, then enter a small positive adjustment.

Do not over-estimate the real wage or salary growth of either earner. Most workers do not experience positive real dollar wage growth.

You could enter negative or positive percentage adjustments that will change your income growth rates RELATIVE TO FUTURE CONSUMER PRICE INFLATION. Take care to limit any negative or positive annual adjustments, because even very small negative or positive growth

rate adjustments can have a very substantial effect on your projected income when compounded over many years or decades.

0.00% << Enter Earner #1's REAL (NON-INFLATIONARY) income
growth assumption up through Age 65 *

Type a number with the % sign, and verify that your percentage entry is what you intend.
(This will probably be a number between -1% and 1%.) *

0.00% << Enter Earner #2's REAL (NON-INFLATIONARY) income
growth assumption up through Age 65 *

Type a number with the % sign, and verify that your percentage entry is what you intend.
(This will probably be a number between -1% and 1%.) *

Do not over-estimate the real wage or salary growth of either earner.

If you are already successful, that success should already be reflected in current compensation. For most people real wages tend to grow little more than inflation, unless the earner obtains significant greater education, is promoted, and/or otherwise takes on greater authority in an organization.

Here are some guidelines to follow:

- * If either earner is fully established in his or her career and does not expect significant further advancement prior to retirement, then enter 0% real income growth.
- * If an earner is early in their working career and expects some rise in real compensation due to increased expertise and seniority, but not any promotion or greater scope of authority or supervision, then enter .25% (1/4 of one percent) to .5% (1/2 of one percent)
- * If the earner expects at least one significant promotion during his or her career within the next ten years, to .5% (1/2 of one percent) to .75% (3/4 of one percent)
- * If a younger earner expects to be promoted by two significant levels of authority within 15 years, enter 1% (one percent).
- * If a younger earner expects to become a very successful professional or executive, then enter less than 2% (two percent).
- * If you expect a decline in real wages, then a negative percentage, e.g. -.5% (negative 1/2 of one percent) can be entered. Particularly in the past several decades, a large

percentage of the working population has experienced an erosion in real wages. If your rate of income growth has not kept pace with the rate of inflation, then you should decide whether or not this is likely to continue. If you expect that it will, then enter an appropriate negative percentage relative to inflation.

5.7: Future gifts, inheritances, non-spouse beneficiary RMDs, and the receipt of new assets in the future

In this section, you can enter year-by-year future gifts, inheritances, and receipt of new assets, which would NOT be subject you to taxation upon receipt. If you are so fortunate as to reasonably expect that you will receive new assets in the future, enter them below.

Because the year-by-year table with Column A & B below permits you to enter positive dollar amounts, this table can be used to add inherited assets to your model in the future. In addition, because Columns A & B also allow you to enter negative dollar figures, you can plan to gift cash to others, as well.

If you expect to inherit non-spousal traditional and/or Roth beneficiary retirement accounts in the future, make those entries in Columns C, D, and E below. The SECURE ACT was enacted into law in December of 2019. (Note that this section DOES NOT apply to spouses who might inherit one or more traditional or Roth retirement accounts in the future. If your projection plan is for a married couple filing taxes jointly, all such retirement account assets should be entered on the yellow-tabbed FINANCIAL ASSETS worksheet with the appropriate coding for account taxability in the "When Taxable" column. Should one spouse pre-decease another those assets would automatically shift to the surviving spouse in the future.

If older relatives have told you to expect certain gifts or future inherited assets, this section will allow those assets to enter your VeriPlan projection model at whatever year(s) in the future you expect to receive those assets. With promised gifts, projecting when the a gift might be received could be straightforward. For example, if your parents tell you that they will give you \$30,000 toward the down payment on a home that you plan to purchase in four years, then the timing is receipt of this gift is known. With inheritances, the timing is much less certain. Nevertheless, you can make arbitrary decisions on the timing and size of a likely future inheritance, so that you can understand its impact upon your future finances.

When you make dollar entries below, use net real dollar figures that reflect the prior payment of any estate taxes or other taxes that would be due prior to your receipt of the net cash proceeds. When determining the future real dollar value of the expected gift, inheritance, or other asset, consider what its current dollar cash value is and enter that amount in the table below in the future year you expect to receive the cash. Then, use the next adjacent "relative growth column" to enter the expected percentage growth rate above or below inflation. If the current dollar amount is fixed and will not increase, then enter -3% to reflect inflationary value erosion over time. Enter 0% (zero%) for any gift or inheritance that is expected to grow with the rate of inflation. If the assets you expect to receive in the future are invested in an asset class that is likely to grow faster than inflation, then enter some modest positive percentage. Note that small positive growth percentages can compound significantly over the years.

In addition, when entering real dollar figures below, remember also to deduct any asset sales expenses that would be due to liquidate any investment asset or property and convert it to cash. For example, if you expect to receive a full or partial interest in an inherited home, assume that the property will be sold, sales expenses will be paid, and you will receive the net proceeds in cash. In most circumstances, homes inherited by non-spouse relatives are sold, although the sale normally takes place after the owner has passed away. Note that if you would expect to keep an inherited residential home or rental property instead of selling it, enter the expected real dollar value below without any sales expenses. Then, use the PROPERTY+DEBT worksheet to create a corresponding home or property asset in that same future year with the same purchase value as the real dollar cash amount that you enter below.

Inherited non-spousal retirement accounts (inherited in 2020 and after)

You should enter information about non-spousal retirement accounts that you expect to inherit in the future into Section 6A below.

The SECURE Act became law in December 2019 and has significantly changed the treatment of non-spousal inherited traditional and Roth retirement accounts. With the enactment of the SECURE Act, a non-spousal beneficiary must now withdraw all assets from an inherited traditional or Roth retirement account within 10 years. There are a few exceptions, but in general, one can no longer bequeath assets to beneficiaries who could benefit from those accounts across their lifetimes, unless they are your spouse.

Regarding both traditional and Roth retirement accounts that are inherited by a non-spouse, there are no longer any annual required minimum distributions. Instead, the beneficiary of an inherited traditional or Roth retirement account is required to empty the account within ten years, paying taxes on distributions from traditional inherited retirement accounts.

Regarding retirement accounts that you expect to inherit in the future, VeriPlan will project that those assets will be held for the full ten years. After ten years, all account assets with appreciation will be distributed, unless overall negative cash flow in your model requires earlier distribution. Upon distribution at the end of ten years, Roth assets will transfer to taxable asset accounts without taxation. For traditional inherited retirement accounts, ordinary income taxes will be assessed, and the net assets will be deposited into taxable asset accounts.

Holding traditional retirement account assets for tax-free appreciation for ten years will increase the account value, but taxation of the lump sum may not be optimal depending upon your tax situation. When you actually inherit these retirement accounts, as expected, in the future you may be able to spread distributions across multiple years to improve the tax outcome.

Taxable and non-spousal beneficiary retirement assets expected to be inherited in Future Years

Notes about Input Tables for future gifts, inheritances, and receipt of new assets

- * Only the gray bold border columns A, B, C, D, and E below are user-adjustable. The others are automatically generated.
- * Columns A and B below are for deposits into and withdrawals from regular taxable asset accounts that are subject potentially to taxation of interest, dividends, and capital gains each year.
- * Columns C and D below are for future inherited traditional retirement accounts and Roth retirement accounts. Retirement accounts inherited in the future are NOT subject to RMDs. Instead, assets must be distributed within 10 years.
- * Indicate traditional versus Roth retirement account type in Column E. With this information, VeriPlan will automatically project future account values and future RMD withdrawals.
- * All projected dollar output figures in this table are real dollars, which include your inflationary growth adjustments.

- * You may "copy-and-paste" to copy a single entry vertically, BUT ONLY between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE WITHIN THE SAME COLUMN.

Expected inherited assets to be added to taxable accounts in the future

AND * Enter as POSITIVE dollars

Gifts you plan to make from your taxable accounts in the future

* Enter as **NEGATIVE** dollars

		>>> A <<<		>>> B <<<	
Projection Year	...when the age of Earner #1 is:	ENTER Positive and Negative Asset Adjustments IN CURRENT DOLLARS	ENTER Your Relative growth for Column A (annual % change above or below inflation)	Your Positive and Negative Adjustments to Column A after Column B inflation adjustment	
1	18	\$0	0.00%	\$0	
2	19	\$0	0.00%	\$0	
3	20	\$0	0.00%	\$0	
4	21	\$0	0.00%	\$0	
5	22	\$0	0.00%	\$0	

Traditional and Roth retirement account assets to be inherited in the future

* Enter dollar figures as POSITIVE numbers

* Enter 0 or 1 in Column E to indicate Traditional versus Roth retirement account

* (If the account is not named a Roth account, it would be a Traditional retirement account.)

>>> C <<<		>>> D <<<		>>> E <<<			
ENTER Positive and Negative Asset Adjustments IN CURRENT DOLLARS		ENTER Your Relative growth for Column A (annual % change above or below inflation)		Your Positive and Negative Adjustments to Column C after Column D inflation adjustment		Account type? ENTER "0" (zero) for a traditional retirement account and "1" for a Roth retirement account	
\$0		0.00%		\$0		0	
\$0		0.00%		\$0		0	
\$0		0.00%		\$0		0	
\$0		0.00%		\$0		0	
\$0		0.00%		\$0		0	

CURRENTLY OWNED TOTALS for Inherited Retirement Beneficiary Accounts subject to Required Minimum Distributions (RMDs) inherited before 2020

Older inherited retirement accounts (inherited in 2019 and before)

Prior to the SECURE Act, which was enacted in December of 2019, inherited non-spousal retirement accounts were sometimes referred to as "stretch accounts," because they were subject to lifelong Required Minimum Distributions related to the life expectancy of the beneficiary. With a long life expectancy for younger beneficiaries, RMDs in earlier years tended to be small and assets in these stretch accounts could grow dramatically over long periods. If you had already inherited a retirement account in 2019 or before, the old rules will still apply and be "grandfathered" in for those accounts. For accounts inherited in 2019 or before, you can continue to take RMDs and perhaps own the account far longer than the ten years allowed for accounts inherited in 2020 or later.

- 1) FIRST, enter individual account values for all inherited retirement beneficiary accounts you currently own on the FINANCIAL ASSETS worksheet.
- 2) Totals for the account assets that you enter on the Financial Assets worksheet are the maximum against which VeriPlan will calculate RMDs ---- even if the currently

owned retirement beneficiary account asset totals that you enter below exceed the total from the Financial Assets worksheet.

- 3) The inherited Traditional and Roth retirement beneficiary account assets totals you enter below will ONLY affect lifetime Required Minimum Distribution (RMD) projections. RMD rules for retirement beneficiary accounts differ significantly from the RMD rules for your own personal contributory and rollover retirement accounts.
- 4) When you enter asset totals for your currently owned inherited retirement accounts here, VeriPlan will automatically project lifetime RMDs for them. RMDs on currently owned retirement beneficiary accounts will begin in the second projection year and continue thereafter.
- 5) VeriPlan automatically projects RMDs for "Traditional" and "Roth" retirement accounts, and it uses the entries you make below to distinguish between the inherited retirement accounts and the other non-inherited retirement accounts you currently own. Note that retirement accounts are considered "Traditional" accounts, if they are not explicitly named "Roth" accounts.
- 6) Note further that RMDs are calculated differently on your own traditional retirement accounts versus retirement accounts inherited before 2020. RMDs on your own accounts are recalculated each year and the formula readjusts the longer you live. In contrast, retirement accounts inherited before 2020 calculated remaining years of life for the heir at the outset and did not readjust over time. This method means that older retirement account RMDs stop at the initially estimated year of life expectancy, because the retirement account will be emptied when you reach the life expectancy calculated at the outset. Thus, when you have a combination of your own traditional retirement accounts and retirement accounts inherited before 2020, you may see a noticeable decline in total annual RMDs during your mid-80s.

**Enter your Inherited Non-spousal Retirement Beneficiary
Account asset totals in the gray boxes**

CURRENTLY OWNED Inherited Retirement Accounts	<u>Inherited TRADITIONAL</u> Retirement Account Assets Already Owned Now	<u>Inherited Roth</u> Retirement Account Assets Already Owned Now
Both Earners >	\$0	\$0
Totals from the Financial Assets worksheet	\$0	\$0
% Inherited	0.00%	0.00%

Chapter 6: Expenses worksheet

- 6.1: Enter your total current annual ordinary living expenses
- 6.2: What to include in your total current annual ordinary living expenses
- 6.3: Enter your major planned expenses and year-by-year expense adjustments
 - 6.3.1: Children's Education Expenditure Planning
 - 6.3.2: Mid-Career Education Planning
- 6.4: Healthcare expenses as part of your annually recurring ordinary living expenses
- 6.5: Change the expected growth of ordinary living expenses before retirement
- 6.6: 24-month expense tracking, budgeting, and variance worksheets
 - 6.6.1: 2 Year Monthly Expense Tracking Worksheet
 - 6.6.2: 2 Year Monthly Expense Budgeting Worksheet
 - 6.6.3: 2 Year Monthly Budget Variances Worksheet

Introduction



Enter information about your expected expenses on this worksheet. VeriPlan enables you to provide inputs about your expected ordinary and major planned future expenses and to indicate expected growth rates relative to normal consumer price inflation. This tool also allows you to make ad hoc expense adjustments for any projection year.

Most people who decide to do lifetime financial planning usually have already adopted one of the many available manual and automated budgeting methods to track their near-term living expenses. However, if you do not currently use another expense and budget tracking method, a section at the bottom of this expense worksheet provides 24 month expense, budget, and budget

variance spreadsheets for your convenience. You will find six expense, budget, and variance worksheets. Vertically, there are three worksheets: Actual Expenses, Expense Budget, and Budget Variance. Horizontally, each of these three worksheets is duplicated so that you can track expenses for two years. This also means that you can start tracking expenses in a particular month of one year and continue into the next year.

These 24-month expense, budget, and budget variance worksheets are NOT connected automatically to the rest of VeriPlan's functionality. They are provided for your convenience in doing near-term family expense tracking, budgeting and expense variance analysis. You can also use these sheets to develop an accurate estimate of your annual ordinary living expenses for your VeriPlan projections, which you will need to enter on this worksheet.

Anyone interested in improving their financial planning must understand that tracking expenses accurately and comprehensively is very important. Exactly how your expenses are tracked is not so important, as long as the results are relatively accurate. Greater savings through better expenditure control and/or increased income are not abstractions. VeriPlan can help you understand the sustainable projected expenditure levels that still would allow you to achieve your lifecycle financial goals. Whether you will achieve your expenditure and savings goals depends upon your commitment to stay within your budget and upon your accurate measurement of your income, expenditures, and savings.

After you have input your personal financial data and experimented with VeriPlan, it should become clear that relatively very small percentage changes in financial behaviors that are sustained over many years can have a very significant cumulative impact on lifecycle finances. Increased savings through conscious expenditure reductions is the single largest and most controllable factor in the long-term financial success of most households.

Along with efforts to increase earned income, the savings factor largely determines lifelong financial success or failure by steadily and more substantially feeding a rational investment program. Cleverness in the selection of particular investments is a far, far less reliable, less important, and most often negative factor in long-run personal financial success. In addition and similar to personal expense control, limiting investment expenses and taxes are the other more important and more controllable success factors available to individual investors.

6.1: Your total current annual ordinary living expenses

Your current total annual ordinary living expenses

See Section 2 below for a listing of the types of ordinary living expenses that should be included in your annual total. If you need a tool to help you add up your annual expenses, use Section 6.

DO NOT include any of the following in your Annual Ordinary Living Expenses, because VeriPlan automatically projects these other items for you separately.

- 1) DO NOT include any TAXES except sales taxes, which are part of your expense receipts.
- 2) DO NOT include any DEBT PAYMENTS OR MORTGAGE PAYMENTS.
- 3) DO NOT include any INVESTMENT COSTS, FEES, OR TAXES.
- 4) DO NOT include any PLANNED SAVINGS.
- 5) DO NOT include any MAJOR EXPENDITURES that you intend to enter SEPARATELY YEAR-BY-YEAR as "major planned expenses" below in Section 3.

Notes:

- * All taxes are projected automatically. See the yellow-tabbed Taxes worksheet for tax settings.
- * All debts are projected automatically. See the yellow-tabbed Property+Debt worksheet.
- * All owned real estate property taxes and building maintenance costs should be entered on the yellow-tabbed Property+Debt worksheet.
- * Savings and cash flows are projected automatically by VeriPlan, as are planned contributions to retirement plans.

Section 6 can help you estimate your current annual ordinary living expenses. The expense categories allow you to check the completeness of your estimate.

Include all other annually recurring ordinary living expenses here:

Include all other annually recurring ordinary living expenses here:

<input type="text" value="\$0"/>	<< Enter the ANNUAL DOLLAR TOTAL of your Current Ordinary Living Expenses
<input type="text" value="\$0"/>	<< Enter the ANNUAL DOLLAR TOTAL of any rental payments on your primary residence (If you currently own your primary residence, your rent payments should be entered here)
<input type="text" value="\$0"/>	<< TOTAL ANNUAL Ordinary Living Expenses plus Primary Residence Rent

If you already own your primary residence, go to Section 1 of the yellow-tabbed PROPERTY+DEBT worksheet to enter information about your home, including fair market value, first and second mortgage debts, real estate taxes, and building maintenance expenses. Since you do not pay rent on your primary residence, your rent entry above will be \$0.

If you rent your primary residence, VeriPlan will use the annual rent number that you provide above for your projection years going forward.

If you rent now, but plan to purchase a primary residence in the future, go to Section 1 of the yellow-tabbed PROPERTY+DEBT worksheet to enter information about the home you intend purchase, including estimated value, planned mortgage, real estate taxes, and building maintenance expenses. Then, enter the number of years in the future until you plan to purchase this primary residence. VeriPlan will automatically project all financial aspects of this future home purchase, and it will also remove rental payments for years thereafter.

Whether you currently own your primary residence or you rent now and plan to purchase in the future, VeriPlan also allows you to plan to sell your primary residence in any subsequent year. If you plan to sell your primary residence in some future year and to rent your residence thereafter, VeriPlan will automatically resume annual rent payments using the amount that you have entered above.

If you believe, for example, that future rent payments after the sale of your home would be higher (or lower) than the annual rent amount you entered above, then you should the positive (or negative) difference as year-by-year incremental (or decremented) expenses below in Section 3.

6.2: What to include in your total current annual ordinary living expenses

At the top of this workbook, enter as accurate an estimate as you have of your total current annual ordinary living expenses. If your expenses have fluctuated significantly in the past few years, enter the dollar average that you believe represents your sustained current expenditures. At any time, you can always alter this figure upward or downward, VeriPlan will instantly develop a new projection for you. This 'what if' expenditure testing can help you to understand better the impact that sustaining your expenditure level would have on your lifecycle financial welfare.

To illustrate the types of expenses that should be included in your "total current ordinary living expenses," these are the standard ordinary living expense categories provided by the 24 month expense tracking and budgeting worksheet below.

Automobile (including Gas, Insurance, Maintenance, Purchase, & Payments)

Clothing

Communications (including Cable/Satellite, Internet, & Phone)

Donations & Charity

Education

Entertainment

Exercise & Fitness

Food (including Eating Out & Groceries)

Gifts

Hobbies

Home (Rent but NOT Mortgage and NOT real estate taxes -- see input section at the top of this worksheet)

Household Expenses (Cleaning, Furnishings, Gardening, & Insurance)

Life Insurance

Medical and Healthcare (including Copays, Doctors, Drugs, & Health Insurance) plus dental and vision

Miscellaneous

Personal Care

Pets

Subscriptions & Books

Utilities (including Electric, Gas, Sewer, Trash, & Water)

Vacations & Travel

6.3: Your major planned expenses and year-by-year expense adjustments

The table in this section allows you to enter major planned expenses and to make positive and negative annual expense adjustments. Each annual entry can have a different real dollar growth rate.

Certain major future expenses can be anticipated and projected, such as the purchase of an automobile every so many years, private school/college tuition for children, adding a pool, a cruise around the world, etc. For other expenses, you might not be able to plan as precisely, but you might want to run a 'what if' analysis. Examples might be: paying for a large condominium upgrade assessment, settling a pending and uninsured lawsuit, the cost of several years of nursing home care beginning at age 90, etc. The VeriPlan table below will allow you to add and evaluate numerous such major planned and unplanned expenses to your lifecycle projections.

<<< Using this input table for your major planned expenses and expense adjustments >>>

Only the bold border columns below are user-adjustable. The other columns are automatically generated and permit you to inspect the impact of any dollar amounts and relative inflationary growth differentials that you enter.

- * Enter your dollar expenses as POSITIVE numbers into the table below. Any expense adjustment intended to INCREASE expenses should be entered as a POSITIVE number. Only if you want to enter a dollar adjustment, which is intended to REDUCE your other expenses, would you enter a NEGATIVE dollar figure.
- * To enter these anticipated major expenses and expense adjustments, you first need to determine the number of years from now until these expenses are expected to occur. For your convenience in selecting which year to use, the table also provides the corresponding ages for Earner #1 starting with his or her current age adjacent to the first projection year.
- * Enter all dollar figures in CURRENT value terms. VeriPlan will automatically adjust your current dollar entries when you enter a relative inflationary growth rate for any point in the future.

For those major planned expenses that are expected to grow at a rate below or above the consumer price index, estimate only the EXPECTED AVERAGE ANNUAL DIFFERENCE IN PRICE GROWTH BELOW OR ABOVE a 3% expected Consumer Price Index inflation rate. Because VeriPlan uses real or constant purchasing power dollars in its all of projections, only the difference compared to inflation rather than the total inflation rate itself should be entered.

Enter relative annual percentage growth rate adjustments to inflation, as follows:

- * Enter relative percentage increases as POSITIVE PERCENTAGES.

* Enter relative percentage decreases as NEGATIVE PERCENTAGES.

All projected dollar figures in this table are real dollars, after your relative inflationary growth adjustments.

Overall expenses cannot be less than zero in any year. Therefore, overall negative expense reductions on this input table are automatically limited to lowering the sum of your ordinary living expenses, major planned expenses, and expense adjustments to zero. When you attempt to use negative adjustments that are overly large, you will see that the negative total in the last column will not equal the total of your negative adjustments, but will instead equal "Your PRE-ADJUSTMENT projected ordinary living expenses with retirement limits" in the fourth column.

You may "copy-and-paste" to copy a single entry vertically, BUT ONLY between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE WITHIN THE SAME COLUMN.

Be careful! Other copy-and-paste operations that are NOT between VERTICALLY CONTIGUOUS CELLS of the SAME DATA TYPE in the SAME COLUMN COULD HARM YOUR CURRENT WORKING PLAN FILE. Always back up your plan periodically with different file names on your hard disk drive. A corrupted file will be obvious by looking at the output graphics and data tables. If your file becomes corrupted, then roll back to your most recently saved file without the operations that corrupted the file. Hard disk storage is essentially free, so ALWAYS use a changing file naming convention, so that you do not keep overwriting the same file on disk.

<<<<<< Major Expenses >>>>>>

Projection Year	...when the age of Earner #1 is:	...before or after the retirement age of Earner #1?	Your PRE-ADJUSTMENT projected ordinary living expenses with retirement limits	>>> A <<< Your major planned expenses IN CURRENT DOLLARS	>>> B <<< Relative growth for Column A (annual % change above or below inflation)	>>> C <<< Your Positive and Negative Adjustments to Column A after Column B inflation adjustment (calculated)
1	18	Before	\$75,000	\$0	0.00%	\$0
2	19	Before	\$75,000	\$0	0.00%	\$0
3	20	Before	\$75,000	\$10,000	0.00%	\$10,000
4	21	Before	\$75,000	(\$5,000)	0.00%	(\$5,000)
5	22	Before	\$75,000	\$0	0.00%	\$0
6	23	Before	\$75,000	\$0	0.00%	\$0
7	24	Before	\$75,000	\$0	0.00%	\$0
8	25	Before	\$75,000	\$0	0.00%	\$0
9	26	Before	\$75,000	\$0	0.00%	\$0
10	27	Before	\$75,000	\$0	0.00%	\$0
11	28	Before	\$75,000	\$0	0.00%	\$0

NOTE: Rows 11 to the end of the table have not been included in this User Manual.

(The table below shows the other columns that are to the right of the columns shown in the table above.)

<<<< Expense Adjustments >>>>

Projection Year	...when the age of Earner #1 is:	>>> D <<< Your other positive and negative expense adjustments IN CURRENT DOLLARS	>>> E <<< Relative growth for Column D (annual % change above or below inflation)	>>> F <<< Your Positive and Negative Adjustments to Column D after Column E inflation adjustment (calculated)	Major planned expenses and adjustments with overall limitations (calculated)
1	18	\$0	0.00%	\$0	\$0
2	19	\$0	0.00%	\$0	\$0
3	20	\$0	0.00%	\$0	\$10,000
4	21	\$0	0.00%	\$0	(\$5,000)
5	22	\$0	0.00%	\$0	\$0
6	23	\$0	0.00%	\$0	\$0
7	24	\$0	0.00%	\$0	\$0
8	25	\$0	0.00%	\$0	\$0
9	26	\$0	0.00%	\$0	\$0
10	27	\$0	0.00%	\$0	\$0
11	28	\$0	0.00%	\$0	\$0

6.3.1: Children's Education Expenditure Planning



The input table in the section above can be used as a children's education expenditure planning tool. This section provides a detailed example of how to make projected college expense entries for two children, who currently are young.

This section provides an example of how to use the expenditure input table above as a college expense planning tool. In addition, this example also illustrates how to use adjustments in the table above to reflect expected scholarships and other financial aid. In this situation, we will assume that other financial aid will consist of student loans that your children will have the obligation to repay as adults. Therefore, these student loans will reduce your net lifecycle expenses. (Note: This tool can be used in a similar fashion for elementary and secondary private school costs.)

For this example, we will assume that:

- * The current cost of sending a child to a college is \$30,000 per year for four years.
- * You have two children whose current ages are 4 and 6.
- * Your children will enter college beginning at age 18.
- * Therefore, your first child will enter college in year 12 of the input table above. Age 18 - age 6 = year 12. The second child will enter in year 14. Age 18 - age 4 = year 14.

You would make the following current dollar entries into the bold border user data entry column for major expenses in the table above:

- 30,000 at year 12 (1 child in college)
- \$30,000 at year 13 (1 child in college)
- \$60,000 at year 14 (2 children in college)

\$60,000 at year 15 (2 children in college)

\$30,000 at year 16 (1 child in college)

\$30,000 at year 17 (1 child in college)

Next, you might set a relative growth adjustment for these expenses in the adjacent bold border user data entry column. This inflation differential adjustment factor is particularly useful for college education costs, which have tended to exceed normal inflation. However, you should probably not be overly aggressive in your inflation adjustment. Excess growth trends tend not to be sustained over very long periods. An excess inflation adjustment of 1.0% to 4.0% is probably most appropriate for college costs, using the higher end of the range for nearer term expenses and moving toward the lower end of the range for costs in the more distant future. If you experiment with these percentages, you will see that seemingly small changes in real growth percentages can have a large real dollar impact.

For purposes of this example, assume that you will use +2% as your relative inflation adjustment factor. You should enter this percentage adjacent to each of the dollar figures that you enter in the table above. You could, of course experiment with this percentage and it does not have to be the same for each year.

In addition, it has become clear that your six-year-old is quite precocious, and you are optimistic about her chances of obtaining some financial aid. You decide to plan that she will win scholarships for 1/3 of her college expenses or \$10,000 per year. You also expect her to take out loans for another 1/3 of her expenses, and you will pay the \$10,000 annual balance yourself. Since he is younger, you are less certain about the prospects for your son, so you are going to assume only that he will take on \$10,000 per year in loans, and you will pay the \$20,000 annual balance. You decide that you will monitor the situation over the years and in the future you might revise your assumptions in VeriPlan, if his prospects for scholarship seem to improve.

In the bold border dollar adjustments column in the table above, you would make the following **negative dollar entries** to reflect the scholarships and loans that you expect your daughter and son to win and assume:

* (\$20,000) at year 12 (1 child in college) (Daughter: \$10,000 scholarship; \$10,000 loan)

* (\$20,000) at year 13 (1 child in college) (Daughter: \$10,000 scholarship; \$10,000 loan)

* (\$30,000) at year 14 (2 children in college) (Daughter: \$10,000 scholarship; \$10,000 loan) (Son: \$10,000 loan)

- * (\$30,000) at year 15 (2 children in college) (Daughter: \$10,000 scholarship; \$10,000 loan) (Son: \$10,000 loan)
- * (\$10,000) at year 16 (1 child in college) (Son: \$10,000 loan)
- * (\$10,000) at year 17 (1 child in college) (Son: \$10,000 loan)

However, you are worried that scholarships and loans will be an increasingly competitive challenge to obtain, because of continually rising college costs. Therefore, instead of projecting that the availability of scholarships and loans will keep pace with the 2% real growth rate that you assumed for college costs, you instead assume that they will in fact decline by -1% annually in real dollar growth terms. Therefore, next to each of these negative dollar adjustments above, you will also put in an **negative 1% growth rate** for these adjustments. In effect, you will plan to make up the difference financially.

Once you have made these entries, you can evaluate VeriPlan's graphics and data tables to assess the impact of this plan to fund your children's college expenses across your entire lifecycle financial plan. Obviously, you can make any adjustments that you would like to any variable in VeriPlan, as you conduct instant 'what-if' planning to develop a workable lifecycle plan that includes paying your portion of your children's college expenses.

6.3.2: Mid-Career Education Planning



Adults sometimes need to evaluate the advantages and disadvantages of returning to school in mid-career. The input table above can also be used as a Mid-Career Education Planning Tool.

This section provides a detailed example of how to use VeriPlan as a Mid-Career Education Planning Tool to model the financial tradeoffs associated with returning to school for career advancement.

The major expense and expense adjustment table above can also be used to analyze whether it is worth returning to school to improve one's earnings capacity. The following example explains the steps to take to analyze the value of obtaining additional education to further one's career.

Assume that you currently earn \$50,000 per year and expect your real income to increase annually throughout your normal working years at .5% greater than the rate of consumer price inflation. You have already made various required and optional entries on VeriPlan's worksheets, and you have developed a lifetime financial plan. Your current plan uses \$50,000 as your employment income and .5% as your relative earned income growth rate on the income worksheet. After reviewing your current financial plan, you would like to explore ways to improve your long-term outlook for earned income and asset growth.

Currently, you have a bachelor's degree and a strong work ethic, but those who are managers in your profession all seem to have graduate degrees in a specialty valued by your industry. You are considering whether it is worth going to graduate school to obtain a master's degree requiring a two-year course of study. If it makes sense to do so financially, you intend to enter graduate school in one year after working at your current salary for one more year.

Graduate school tuition currently costs \$40,000 per year. You expect that these educational expenses will continue rise at 2.5% above the rate of inflation from now until you complete your studies. While in graduate school, you do not intend to work, so you will not earn any salary. Furthermore, you intend to maintain the same level of ordinary living expenses and the same real ordinary expense growth rate that you already have in your current plan.

When you complete your master's degree, you expect that you will be able to earn \$75,000 annually. Furthermore, you also believe that your real income would increase annually throughout your normal working years up to age 65 at a slightly higher 1.0% real growth rate relative to inflation.

Clearly, the potential for both higher annual earnings and a higher real earnings growth rate are appealing, but is it worth the two year income loss and the significant cost of paying tuition while in school?

How to model these factors in VeriPlan so that you could evaluate the alternatives:

Step 1) You need to record baseline information about your current lifecycle plan with \$50,000 in income and a .5% real ordinary expense growth rate. Since you have already entered all your information on VeriPlan's various worksheets and have a current plan, all you need to do is consult some asset related projection graphics and their corresponding data worksheets. A simple way to benchmark this comparison would be to refer to the financial assets graphic and corresponding data. Print a copy of the full data worksheet or write down the asset numbers for one or two ages in the future.

Step 2) Enter your new lifecycle earnings projection:

- * Change your current annual employment earnings from \$50,000 to \$75,000 on the income worksheet.
- * Change your current real dollar earned income growth rate from .5% to 1.0% on the income worksheet.

Step 3) Offset your projected earnings during the first year, while you continue to work at \$50,000 for one more year.

- * Enter **negative** \$25,000 into expense adjustments Column D for Year #1.
- * Enter a real relative growth rate of 1.0% as a positive number in Column E for Year #1.
- * This would reduce your salary by \$25,000 growing at 1% in real terms, during the coming year.

(Note: If you want to be a more precise, use an adjustment in Step 3a of negative \$25,250 versus negative \$25,000. This is one-half the difference between \$75,000 growing at 1% in real terms to \$75,750 by the end of the year versus \$50,000 growing at .5% in real terms to \$50,250 at the end of the year. Take the \$500 difference and divide by 2 to approximate the average difference throughout the year. This observation is made solely to point out that growth rate differences may require consideration, when you make adjustments -- particularly if the percentage rate of growth differences are significant and many intervening years are involved.)

Step 4) Fully offset your projected earnings, while you are in school during years #2 and #3, and you are not employed:

- * Enter **negative** \$75,000 into the expense adjustments Column D for Year #2 and #3.

- * Enter a real relative growth rate of 1.0% as a positive percentage number in Column E for Year #2 and #3

- * This would reduce your salary by \$75,000, down to \$0 during Year #2 and #3.

(Note: Because the real growth rates are the same, your adjustment would precisely offset your projected salary for Year #2 and #3.)

Step 5) Enter the cost of graduate school tuition:

- * Enter positive \$40,000 in the major planned expense Column A for Year #2 and #3.

- * Enter a real relative growth rate of 2.5% as a positive percentage number in Column B for Year #2 and #3

Step 6) Evaluate your new lifecycle projection to see whether it might be worth returning to school under these assumptions.

- * Evaluate the financial assets output data and compare the projected value of your financial asset portfolio at the same benchmark ages that you had chosen above in Step 1.

Test the uncertainty of your projection, by varying your estimated annual earned income and your estimated real income growth rate. Vary any other projection settings in VeriPlan that you find useful to consider. If it makes sense to you, send in your graduate school admissions applications and buy a bean-bag chair.

6.4: Healthcare expenses as part of your annually recurring ordinary living expenses

During working years, most families will pay some medical insurance premiums and certain out-of-pocket medical, dental, and vision expenses that are not paid for by an employer and/or a government insurance program. Those annual healthcare expenses should be included above as part of your annual total dollar total of current Ordinary Living Expenses.

When most people reach 65, as individuals, they will enroll in some parts of the Medicare healthcare insurance system for senior citizens. Depending upon your Medicare choices, each beneficiary will then pay certain Medicare insurance premiums and may pay some out of pocket healthcare expenses.

Because healthcare costs while working and while on Medicare can be quite different, VeriPlan provides features to automate the projection of your lifetime and retirement healthcare costs.

On the Medicare worksheet, VeriPlan summarizes the Medicare program and allows you to model and project your healthcare expenses in retirement. VeriPlan also provides default entries for various Medicare program expenses, since many VeriPlan users are not yet old enough to have the pleasure of understanding the Medicare system.

Note that you must turn on these healthcare features on the Medicare worksheet for them to become a part of your projections.

When you complete the healthcare section of the Medicare worksheet, you will see that one section asks you to enter the total dollar amount that you currently pay for healthcare expenses, which you have included above in Ordinary Living Expenses. When you have completed the healthcare section of the Medicare worksheet, and you turned on those features, then the yellow box below will display your current total annual cash expenses for healthcare:

\$8,450	Total annual family healthcare expenses included in Ordinary Expenses
----------------	--

With this healthcare cost information, VeriPlan will automatically do the following:

VeriPlan will NOT change your annual Ordinary Expenses total up to age 65. However, on the blue-tabbed Expenses graphic, VeriPlan will graph these healthcare expenses separately from your other Ordinary Expenses up through age 65.

Beginning at age 66 and in later years, VeriPlan will then remove the annual healthcare expense amount above from Ordinary Expenses and replace it with your retirement healthcare expense model. Thereafter, VeriPlan will instead project your Medicare and other age 65+ healthcare expenses according to your settings on the Retirement worksheet. If there is an age difference between a couple, then half of the total annual family healthcare expenses will be switched, as each person reaches age 66.

6.5: Change the expected growth of ordinary living expenses before retirement

Most people do not need to adjust expenses relative to general inflation and should NOT use this adjuster.

You can adjust your expected annual growth rate for consumption expenses, RELATIVE TO AVERAGE INFLATION, during your working years. The purpose of VeriPlan's inflation adjuster tools is to allow you to test how unusually low or unusually high sustained inflation in relationship to the long-term inflation average might affect your lifetime plan prior to retirement of Earner #1. For more information, see the section on "When to use and when NOT to use VeriPlan's inflation differentiators" on the red-tabbed Optimizations worksheet.

Remember that VeriPlan projections use "real, constant purchasing power dollars" that have already had the general long-term, compounded average CPI inflation component removed. Please do not make the error of putting in a number for average inflation, because that will very significantly distort your projections.

Throughout every aspect of its financial lifecycle projections, VeriPlan measures all current and future dollar amounts in real or constant purchasing power dollars with inflation removed. However, you might expect that your current total annual living expenses will decline or increase at a rate, which is lower or greater in real dollar terms, than the general rate of consumer price inflation. If you have such an expectation, VeriPlan can project that your expenses will grow during your working years, at some different real dollar growth rate. You can set your relative real dollar growth rate in the bold border user data entry box below in this section. If you do not make a relative growth rate adjustment, then VeriPlan will project that your real dollar living expenditures would grow with the rate of inflation until Earner #1 reaches retirement age.

VeriPlan will apply the real dollar ordinary expense growth adjustment that you make in this section up until the year that Earner #1 retires. After retirement, you may select a different total ordinary living expenses level and choose a different real dollar growth for ordinary living expenses in retirement. You can adjust your total initial retirement living expenses and your real dollar retirement living expense growth rate on the "Retirement" worksheet.

0.00%	<< Enter your assumption for real dollar % growth in living expenses BELOW OR ABOVE AVERAGE INFLATION, during the working years up until Earner #1 retires.
-------	---

^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

- * If you expect your expenses to grow at the rate of inflation, then leave the 0% default.
- * If you use any adjustment, it probably would be within the -.5% to +1% per year range.
- * NOTE THAT YOU SHOULD NOT UNDER- OR OVER-ESTIMATE EXPENSE GROWTH IN REAL TERMS.

6.6: 24-month expense tracking, budgeting, and variance worksheets (optional)

These worksheets allow you to do 24 month family expense tracking, budgeting, and budget variance monitoring. They are supplemental and are not required to by VeriPlan to develop your lifetime financial planning projections.

How to use the monthly family expense tracking, expense budgeting, and budget variance worksheets below

This worksheet provides these expense tracking and budgeting worksheets for your convenience. Below, you will find six worksheets. Vertically, there are three worksheets: Actual Expenses, Expense Budget, and Budget Variance. Horizontally, each of these three worksheets is duplicated so that you can track expenses for two years. This also means that you can start tracking expenses in a particular month of one year and continue into the next year.

These worksheets are NOT connected automatically to the rest of VeriPlan's functionality. They are provided for your convenience in doing near-term family expense tracking, budgeting and expense variance analysis. You can also use these sheets to develop an accurate estimate of your annual ordinary living expenses for your VeriPlan projections. With either 12 months of complete data or annual extrapolation from fewer months with complete expense data, you can verify the annual ordinary expense total that you have entered into the first section of this expense worksheet. As the note below the "Actual Expenses" chart indicates, mortgage expenses and real estate taxes, should be removed when calculating annual living expenses for this expense worksheet. (VeriPlan tracks mortgage payments and real estate taxes separately and automatically.) If you have a complete year of expense data, the mortgage expense and real estate tax removal is done for you below. If you use fewer months to extrapolate, remember to subtract mortgage payments and real estate taxes from the monthly totals.

You could use only the top Actual Expenses spreadsheet to track your expenses monthly, and you could ignore the Budget and Budget Variance worksheets below.

You can also set an annual budget in the second spreadsheet and then track your actual expenses in the top spreadsheet. If you do this, then the variances to your budget will be shown automatically in the third spreadsheet. You can change both the Actuals spreadsheet and the Budget spreadsheet, but not the Budget Variances spreadsheet. Variances are calculated

automatically by evaluating the differences between the Actuals and the Budget spreadsheets above the Budget Variance spreadsheet. Positive variances indicate expenses that are below budgeted amounts and negative variances indicate expenses in excess of budget.

User entries are allowed only in the BOLD BORDER spreadsheet cells. You are limited to making positive decimal or whole number numerical data entries. Other cells are locked to prevent accidentally overwriting formulas.

In the "Actual Expenses" worksheet for the "Current Calendar Year" below, there are 38 pre-named expense categories and another 10 that you could add. If you use a different set of expense categories already in your family expense tracking and budgeting and you want to use your own expense categories instead of those provided, you can. Just type in or rename with your list of categories, and your expense category names will automatically propagate to the other five expense, budget, and variance worksheets. Of course, you should first determine your expense categories, before you add any expense data to these worksheets. For the reasons explained above, the mortgage expense and real estate tax categories are locked and highlighted in green. You should enter your mortgage payments and real estate taxes on these lines only and not on any other lines. This preserves the proper derivation of total annual expenses below the expense worksheets, when you have entered complete annual expense information.

You could also use the top "Actual Expenses" spreadsheet to estimate your annual expenses using a sampling method. For example, you could categorize and add up your expenses over three months, divide by 3, and then copy that per month expense figure in any category across the full 12 months. Also, remember to look at the list of categories for other expenses, such as real estate taxes, insurance payments, vacations, etc. that you normally would incur, but that did not occur in months that you sampled. Either enter those amounts in the months that they normally occur; or take those infrequent expenses, divide by 12, and copy the resulting monthly figure across the 12 months.

Remember to exclude any payments that would double count your expenses. For example, include your living expenses, whether you paid by cash, check debt card, credit card, etc. To track your expenses, you might collect all your receipts and/or you could refer to your bank registers and credit card statements for listings of your particular expenses. DO NOT, however, include your payment of your credit card bill, because that would double count your expenses.

Use the Zoom function to change the size of the viewable spreadsheet in your computer window. (VIEW >> ZOOM)

6.6.1: 2 Year Monthly Expense Tracking Worksheet

You may "copy-and-paste" to copy a single entry vertically, BUT ONLY between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE WITHIN THE SAME COLUMN.

Be careful! Other copy-and-paste operations that are NOT between VERTICALLY CONTIGUOUS CELLS of the SAME DATA TYPE in the SAME COLUMN COULD HARM YOUR CURRENT WORKING PLAN FILE. Always back up your plan periodically with different file names on your hard disk drive. A corrupted file will be obvious by looking at the output graphics and data tables. If your file becomes corrupted, then roll back to your most recently saved file without the operations that corrupted the file. Hard disk storage is essentially free, so ALWAYS use a changing file naming convention, so that you do not keep overwriting the same file on disk.

(Note that only 4 monthly columns are show. In VeriPlan this table has all twelve months and an annual total. Then, an additional 12 month table for the next year is also provided.)

ACTUAL EXPENSES	202x	<< CURRENT CALENDAR YEAR		
	JAN	FEB	MARCH	APRIL
Autos * -- Gas	\$0	\$0	\$0	\$0
Autos * -- Insurance	\$0	\$0	\$0	\$0
Autos * -- Maintenance	\$0	\$0	\$0	\$0
Clothing	\$0	\$0	\$0	\$0
Communications -- Cable/Satellite/Internet	\$0	\$0	\$0	\$0
Communications -- Internet	\$0	\$0	\$0	\$0
Communications -- Phone	\$0	\$0	\$0	\$0
Donations & Charity	\$0	\$0	\$0	\$0
Education	\$0	\$0	\$0	\$0
Entertainment	\$0	\$0	\$0	\$0
Exercise & Fitness	\$0	\$0	\$0	\$0
Food -- Eating Out	\$0	\$0	\$0	\$0
Food -- Groceries	\$0	\$0	\$0	\$0
Gifts	\$0	\$0	\$0	\$0
Hobbies	\$0	\$0	\$0	\$0
Home -- Mortgage **	\$0	\$0	\$0	\$0
Home -- Real Estate Tax **	\$0	\$0	\$0	\$0
Home -- Rent	\$0	\$0	\$0	\$0
Household -- Cleaning	\$0	\$0	\$0	\$0
Household -- Furnishings	\$0	\$0	\$0	\$0
Household -- Gardening	\$0	\$0	\$0	\$0

Household -- Insurance	\$0	\$0	\$0	\$0
Life Insurance Premiums	\$0	\$0	\$0	\$0
Medical -- Copays/Doctors	\$0	\$0	\$0	\$0
Medical -- Drugs/Pharmacy	\$0	\$0	\$0	\$0
Medical -- Insurance	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0
Personal Care	\$0	\$0	\$0	\$0
Pets	\$0	\$0	\$0	\$0
Subscriptions & Books	\$0	\$0	\$0	\$0
Utilities -- Electric	\$0	\$0	\$0	\$0
Utilities -- Gas	\$0	\$0	\$0	\$0
Utilities -- Sewer	\$0	\$0	\$0	\$0
Utilities -- Trash	\$0	\$0	\$0	\$0
Utilities -- Water	\$0	\$0	\$0	\$0
Vacations & Travel	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
<< Add your new category >>	\$0	\$0	\$0	\$0
TOTAL:	\$0	\$0	\$0	\$0
CUMULATIVE	\$0	\$0	\$0	\$0

6.6.2: 2 Year Monthly Expense Budgeting Worksheet

This budget worksheet uses the same rows as the Expense tracking worksheet above.

(Note that only 4 monthly columns are shown. In VeriPlan this table has all twelve months and an annual total. Then, an additional 12 month table for the next year is also provided.)

EXPENSE BUDGET	202x	<< CURRENT CALENDAR YEAR		
	JAN	FEB	MARCH	APRIL
Autos * -- Gas	\$0	\$0	\$0	\$0
Autos * -- Insurance	\$0	\$0	\$0	\$0
Autos * -- Maintenance	\$0	\$0	\$0	\$0
Clothing	\$0	\$0	\$0	\$0
Communications -- Cable/Satellite/Internet	\$0	\$0	\$0	\$0
Communications -- Internet	\$0	\$0	\$0	\$0
Communications -- Phone	\$0	\$0	\$0	\$0
Donations & Charity	\$0	\$0	\$0	\$0
Education	\$0	\$0	\$0	\$0
Entertainment	\$0	\$0	\$0	\$0
Exercise & Fitness	\$0	\$0	\$0	\$0
Food -- Eating Out	\$0	\$0	\$0	\$0
Food -- Groceries	\$0	\$0	\$0	\$0
Gifts	\$0	\$0	\$0	\$0
Hobbies	\$0	\$0	\$0	\$0
Home -- Mortgage **	\$0	\$0	\$0	\$0
Home -- Real Estate Tax **	\$0	\$0	\$0	\$0
Home -- Rent	\$0	\$0	\$0	\$0
Household -- Cleaning	\$0	\$0	\$0	\$0
Household -- Furnishings	\$0	\$0	\$0	\$0
Household -- Gardening	\$0	\$0	\$0	\$0
Household -- Insurance	\$0	\$0	\$0	\$0
Life Insurance Premiums	\$0	\$0	\$0	\$0
Medical -- Copays/Doctors	\$0	\$0	\$0	\$0
Medical -- Drugs/Pharmacy	\$0	\$0	\$0	\$0
Medical -- Insurance	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0
Personal Care	\$0	\$0	\$0	\$0
Pets	\$0	\$0	\$0	\$0
Subscriptions & Books	\$0	\$0	\$0	\$0

* Provides the same row categories as the Expense tracking worksheet.

NOTE: The remaining rows have been truncated for this User Manual.

6.6.3: 2 Year Monthly Budget Variances Worksheet

This budget variances worksheet shows the difference between expense actuals and budget by month and category. This budget variances worksheet uses the same rows as the Expense tracking worksheet above.

[Note that only 4 monthly columns are shown. In VeriPlan this table has all twelve months and an annual total. Then, an additional 12 month table for the next year is also provided.]

BUDGET VARIANCE	202x	<< CURRENT CALENDAR YEAR		
	JAN	FEB	MARCH	APRIL
Autos * -- Gas	\$0	\$0	\$0	\$0
Autos * -- Insurance	\$0	\$0	\$0	\$0
Autos * -- Maintenance	\$0	\$0	\$0	\$0
Clothing	\$0	\$0	\$0	\$0
Communications -- Cable/Satellite/Internet	\$0	\$0	\$0	\$0
Communications -- Internet	\$0	\$0	\$0	\$0
Communications -- Phone	\$0	\$0	\$0	\$0
Donations & Charity	\$0	\$0	\$0	\$0
Education	\$0	\$0	\$0	\$0
Entertainment	\$0	\$0	\$0	\$0
Exercise & Fitness	\$0	\$0	\$0	\$0
Food -- Eating Out	\$0	\$0	\$0	\$0
Food -- Groceries	\$0	\$0	\$0	\$0
Gifts	\$0	\$0	\$0	\$0
Hobbies	\$0	\$0	\$0	\$0
Home -- Mortgage **	\$0	\$0	\$0	\$0
Home -- Real Estate Tax **	\$0	\$0	\$0	\$0
Home -- Rent	\$0	\$0	\$0	\$0
Household -- Cleaning	\$0	\$0	\$0	\$0
Household -- Furnishings	\$0	\$0	\$0	\$0
Household -- Gardening	\$0	\$0	\$0	\$0
Household -- Insurance	\$0	\$0	\$0	\$0
Life Insurance Premiums	\$0	\$0	\$0	\$0
Medical -- Copays/Doctors	\$0	\$0	\$0	\$0
Medical -- Drugs/Pharmacy	\$0	\$0	\$0	\$0
Medical -- Insurance	\$0	\$0	\$0	\$0

* Provides the same row categories as the Expense tracking worksheet.

NOTE: The remaining rows have been truncated for this User Manual.

Chapter 7: Financial Assets worksheet

- 7.1: Enter your cash and cash equivalent assets -- up to 24 securities/accounts
- 7.2: Enter your bond and fixed income assets -- up to 24 securities/accounts
- 7.3: Enter your stock and equity assets -- up to 99 securities/accounts
- 7.4: Notes about the cash, bond, and stock financial assets input tables
- 7.5: Investment costs inputs
- 7.6: Health Savings Accounts (HSAs) and Other Tax-Favored Health Plans
- 7.7 Notes on target date funds and other funds that mix the cash, bond, and stock assets

Introduction



Use this Financial Assets worksheet to enter detailed information about your currently owned cash/cash equivalent, bond/fixed income, and stock/equity assets. You can change and update any of this financial asset information at any time in the future.

For detailed instructions and information about any of the columns in the cash, bond, and stock data input tables below, just scroll down below the last stock/equity asset entry table.

This current Financial Asset holdings worksheet allows you to enter information about up to:

- * 24 cash/cash equivalent security/account holdings
- * 24 bond/fixed income security/account holdings
- * 99 stock/equity asset security/account holdings

Cash and cash equivalent assets would include all cash equivalents, such as checking, savings, and money market accounts plus short-term certificates of deposit, etc. A cash equivalent asset would be any asset that is similar to cash, such as a money market fund where a constant Net Asset Value (NAV) of \$1.00 per share is maintained. Interest earnings and costs are paid by issuing/redeeming shares with a \$1.00 NAV, rather than by changing the value of the shares themselves.

Bond and fixed income assets would include corporate and/or government bonds, bond funds, and equivalents, including hybrid funds with a dominant fixed income emphasis.

Stock and equity assets would include publicly-traded common stocks, preferred stocks, equity mutual funds, exchange-traded equity funds, etc., including hybrid funds with a dominant equity emphasis.

DO NOT ENTER illiquid non-market-traded securities and privately held securities on this worksheet. Instead, enter them as Other Properties in Section 4 of the "Property+Debt" worksheet. Illiquid securities cannot be easily and cost-effectively transacted, so they should not be classified as tradeable cash, bonds, or stocks.

Also, if you expect to receive additional assets in the future through inheritance and/or gifts, those assets can be entered in the bottom section of the Income worksheet.

Since this worksheet is for your currently-owned financial assets, you might wonder about the addition of assets in the future. If you are projected to have positive cash flows in future years, VeriPlan will automatically invest those new savings assets according to your settings on VeriPlan's various yellow-tabbed input worksheets that affect investing. If annual cash flows are negative in any projection year, then VeriPlan will automatically withdraw assets. See Section 9, titled "VeriPlan's design and discounted cash flow modeling" on the red-tabbed Optimizations worksheet for more information.

General Instructions

Suppose that you have an investment account with a total valuation of \$50,000, which is a mixture of \$10,000 in cash assets, \$25,000 in bonds or fixed income assets, and \$15,000 in stocks or equity assets. You should make these entries below:

- * Enter the \$10,000 in cash in one or more rows of "Section 1: Cash and cash equivalent assets input table"

* Enter the \$25,000 in bonds in one or more rows of "Section 2: Bond and fixed income assets input table"

* Enter the \$15,000 in stocks in one or more rows of "Section 3: Stock and equity assets input table"

Separating your cash, bond, and stock assets should be relatively straight-forward, when the individual assets that you hold individually are of one asset class or another. If the asset is cash or a CD, enter the total dollar amount into a row of Section 1 (Cash) of this worksheet.

If the asset is a bond or fixed income asset, then enter the number of bonds or the number of mutual fund or ETF shares into a row of Section 2 of this worksheet. Then, use the Internet to look up the current per share market price of that bond, mutual fund or ETF share on the same line. (Morningstar.com is one place to look.) VeriPlan automatically displays the total current market value of that bond times the number of shares that you own.

Concerning your stocks and equity assets, use the same method just described for bonds, but instead enter your equity asset share numbers and per share prices into the various rows of Section 3 of this worksheet.

VeriPlan collects specific information on each of your asset positions about size, value, taxability, investment costs, and expected distributions (for stocks). Because VeriPlan will project each of your asset holdings separately and will calculate returns, volatility, taxes and costs accordingly, the more accurate your inputs, the more informative your projections can be for you.

Automatic differentiation of financial assets by account taxability

For each of your financial asset holdings, you should be careful to properly code the "When Taxable?" columns with a 0, 1, or 2, so that VeriPlan will automatically differentiate the taxability of your assets. The "When Taxable?" columns have this short-hand coding "(Tax-Deferred=0; Always=1; Roth 'tax-now-not-later'=2)."

Always=1 (the default) means as normal taxable non-retirement account. Tax-Deferred=0 means a traditional qualified retirement account that may reduce your taxable income when you contribute and would be subject to required minimum distributions (RMDs) in retirement. Roth 'tax-now-not-later'=2 means a Roth retirement account which does not reduce taxable income when contributions are made, but is not subject to taxation on withdrawals thereafter.

Automatic projection of assets lost to excessive investment costs

There are additional columns in these data entry tables for the investment costs related to each of your assets. Over the years, even "average" investment costs can dramatically undercut the potential value of your portfolio. Do not neglect these entries. When you include investment costs related to your holdings, VeriPlan will automatically project your cumulative lifetime investment costs. For more about VeriPlan and investment costs, see the yellow-tabbed Investment Costs worksheet. This is a wake-up call to cut your investment costs to the bone. (Morningstar.com is one convenient place to look for this investment cost information.)

Internally, VeriPlan will maintain all of this information for each individual holding throughout your lifetime projections. VeriPlan automatically aggregates total cash, total bonds, and total stocks within each of the account taxability types (taxable, traditional retirement, and Roth retirement) to develop its projections and allow you to manipulate your projections.

VeriPlan can provide significant insights into your particular investment circumstances. It calculates your overall portfolio tax-efficiency and investment cost-efficiency for each year of any projection -- even though the net valuation of your individual holdings may change at different rates because of differences in investment returns, costs, and taxes.

A note for married couples

VeriPlan does not require you to distinguish ownership of financial accounts by spouse in your entries below.

Spousal account ownership tends not to be relevant, except for the projection of Required Minimum Distributions (RMDs) from traditional retirement accounts, when there is an age difference. If this is your situation, see the "Apportioning married couple's traditional retirement account assets for RMD calculations" in Section 12 of the "Taxes" worksheet.

Automatic tax basis tracking

VeriPlan projections also track your asset tax basis by asset class and account taxability. Internally, VeriPlan automatically keeps track of your current investment asset tax basis. When appropriate, it will also add new asset tax basis associated with future transactions.

When you enter the tax basis of your currently owned accounts, VeriPlan can track your total tax basis by asset class and account taxability type. VeriPlan's projections separate the cash,

bond, and stock asset classes and differentiate assets by the taxability of the account. As discussed above, the three account tax types are: taxable accounts, traditional tax-advantaged retirement accounts, and Roth retirement accounts. Tax basis is aggregated by asset class and applied proportionately when transactions are required.

Entering your current asset tax basis is important. If you do not enter your current tax basis in the cash, bond, and stock asset tables below, then VeriPlan's automated tax models will assess unnecessarily higher taxes on transactions in negative cash flow years than otherwise would be required, had you instead entered the actual tax basis of your current holdings.

The Cash, Bond, and Stock data entry sections below have a column titled; "Current Tax Basis (your already taxed capital contributions)" for the entry of your current asset tax basis. Your tax basis can usually be found on your taxable investment statements.

Here are some asset tax basis rules-of-thumb that may help with your tax basis entries below:

Cash Assets:

- * For taxable accounts, the tax basis will equal the current value of the holding.
- * For traditional retirement accounts usually the tax basis is usually zero dollars, unless you have contributed after tax assets.
- * For Roth accounts, enter the current value of the holding, as your tax basis

Bond/Fixed Income and Stock/Equity Assets

- * For taxable accounts, the tax basis should be found on your most recent custodial statement. Your tax basis could be less than or greater than the current value of your holding.
- * For traditional retirement accounts usually the tax basis is usually zero dollars, unless you have contributed after tax assets.
- * For Roth accounts, enter the current value of the holding, as your tax basis

Health Savings Accounts (HSAs) and Other Tax-Favored Health Plans

HSAs and other tax-favored health plans can function as tax-favored longer-term investment vehicles. However, for most they are shorter-term tax-favored assets. There is a more detailed

information section at the bottom of this worksheet with the same title as this section. It provides guidance on how to enter these health account assets on this Financial Assets worksheet.

A less preferred, quick-and-dirty summary asset entry method

It is strongly preferred that you enter individually each of your cash, bond, and stock asset holdings into Sections 1, 2, and 3 below. When you enter each of your cash, bond, and stock financial assets separately, VeriPlan will automatically measure the asset allocation of your current portfolio and assess the lifetime impact of your various investment costs. This individual asset method also prepares you for much easier and more precise updating and rebalancing of your portfolio in the future.

Nevertheless, if you already have an external spreadsheet that segregates and totals your cash, bond, and stock investment assets by account type (taxable, traditional retirement, and Roth retirement), there is a more simplified data entry approach you could use.

For each of the cash, bond, and stock tables below, in the first row enter your taxable assets and code the "When Taxable?" column with a "1". For cash, just enter the total cash. For bonds and for stocks, in the first line of each enter the total dollar values as the "number of shares" and then enter \$1.00 as the price per share.

Next, in the second rows of the cash, bond, and stock tables, code the "When Taxable?" column with a "0" for your traditional retirement accounts. In the third rows, code the "When Taxable?" column with a "2" for your Roth retirement account assets. Then, enter the asset values using the method discussed in the paragraph above.

Using this method, you will have a total of nine rows for your asset entries -- the first three rows each of the cash bonds, and stocks tables -- with the first three rows of each differentiating your holdings by account taxability.

Use this summary method only for preliminary, quick-and-dirty lifetime investment projections. Later, take the time to enter individual assets to develop a more refined and useful family financial plan. Simply change the first three lines of each of the three tables to represent some of your individual holdings. When you do, you will remove your summary entries and avoid double-counting.

Important Notes about making entries in the Cash, Bond, and Stock data entry tables below

* For more detailed directions and comments about the columns of these input tables, see the extensive instructions and notes found below the last table.

* Enter all dollar and percentage information as POSITIVE NUMBERS in the bold bordered data entry boxes. Verify the accuracy of each of your entries.

* When a data entry box has a PERCENT SIGN (%) in it, you data entry MUST ALSO CONTAIN A PERCENT SIGN. These data entry boxes are coded as percentages, and Microsoft Excel may multiply by 100 if you neglect the percent sign. Check all percentage entries to confirm that they are what you intended.

* IMPORTANT: You may use Excel's "copy-and-paste" function to copy a single entry vertically, BUT ONLY do this between VERTICALLY CONTIGUOUS CELLS of the SAME TYPE IN THE SAME COLUMN. NEVER use any "cut-and-paste" operations, because that can blow up you model and force you to revert to the most recent version that you have saved to your hard drive.

7.1: Enter your cash and cash equivalent assets -- up to 24 securities/accounts

Name of Company Holding CASH Asset for You	CASH Security Name	Trading or Ticker Symbol	Number of Dollars or Shares Owned Now	Current Value per Share (NO ENTRY) (Always equals \$1.00 /share)	Total Current Value of this Security Position (NO ENTRY) (calculated)
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH account/fund name	xyz	\$0.00	\$1.00	\$0.00
CASH - Bank/Fund Co.	CASH - account/fund name	xyz	\$0.00	\$1.00	\$0.00

NOTE: VeriPlan's lines for Cash Assets up to #24 have not been included in this User Manual.

(The table below shows the other columns that are to the right of the columns shown in the table above.)

When Taxable? (Tax-Deferred=0; Always=1; Roth 'tax-now-not-later'=2)	Current Tax Basis (your already taxed capital contributions)	Front-end Sales Load (% of purchase amount) [If you are to pay a Back-end load, see the note below.]	Asset Management Fee (% of assets per year)	Marketing Fees { 12b-1 fees, for example } (% of assets)	Asset Custody Fees, Commissions, and Advisory Fees (% of assets per year)
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%
1	\$0.00	0.00%	0.00%	0.00%	0.00%

7.2: Enter your bond and fixed income assets -- up to 24 securities/accounts

[illegible][illegible]

NOTE: VeriPlan's lines for Bond Assets up to #24 have not been included in this User Manual.

(The table below shows the other columns that are to the right of the columns shown in the table above.)

7.3: Enter your stock and equity assets -- up to 99 securities/accounts

Name of Company Holding STOCK Asset for You	STOCK Security Name	Trading or Ticker Symbol	Number of Shares Owned Now	Current Market Value per Share (\$/share) (NOT the total value)	Current Market Value of This Asset Position (calculated)	When Taxable? (Tax-Deferred=0; Always=1; Roth 'tax-now-not-later'=2)
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1
STOCK - Broker/Fund Co	STOCK - fund or stock name	xyz	0.00	\$0.00	\$0.00	1

NOTE: VeriPlan's lines for Stock Assets up to #99 have not been included in this User Manual.

(The table below shows additional columns that are to the right of the columns shown in the table above.)

Current Tax Basis (your already taxed capital contributions)	Front-end Sales Load (% of purchase amount) [If you are to pay a Back-end load, see the note below.]	Asset Management Fee (% of assets per year)	Marketing Fees {12b-1 fees, for example} (% of assets)	Asset Turnover (% of assets per year)	Asset Custody Fees, Commissions, and Advisory Fees (% of assets per year)
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%
\$0.00	0.00%	0.00%	0.00%	0%	0.00%

NOTE: VeriPlan's lines for Stock Assets up to #99 have not been included in this User Manual.

(The table below shows additional columns that are to the right of the columns shown in the table above.)

TAXABLE DISTRIBUTIONS: Expected Annual Qualified Dividend Distributions (% of assets per year -- [FOR 'ALWAYS TAXABLE' ACCOUNTS ONLY] Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.)	TAXABLE DISTRIBUTIONS: Expected Annual Interest, Non-qualified dividends, and Short- term Capital Gains Distributions (% of assets per year -- [FOR 'ALWAYS TAXABLE' ACCOUNTS ONLY] Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.)	TAXABLE DISTRIBUTIONS: Expected Annual Long-term Capital Gains Distributions (% of assets per year -- [FOR 'ALWAYS TAXABLE' ACCOUNTS ONLY] Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.)
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%
0.00%	0.00%	0.00%

7.4 Notes about the cash, bond, and stock financial assets input tables

- * Reference Number -- Rows are numbered to the left to make it easier for you to locate a particular holding.
- * Name of Company Holding Asset for You -- This is the company that acts as a fiduciary and holds the security for you.
- * Security Name -- Enter a distinct identifier, such as "XYZ Credit Union Savings", "Big Index Mutual Fund" or "ZeeCorp common stock"

- * Ticker Symbol -- This is the symbol under which an asset trades in the market. Some assets will not have trading symbols.
- * Number of Shares Owned Now -- Enter the number of shares currently owned. Enter fractional shares as a decimal number.
- * Current Market Value per Share -- This is the most recent value at which a share of this asset traded in the market.
- * When Taxable? (Tax-Deferred=0; Always=1; Roth 'tax-now-not-later'=2) -- VeriPlan distinguishes between assets that are:
 - * Tax-Deferred, which are not taxable now, but are taxable in the future. (Enter a 0.)
Examples are traditional tax-deferred accounts, such as IRAs and 401(k) accounts, which grow tax-free, but whose withdrawals are taxed.
 - * 'Always Taxed', which are normal taxable account that could be taxed now and in the future. (Enter a 1.) Yields/gains on almost any asset are taxable, unless some tax code provision exempts or delays its taxation.
 - * Roth 'tax-now-not-later' which are never taxed. (Enter a 2.) Examples include equity assets held in Roth IRAs and designated Roth 401(k)s.

NOTE THAT THESE ENTRIES RELATE ONLY TO THE TAXABILITY OF THE ACCOUNT ITSELF AND NOT TO THE TAXABILITY OF THE INVESTMENTS HELD WITHIN THE ACCOUNT. FOR EXAMPLE, WHILE CERTAIN GOVERNMENT BONDS MAY OR MAY NOT BE TAXABLE AT VARIOUS LEVELS OF GOVERNMENT, THE INCOME TAXABILITY OF THE BOND ITSELF IS NOT RELEVANT TO THE TAXABILITY OF THE ACCOUNT FOR CATEGORIZATION PURPOSES IN VERIPLAN.

- * Current Tax Basis (your already taxed capital contributions)

While future yields or gains on this asset may be subject to additional taxes, the basis is not taxed. VeriPlan tracks the tax basis of your individual assets, and it adds to the tax basis as loads are incurred and as yields and gains are taxed in the future. When portfolio assets are withdrawn, VeriPlan adjusts the tax basis. Regarding the tax basis of the three taxability categories that VeriPlan tracks, consider that:

- * An investment in a 'Tax-Deferred' account (coded 0 in the previous column) initially would have a tax basis of zero, if funded with a tax-deductible contribution. If funded with a contribution that was not tax-deductible, then the tax basis would equal the

initial asset value. Investment costs, such as a sales load charge, also could increase the account basis in either situation. Over time, appreciation in these accounts funded by either tax-deductible or non-deductible contributions would be shielded from further taxes on any distributions or asset appreciation, until your assets were withdrawn. The tax basis for each account, respectively, would remain at or near either zero or at or near the initial investment amount, depending upon investment costs. Of course, over time, tax-deductible and non-deductible contributions may be made into a single account, and the account tax basis would increase due to further non-deductible contributions and to certain investment costs. Your 'Tax- Deferred' account tax basis helps to reduce your future short- and long-term ordinary income taxes on taxable withdrawals in reality and in VeriPlan's projections for you.

- * An investment in an 'Always Taxed' account (coded 1 in the previous column) initially would have a tax basis equal to the amount contributed plus any initial investment costs paid, such as a sales load charge. Ongoing taxable distributions, new investments, and sales loads paid on new investments and reinvestments of taxable distributions would add to your tax basis. This 'Always Taxed' account tax basis will help to reduce your future short- and long-term capital gains taxes on taxable withdrawals.
- * An investment in a Roth 'tax-now-not-later' account (coded 2 in the previous column) initially would have a tax basis equal to the investment amount, because your contribution would not be tax-deductible. Investment costs, such as a sales load charge, could add to that tax basis. Because appreciation and withdrawals would not be taxed, these events would not add to your tax basis. However, ongoing investment sales loads that you pay can add to your tax basis. Because Roth assets will not be taxed in the future, tracking their tax basis would seem pointless. However, certain tax situations can occur where this Roth tax basis information would be useful. In addition, knowing your Roth tax-now-not-later' account tax basis is useful to VeriPlan, which uses it to estimate possible cost inefficiencies associated with past load-related investments.

7.5 Investment costs inputs

Investment costs are a huge and highly detrimental factor for individual investors, although few realize the magnitude of the cumulative damage that even average investment costs can do to their portfolio over a lifetime.

VeriPlan provides tools that allow you to understand the projected impact of your current and usually excessive investment costs on your portfolio during the course of your lifetime. You can find the detailed cost inputs on this financial assets worksheet investment cost worksheet. These cash, bond, and stock input sections above on this worksheet provide a variety of input columns for the numerous costs that individual investors pay. The instructions below will help you to understand how to make these inputs on this asset worksheet. The investment cost worksheet explains investment costs and provides an automated mechanism to compare projected investment returns using the investment costs of your current portfolio versus alternate, lower investment costs that you might consider more reasonable to pay.

There is no reason to be subtle about this. Most investors are simply naïve about the insidious and corrosive nature of investment costs.

While most investors do not focus on investment costs, investment costs are the only substantial investment strategy factor over which they have some control that will affect their net long-term investment returns. Investment costs seem like a relatively minor factor to many people, largely because investment costs are stated as a percentage of overall assets and not gross returns. Yet, when investment costs are compared to average gross annual investment returns rather than total assets (which is the proper comparison), then the average investor pays between 1/4 to 1/3 of their gross annual returns in investment costs.

When inflation is considered, then the average investor pays investment costs amounting to about 50% of annual real dollar (after inflation) investment returns.

The financial industry is a massive parasite on investors assets, and overall it delivers a "negative value-added" with respect to its investment costs. On average, the more an investor pays, the less they keep in the long-term. The academic research literature clearly demonstrates that cost reduction is highly beneficial to investors. The investment research literature also demonstrates that individual investors have no reliable mechanisms to pick investments beforehand that will yield superior investment returns -- except lower costs. Historical investment returns normalized for investment costs tell investors absolutely nothing of value in

choosing one investments over another. On the other hand, choosing low-cost investments has been demonstrated to be a reliable means to achieve superior returns averaged across the investor population. Nevertheless, if you look at search engine statistics about the phrases that people are searching for related to investments, there is roughly a 100 to 1 ratio between search terms that are associated with superior historical returns compared to investment costs. Like sheep to slaughter, this will continue indefinitely unless individuals wake up and start taking steps to cut their investment costs to the bone.

Depending upon your settings on the investment costs worksheet, VeriPlan will develop your overall automated projections using either your current investment costs or your reasonable investment costs. While it does take some effort to research the investment cost characteristics of the current investment portfolio that you hold:

- A) doing this research,
- B) entering your investment costs in the columns above using the instructions below,
- C) comparing your lifetime projections using your current investment costs versus costs that you consider to be reasonable,
- D) committing to a low-cost lifetime investment strategy, and
- E) actually implementing that strategy over your lifetime (which is easy to do) could provide most people with the highest hourly wage for the effort involved, than they would earn doing anything else in their lives -- unless, of course, they have already cut their investment expenses to the bone.

You should note that, if you do not enter investment costs into the columns above, which would allow VeriPlan automatically to develop investment cost percentages weighted by your asset holdings, then VeriPlan can automatically use the low minimum costs for the various expense categories on any asset line that has any positive asset value. This negligence on your part will cause VeriPlan to develop very low-cost investment projections, when in reality you are likely to hold much higher investment cost assets and you are doing nothing to reduce their investment costs. In this situation, it is more likely that your investment return projections in VeriPlan would be significantly more optimistic than the net returns you might obtain with your real-life portfolio in the future. Year after year investment costs would bleed your portfolio, without you taking action. Instead, you should take the issue of investment costs very seriously,

do the research on your current portfolio, enter appropriate investment cost figures above, do the analysis, wake up, and take action.

Investment Cost Information Sources

Within the notes about particular investment costs below, potential information sources are suggested. Also, the investment cost worksheet provides more information on how to research investment costs. For bonds and stocks, morningstar.com is often the quickest free source of expense-related information and recent securities prices.

Front-end Sales Load (% of purchase amount) [If you pay a Back-end load, see Note A below.]

- * If you paid a sales load when you acquired this asset, then indicate the load as a percent of the original investment. VeriPlan assumes that you will continue to acquire new investments with the same cost efficiency or lack of cost efficiency that you have in the past, unless you decide to change your behavior. VeriPlan will assess the weighted average percentage loads you have paid in the past against new bond and stock investments from positive net earned income (but not on reinvested asset appreciation). If you have paid a sales load %, you should enter it here. Otherwise, VeriPlan will presume that your investment acquisition costs are lower than what they actually have been.
- * There are different forms of load charges, including front-end loads and back-end loads. VeriPlan measures the cost of front-end loads. If you agreed to pay a deferred or back-end sales load when you acquired this asset, you should nevertheless enter the front-end load that would have applied, if you had chosen that alternative. The true costs of back-end loads are much more speculative due to future asset value fluctuations, potential conversions, etc. However, from the broker's perspective, these front- and back-end loads are priced to be roughly equivalent. By entering the front-end load here, you can get a reasonable understanding of the long-term impact of paying loads on your investment portfolio. (Note that VeriPlan will charge the percentage loads that you have paid, weighted by the value of the assets acquired,

whenever you have positive net earned income and on your reinvested asset yields net of other investment costs.

- * For more information on sales loads, see the sales load footnote under "Maximum investment costs that are reasonable to you" on the investment cost worksheet.
- * Note that sales loads and sales commissions are different and you may pay both to acquire an asset. If you paid commissions to acquire this asset, do not include those commissions here. Instead, calculate the percent of asset value you paid in commissions and include it in the column titled: "Total Asset Custody Fees, Commissions, and Advisory Fees (% of assets per year)." Read the addition note below and remember that you pay commissions both buying and selling.

Asset Management Fee (% of assets per year)

- * Enter the % of assets fee that is charged annually by the manager of this asset. This fee should be found in the most recent prospectus or through on-line sources such as NASD, Lipper, or Morningstar. (Also, see more information on the investment cost worksheet.)

Marketing Fees (% of assets)

- * These are annual percent of asset fees charged by certain funds in addition to asset management fees. This information can be found in the prospectus. Note that certain information sources will include these marketing fees in the annual asset management fee. This is true of NASD and Morningstar. If you use one of these sources to obtain the Asset Management Fee, then leave a zero on this line. Despite being combined with the management fee, note that these marketing fees, sometimes called 12b-1 fees for funds, are not spent on asset management. They pay the person and firms that sold you the investment product.

Asset Turnover (% of assets per year)

- * Portfolio turnover is an important indicator of the trading costs that are incurred by a fund. These costs are not included in the management or other fees, but do reduce net returns. VeriPlan uses information from industry studies to estimate trading costs associated with turnover.

Total Asset Custody Fees, Commissions, and Advisory Fees (% of assets per year)

- * In addition to the fees above, securities and advisory firms may also charge a fee against the assets they hold for you. You should enter these "wrap account," "separately managed account," or other asset service fees as a percent of assets in the table below. Note that such fees are charged above and beyond any asset management fee being paid to make investment decisions about the assets held within the account. If you pay a combined annual percent of assets fee for account servicing and investment management, then it can be entered either under this column or under the Asset Management Fee column. If the cost components are reported separately, then enter percentages in their appropriate columns.
- * Some people may not pay a percent of their assets, but instead they pay commissions on each transaction, when they buy and sell assets. If you pay by the transaction, review your records and estimate the annual percent of that asset that you pay in transaction fees. For example, if an asset is worth \$10,000, and once a year you pay \$50 in commissions to sell it and pay another \$50 to buy another asset of the same type, then your current cost is 1%/year [$(\$50 + \$50) / \$10,000 = 1\%$]. Obviously, asset values will affect these percentages, but if you enter reasonable estimates for each asset you hold, VeriPlan will automatically calculate an informative, value weighted average of your transactions costs across all your large and small value assets. If you trade very infrequently and at very low costs, commissions will not have a significant impact on your portfolio. However, if you pay high commissions and/or trade very frequently you should take the time to make reasonable estimates, because commissions can have a substantial negative impact on investors with high transactions costs.

TAXABLE DISTRIBUTIONS: General (Only applies to stock assets held in taxable accounts -- not tax-advantaged accounts.)

VeriPlan automatically calculates annual asset class returns for your portfolio and will reinvest your portfolio's investment yields net of costs and taxes. It assumes that you will hold investment assets for the long-term, until you need to make withdrawals when your expenses exceed current income. Investments instruments vary by the degree to which they will permit

you to do this. Many organizations make decisions to issue taxable distributions, which are beyond your control and which will be taxed at the ordinary income or long-term capital gains tax rates applicable to you at the time. Taxes on such distributions affect your financial situation and must be paid when distributed and not when you might have preferred to recognize such taxes. Therefore, if you indicate estimates about expected distributions, given the history of such distributions, then VeriPlan will calculate taxes on these distributions separately and deduct them.

Note that VeriPlan automatically tracks annual distributions of asset interest, dividends, short-term capital gains, qualified dividends, and long-term capital gains, assesses taxes in accordance with applicable current tax rates, and tracks the tax basis of each asset. IF YOU ESTIMATE ANY TAXABLE DISTRIBUTIONS THEY WILL HAVE NO IMPACT ON HOW VERIPLAN PROJECTS RETURNS. YOUR ESTIMATES OF DISTRIBUTION WILL ONLY AFFECT THE TIMING OF THE RECOGNITION OF TAXES. If you substantially overestimate taxable distributions, then this will accelerate the recognition of taxes, increase your tax basis in that asset, and reduce your portfolio by the amount of the taxes paid.

TAXABLE DISTRIBUTIONS: Expected Annual Qualified Stock Dividend Distributions
(% of assets per year -- Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.)

Check the recent qualified dividend payment history for each asset and enter the annual dividend yield as a percent of asset value. Note that most corporate distributions are taxed at ordinary income tax rates. Do not assume that dividend distributions would be qualified dividends, unless the distributions have been previously classified as qualified. There is no need to make any adjustment for inflation. For any particular equity asset holding, simply enter the percent of your equity assets that typically is distributed to you as qualified dividends is subject to long-term capital gains tax rates.

TAXABLE DISTRIBUTIONS: Expected Annual Interest, Non-qualified stock dividends, and Short-term Capital Gains Distributions (% of assets per year

Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.)

Equity funds may periodically distribute short-term capital gains. Estimate the average distribution as a percent of assets that the fund has made in the past several years. If you have held this fund for some time, tax distribution information may be found on your annual statements. There is no need to make any adjustment for inflation. For any particular equity asset holding, simply enter the percent of your equity assets that typically is distributed to you as interest, non-qualified capital gains, and short-term capital gains and is subject to ordinary income tax rates.

TAXABLE DISTRIBUTIONS: Expected Annual Long-term Capital Gains Stock Distributions (% of assets per year)

Enter 0%, if this asset is held in a traditional 'tax-deferred' or Roth 'tax-now-not-later' account.

Equity funds may periodically distribute long-term capital gains. Estimate the average distribution as a percent of assets that the fund has made in the past several years. If you have held this fund for some time, tax distribution information may be found on the annual tax statements. There is no need to make any adjustment for inflation. For any particular equity asset holding, simply enter the percent of your equity assets that typically is distributed to you as long-term capital gains and is subject to long-term capital gains tax rates.

Investment Cost Information Related to Cash and Cash Equivalent Assets

For cash held in banks, in very short term CDs, and in money market funds, the costs are not always obvious. While you can look up some costs like management fees, other costs tend to be hidden or obscured. Nevertheless these hidden and obscure costs should not be ignored. For example, if you hold more than very minimal amounts of your assets in checking accounts that do not pay interest, then your management or asset custody fee is effectively the difference between the interest you could have earned in another interest bearing cash account and the 0% interest that you are getting with this checking account. Of course, there is a value to the services of a checking account, but holding a balance larger than your transactional needs is inefficient, and you are potentially missing an opportunity to earn higher interest.

One method to estimate these charges is to determine the market interest rate on relatively low risk interest bearing cash assets, and then record the difference as the implied Asset

Management fee or Asset Custody fee in the chart above. You might be surprised at how high these fees are. NOTE THAT THIS ESTIMATION METHOD ASSUMES THAT YOUR "TOTAL ASSET CUSTODY FEES" FOR THAT ACCOUNT (the last column) ARE ESSENTIALLY THE DIFFERENCE BETWEEN A REASONABLY GOOD MARKET RATE FOR CASH INVESTMENTS VERSUS THE INTEREST RATE THAT IS BEING PAID IN THE PARTICULAR ACCOUNT. IN ADDITION, YOU NEED TO FIND THE "ASSET MANAGEMENT FEE" THAT IS BEING CHARGED AND ENTER THAT INTO THE "ASSET MANAGEMENT FEE COLUMN.

You might be surprised at just how ridiculously non-competitive money market management fees can be. In the very low interest rate environment following the credit crisis crash, many money market funds with high fees, temporarily cut their management fees so that they would not have to report negative returns. Instead, many of these funds paid a whopping .01% or so annually. They were able to do this only by lowering their fees temporarily. Had they kept their fees the same as before the crisis, then their returns would have been negative. Most investors can figure out that they do not need to pay a money market fund to keep their cash, since they can do the same with a regular checking accounts. With increased short-term market interest rates, most previously overpriced (high-cost) money market funds are likely to push their management fees back up to absurd levels.

Current Tax Basis (your already taxed capital contributions)

While future yields or gains on this asset may be subject to additional taxes, the basis is not taxed. VeriPlan tracks the tax basis of your individual assets, and it adds to the tax basis as loads are incurred and as yields and gains are taxed in the future. When portfolio assets are withdrawn, VeriPlan adjusts the tax basis. Regarding the tax basis of the three taxability categories that VeriPlan tracks, consider that:

An investment in a 'Tax-Deferred' account (coded 0 in the previous column) initially would have a tax basis of zero, if funded with a tax-deductible contribution. If funded with a contribution that was not tax-deductible, then the tax basis would equal the initial asset value. Investment costs, such as a sales load charge, also could increase the account basis in either situation. Over time, appreciation in these accounts funded by either tax-deductible or non-deductible contributions would be shielded from further taxes on any distributions or asset

appreciation, until your assets were withdrawn. The tax basis for each account, respectively, would remain at or near either zero or at or near the initial investment amount, depending upon investment costs. Of course, over time, tax-deductible and non-deductible contributions may be made into a single account, and the account tax basis would increase due to further non-deductible contributions and to certain investment costs. Your 'Tax- Deferred' account tax basis helps to reduce your future short- and long-term ordinary income taxes on taxable withdrawals in reality and in VeriPlan's projections for you.

An investment in an 'Always Taxed' account (coded 1 in the previous column) initially would have a tax basis equal to the amount contributed plus any initial investment costs paid, such as a sales load charge. Ongoing taxable distributions, new investments, and sales loads paid on new investments and reinvestments of taxable distributions would add to your tax basis. This 'Always Taxed' account tax basis will help to reduce your future short- and long-term capital gains taxes on taxable withdrawals.

An investment in a Roth 'tax-now-not-later' account (coded 2 in the previous column) initially would have a tax basis equal to the investment amount, because your contribution would not be tax-deductible. Investment costs, such as a sales load charge, could add to that tax basis. Because appreciation and withdrawals would not be taxed, these events would not add to your tax basis. However, ongoing investment sales loads that you pay can add to your tax basis. Because Roth assets will not be taxed in the future, tracking their tax basis would seem pointless. However, certain tax situations can occur were this Roth tax basis information would be useful. In addition, knowing your Roth 'tax-now-not-later' account tax basis is useful to VeriPlan, which uses it to estimate possible cost inefficiencies associated with past load-related investments.

Front-end Sales Load (% of purchase amount) [If you pay a Back-end load, see Note A below.]

If you paid a sales load when you acquired this asset, then indicate the load as a percent of the original investment. VeriPlan assumes that you will continue to acquire new investments with the same cost efficiency or lack of cost efficiency that you have in the past, unless you decide to change your behavior. VeriPlan will assess the weighted average costs of the loads you have paid in the past against new investments from positive net earned income. If you have paid

a sales load %, you should enter it here. Otherwise, VeriPlan will presume that your investment acquisition costs are lower than what they actually have been.

There are different forms of load charges, including front-end loads and back-end loads. VeriPlan measures the cost of front-end loads. If you agreed to pay a deferred or back-end sales load when you acquired this asset, you should nevertheless enter the front-end load that would have applied, if you had chosen that alternative. The true costs of back-end loads are much more speculative due to future asset value fluctuations, potential conversions, etc. For your Property and Other Assets, VeriPlan will charge the percentage loads that you have paid, weighted by the value of the assets acquired, whenever you have income and on your reinvested asset yields net of other investment costs.

Note that direct purchase of residential real estate typically has a front-end load of 1% to 2% when all transactions and financing fees are considered. In effect, they have a huge back-end load of 7% to 8% typically, because the seller pays a brokerage fee of about 6%. Therefore, you should enter only the front-end load amount and not the back-end load. Because VeriPlan assumes that your Property and Other Assets are held throughout the projections then values projected values are gross, rather than net of potential back-end loads.

For more information on sales loads, see "Maximum investment costs that are reasonable to you" on the investment cost worksheet.

Note that sales loads and sales commissions are different and you may pay both to acquire an asset. If you paid commissions to acquire this asset, do not include those commissions here. Instead, calculate the percent of asset value you paid in commissions and include it in the column titled: "Total Asset Custody Fees, Commissions, and Advisory Fees (% of assets per year)." Read the addition note below and remember that you pay commissions both buying and selling.

7.6 Health Savings Accounts (HSAs) and Other Tax-Favored Health Plans

Detailed in IRS Publication 969 titled, "Health Savings Accounts and Other Tax-Favored Health Plans" are a variety of tax-advantaged healthcare spending accounts, including HSAs and other plans, such as Flexible Spending Arrangements (FSAs), Health Reimbursement Arrangement (HRAs), and Archer Medical Savings Accounts (MSAs). Some of these plans allow employees to contribute pre-tax dollars into these accounts up to certain limits, which can then be used to pay for qualified medical and healthcare expenses. In effect, this reduces an

employee's taxable income and thus is a tax subsidy for the payment of healthcare expenses. Publication 969 also details the provisions of HRAs, which operate differently. Through HRAs, employees do not make plan contributions, but they are reimbursed tax free for qualified medical expenses up to certain maximum dollar amounts for coverage periods.

Most participants in these tax-favored health plans manage them to reduce the effective near-term dollar cost of healthcare. Pretax money goes into these accounts and tends to be spent in the short-term. When these plans are used that way, they simply reduce the near term cost of healthcare. For most people these plans are not a long-term financial vehicle. Often people who are attracted to HSAs have higher expected healthcare expenses and will use the balances sooner rather than later. The primary value is the federal income tax reduction associated with personal contributions. In effect, these tax savings mean lower medical expenses, which also compensate for the effort required to participate in these plans.

Usually for healthier people with lower current medical expenses, HSAs can provide an opportunity to accumulate assets, since tax-free contributions can also be invested and accumulate tax-free over the long-run. While these plan are not really retirement plans and annual contribution limits are comparably modest, plan assets can function within a long-term financial plan similar retirement assets.

The tax treatment of these HSAs is most similar to Roth retirement accounts -- once the assets are within the health plan account. There are no federal taxes on investment earnings for assets held long-term in HSA accounts, although state and local income tax treatment may vary. There are no withdrawal taxes on HSAs, when assets are used to pay qualified medical expenses in the future. This is similar to Roth accounts regarding the tax treatment of withdrawals. In addition, for most people, it is likely that their qualified healthcare expenses will exceed their HSA assets in retirement. Given these characteristics, VeriPlan treats your accumulated health care account assets as Roth assets. It is assumed that you will spend accumulated healthcare account assets on qualified medical expenses before and during retirement.

When you have HSA or similar healthcare account balances held for the long-term, use the following methods in VeriPlan:

- A) On this Financial Assets worksheet, enter the current dollar balance as the number of shares and with a share price of \$1. Then, code the "When Taxable?" column as a 2 and also reenter the account balance in the "Current Tax Basis" column.
- B) As long as you intend to use any asset allocation strategy method on the yellow-tabbed Asset Allocation worksheet other than #1, it will not matter whether you enter the HSA balance as cash, bonds, or stocks. The reason is that the overall portfolio will automatically rebalance annually thereafter with the asset allocation model that you choose. However, if you are going to use Asset Allocation method #1, which equals the asset allocation of your the current portfolio, then enter your HSA balance as cash, bonds, or stocks depending upon how the HSA assets are primarily invested.
- C) If you are still employed and expect in future years to contribute additional funds to your HSA or other health expense account that would accumulate rather than be spent in the short-term, you can reflect those additional dollar contributions in Section 7A of the yellow-tabbed Income worksheet. On a year-by-year basis enter the expected net contribution amount (after current qualified healthcare expenses) in Column C of the year-by-year table and code Column E as a 1 (one) for each year that you have entered a dollar value.

7.7 Notes on target date funds and other funds that mix the cash, bond, and stock assets

There also are blended investment assets, such as target date mutual funds, hybrid mutual funds, and variable annuities that have not yet been converted to a fixed annuity contract. For these investments, you need to use your judgment as to how to enter them across these cash, bond, and stock worksheets. The general approach is to determine the percentage of overall market value and then use those percentages to apportion the total value between asset classes. For cash, of course, use the cash value. However, for an asset that blends bonds and stocks, use their relative value proportions to allocate the appropriate number of shares, and then use the same current market price per share on each worksheet.

As long as the total value of a particular target date fund or other mixed asset holding is represented accurately across these three sections below on this worksheet, then a great deal of refined precision regarding the allocation of a particular holding to the cash, bond, and stock

sections below is not necessary. The reason for this lack of need for great precision in the division of a mixed asset relates to VeriPlan's automated asset allocation mechanisms.

After the first year and in every projection year thereafter, the future allocation of your assets and the cumulative projected appreciation of your assets and future savings will be determined by the asset allocation method and parameters that you choose on the asset allocation worksheet. Thus, VeriPlan's sophisticated and automated asset allocation projection methods make great precision in the initial allocation of mixed assets unnecessary.

For example, if you held a mutual fund that was invested 90% in stocks and 10% in cash and bonds, then you could enter the entire value of that holding solely into the stocks section (#3) of this worksheet. If that particular position represented perhaps less than 5% of your portfolio's total current value, then differential asset class appreciation would not make a significant difference for just a single year. At the beginning of the second year through age 100 of your projections, VeriPlan's automated asset allocation mechanisms would project asset appreciation according your chosen asset allocation plan and your initial settings would not be as relevant.

Therefore, in most cases, the precision of your initial splitting of an individual asset position is up to your judgment. However, you should note that you do need to pay attention to the actual holdings of your investment funds over time. While index mutual funds and ETFs tend to stay fully invested in their target asset class, some funds can maintain substantial, but fluctuating cash positions over time. Known as "cash drag" these funds may not achieve the same results as their fully invested and passively managed index fund peers. In fact, this is another area where the research literature indicates that active investment fund managers tend to lack skill in market timing. When asset prices are relatively high, active fund cash balances tend to be relatively low, and when asset prices are relatively low, active fund cash balances tend to be relatively high. If manager skill were in evidence, then one would expect the statistics to demonstrate the opposite. Active managers should be using cash to buy at lower prices and should be selling at higher prices, but unfortunately the numbers do not reflect this market timing skill indicator.

Chapter 8: Property+Debt worksheet

- 8.1: Personal residences and vacation homes
- 8.2: Non-real estate debts, including car loans, student loans, credit cards, etc.
- 8.3: Rental real estate properties
- 8.4: Other properties (non-real estate), including businesses, valuable collections, illiquid investments, etc.
- 8.5: Future purchase and sale automation features for residences, rental real estate, and other properties
 - 8.5.1: Overview: Planning to buy a home in the future
- 8.6: Differences between consumption-oriented and investment-oriented debts
- 8.7: Making general inflation adjustments to your debt repayments
- 8.8: Future unfunded debt tool

Introduction



This worksheet allows you to enter information about residential property, debts, rental real estate, and other property asset holdings.

Your ownership interests in Real Estate Investment Trusts (REITs) and similar real estate based securities should be entered on this worksheet. Use recent public market prices, if they are available. Also, use this worksheet to enter any private equity positions, non-publicly traded financial assets, private businesses, limited partnerships, etc.

If you are using this property and debts worksheet to project the future purchase of a first or second home, VeriPlan will automatically add the projected purchase value of the home in the year of your planned purchase. The value of the future home purchase will be reflected automatically in the property and real estate assets band on the total assets graphics. You do not need to make any entry in the table below. You should only enter real estate that you already own in the table below.

Enter your expectation for the future real dollar growth rate of return on each of these properties, and include information about your investment costs with your asset entries, so that VeriPlan can automatically project asset values net of investment costs.

Focus on the assets that you own, which have the more substantial value. If you have a collection of similar tangible assets, you could group them together on a single line. If you make any such groupings, add a note about the composition of the group for future reference in the description column.

Include only salable property with a value that is not expected to be consumed. For example, exclude cars that are used for transportation, but include valuable cars kept as collectables. Cars for transportation will depreciate, and any current asset value is really just a prepaid expense. On the contrary, collectable automobiles may have an asset value that changes above or below the rate of consumer price inflation. In the same vein exclude normal furniture, but include truly valuable antiques; and so on.

Currently owned property and real estate assets, which are not traded in broad national securities markets should be entered on this worksheet. The current fair market values of such assets are generally much more of a challenge to establish. Furthermore, without a long market history, estimating potential value changes in the future can be even more speculative.

Similar to market-traded financial securities, the future values of property assets are not predictable, but at least one can use local market history to calibrate whether one's future expectations are at least reasonable in the light of that market history. If you lack market values, simply enter current fair market value estimates that seem reasonable. Keep in mind that this is a value projection exercise and not a negotiation to sell. Resist the temptation to inflate the current value of any property. Estimate the price that an independent party would pay willingly in the current market environment.

Include only the current resale value of your real estate properties on this worksheet. Concerning the total rental or other income that you receive from these properties, that income should be entered on the other income section #5 of the income worksheet, as perpetual rental income with any real growth adjustment that you believe is appropriate.

VeriPlan will project the value of each property and real estate asset, as if you were to hold them over your full lifecycle, and they were to continue to appreciate. Clearly, many of your property and real estate assets or your other non-market assets could be sold and converted to cash. Nevertheless, VeriPlan will not make arbitrary assumptions about the timing of such sales, which could involve substantial transactional costs and/or deviate from the values that you estimate. If in the future, you were to liquidate any of these non-market traded assets, then simply delete them from the table below, and make new entries on the appropriate asset worksheets to reflect where the sales proceeds have been reinvested.

Only if your cash, fixed income, equity, and other assets were to be exhausted in the future would you need to liquidate your property and real estate or other assets. Such situations could easily be understood by inspecting the assets graphics, which display your total projected assets.

On these assets graphics, your property and real estate assets would also begin to fall below zero, if your cash, bond, and stock financial assets were to become exhausted. After your cash, bonds, and stock financial assets are gone, VeriPlan would graphically project that the liquidation of your real estate and property assets.

First, one edge of the real estate and property band would begin to dip below zero. The total value of your real estate and property assets would continue to fall, as you consumed them to fund your income to expense shortfall. The liquidation of these assets would continue until the other edge of the property and real estate assets band on these graphics also fell below zero at a subsequent age. In effect, VeriPlan's total assets graphics project an indication of the number of years that your property and real estate assets would continue to fund your projected expense shortfall.

8.1: Personal residences and vacation homes

Residential real estate appreciation, debts, and taxes

This section allows you to enter up to five non-rental residences and vacation properties, including future purchase and sale of these properties.

Enter the real dollar rate of appreciation you expect. This is after general inflation has been removed, so typically this might be around 1%. Note that average long-term historical real estate appreciation has been close to or slightly above general inflation, counter to most people's perceptions and despite the severe decline in housing values in the wake of the credit crisis and Great Recession. Although property values have recovered, most people do not adjust for intervening inflation.

While it would be prudent to enter above very low asset appreciation percentage assumptions relative to inflation, keep in mind that this asset appreciation assumption only relates to the change in asset's market value. A significant portion of the perceived value of owner-occupied real estate comes from the rent-free housing it provides, especially once mortgage debt has been repaid. This additional value is essentially a dividend, which is reflected elsewhere in a cash flow projection, when there is not allowance of rental payments. With a rented residence the rent payment should be added to ordinary living expenses on the Expense worksheet.

Debts are paid down automatically and the largest mortgage interest payments on two properties are automatically added to projected itemized income tax deductions up to legal limits for single and married filing jointly. HELOC interest is only deductible for improvements to the property that secures the HELOC. Given the higher standard deduction, for most people HELOC interest will not be deductible, but if you so itemize and do qualify to deduct HELOC interest, classify your HELOC as a "No=0" below.

Annual real estate taxes for all homes are also automatically added to projected itemized income tax deductions.

When you include payment information for debts, real estate taxes, and operating expenses, make sure that these payments are NOT also included in your ordinary living expenses on the Expenses worksheet to avoid double-counting.

The graphic below shows some of the columns. VeriPlan has five columns for residential properties.

* Required entries (market value & tax basis)	PRIMARY RESIDENCE	Residence # 2	Residence # 3	Residence # 4
Property name or description	Home Name A	Home Name B	Home Name C	Home Name D
* Current Market Value (\$) [even if future purchase]	\$0	\$0	\$0	\$0
Expected Real \$ Annual Appreciation (+/- % relative to the CPI)	0.00%	0.00%	0.00%	0.00%
* Tax basis, if owned (\$) [Calculated for future purchase]	\$0	\$0	\$0	\$0
First debt: (Will be classified as an Investment Debt)				
Principal owed (\$)	\$0	\$0	\$0	\$0
Interest rate (%)	0.000%	0.000%	0.000%	0.000%
Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0	\$0
Home equity line of credit (HELOC)? (No = 0; Yes = 1)	0	0	0	0
Second debt: (Will be classified as an Investment Debt)				
Principal owed (\$)	\$0	\$0	\$0	\$0
Interest rate (%)	0.000%	0.000%	0.000%	0.000%
Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0	\$0
Home equity line of credit (HELOC)? (No = 0; Yes = 1)	0	0	0	0
Taxes:				
<u>Annual</u> Real Estate taxes (\$)	\$0	\$0	\$0	\$0
Maintenance: (Home maintenance costs not already accounted for on the Expenses worksheet.)				
<u>Annual</u> home maintenance expenses (\$)	\$0	\$0	\$0	\$0
Planned Purchase:				
What year? (Owned now=0; Years until purchase = N)	0	0	0	0
Purchase expenses (% of value; non-debt; 2% = default)	2.00%	2.00%	2.00%	2.00%
Planned Sale:				
Years FROM NOW until sale (0, if no sale is planned)	0	0	0	0
Non-tax sale cost (% future value; non-debt; 8% = default)	8.00%	8.00%	8.00%	8.00%

Expected Future Gross REAL DOLLAR Return for this Asset (%)

Input the expected rate of real price changes below or above inflation (as a -% or +%). If the value is expected to increase with the rate of consumer price inflation, then enter zero percent (0%). Concerning future annual real growth rates for directly owned real estate, this is influenced by local market conditions, by the national economy, by the credit markets, and other factors. We had not found any real value growth consensus in scientific investment literature regarding real estate. In contrast, there is much evidence of regionalized or localized real estate boom and bust cycles. Furthermore, recent residential real estate price appreciation has been influenced dramatically by generational lows in long-term interest rates.

Given these uncertainties, an estimate of 1% to 2% for real annual future price appreciation on directly owned real estate over the decades may be reasonable. (Note that this is a real price

change estimate, which is in addition to the expected future change in the consumer price index. If you think that real estate prices will appreciate in line with the rate of consumer price inflation, then you would enter a 0% as your real price change assumption for a particular property.)

8.2: Non-real estate debts, including car loans, student loans, credit cards, etc.

Debt amortization and deductions



All worksheet sections allow you to enter information about debts. VeriPlan will automatically project associated taxation. Debt payoffs are projected given the principal owed, interest rate, and minimum required payment. If you would like to evaluate accelerated debt repayment or if you are already paying more than the monthly minimum payment, enter a higher payment on the "Planned monthly payment, if greater than required (\$)" line.

Regarding taxation, residential mortgage interest is automatically deducted. Rental real estate debt and property related debts are treated as normal deductible business expenses reducing net taxable income flowing to the family. Other debts that are entered in Section 2 do not affect taxable income.

VeriPlan is a real dollar, constant purchasing power projection modeling system. In real dollars, whenever you have a fixed payment debt obligation, your future payments are actually smaller and smaller as the years go by. You are paying the same nominal dollar amount each year, but that same dollar amount in nominal dollars gets cheaper to pay with the passage of time because of inflation. For more information, see the section titled "Constant purchasing power

"real dollar" projections with average inflation removed" on the red-tabbed How to Use worksheet.

Use this section to enter current and future debts, which are not directly associated with an asset. If you plan to incur future debts associated with buying an asset, use the other sections on this worksheet. If you plan to take on and repay educational debt in the future, use this section. Enter the number of years ahead and categorize this student debt as investment debt, if it is expected to increase earned income in excess of the student debt.

The graphic below shows some of the columns. VeriPlan has ten columns for debts.

* Required entries	Debt # 1	Debt # 2	Debt # 3	Debt # 4
Debt name or description	Debt Name A	Debt Name B	Debt Name C	Debt Name D
* Principal owed (\$)	\$0	\$0	\$0	\$0
* Interest rate (%)	0.000%	0.000%	0.000%	0.000%
* Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0	\$0
Type of debt: (classified as Consumption or Investment Debt, depending upon your purpose)				
Consumption debt = 1; Investment debt = 2	1	1	1	1
Current versus future debt:				
When? (Owed now = 0; Years until debt is taken = N)	0	0	0	0

8.3: Rental real estate properties

Rental real estate valuation, income, taxation, and depreciation

This section allows you to enter up to ten rental real estate properties, including the future purchase and sale of these properties.

Enter the real dollar rate of appreciation you expect. This is after general inflation has been removed, so typically this might be around 1%. Remember that this is the real dollar market price appreciation of the asset. While an rental real estate asset might appreciate slowly, it may pay substantial dividends. For rental real estate, the additional income provided once positive cash flow is achieved is also equivalent to a dividend paid by the underlying asset. This tends to be the case with many REITs that may generate substantial cash flow even when underlying asset values have very modest growth.

When you are entering full debt, tax, and operating expense information about a property into VeriPlan, it is then appropriate to enter the expected gross income from that property either

as expected annual rent times the occupancy factor for rental real estate or as total expected income for another kind of property.

When you use this integrated business income functionality, it is assumed that any property is a pass-through tax entity where gross income minus debt payments minus business and real estate tax payments minus all other operating expenses will result in taxable income that flows onto the family tax return.

In years when rental properties are projected to have positive cash flow overall, this will be shown as income on the Income worksheet. In years when net overall cash flow is negative, this will be shown on the Expenses graphic.

For rental real estate, note that non-cash depreciation deduction information for each property is also collected, as well as, whether the property is actively managed. Depreciation is taken into account when assessing taxes, as is the loss offset exception for rental real estate with active participation when income tests are met.

Enter the rental property's tax basis and remember that accumulated depreciation to date reduces a rental property's tax basis correspondingly. If no tax basis number is entered for a rental property, VeriPlan cannot project future depreciation.

VeriPlan automatically transfers total projected annual taxable net income for your rental real estate and other properties to the tax logic that underlies the section of the Income worksheet that is titled: "Enter other income that is taxed at ordinary income tax rates."

The graphic below shows some of the columns. VeriPlan has ten columns for rental real estate properties.

* Required entries	Rental # 1	Rental # 2	Rental # 3
Rental property name or description	A) Street / City	B) Street / City	C) Street / City
* Current Market Value (\$) [even if future purchase]	\$0	\$0	\$0
Expected Real \$ <u>Annual</u> Appreciation (+/- % relative to the CPI)	0.00%	0.00%	0.00%
* Tax basis, if owned (\$) [Calculated for future purchase]	\$0	\$0	\$0
Annual rental income before taxes, operating expenses, and debt payments:			
Gross annual \$ rental income, if 100% occupied *	\$0	\$0	\$0
Occupancy factor (%) * [Note: 0% = No Rent]	90.00%	90.00%	90.00%
Annual Business and Real Estate Taxes and Operating Expenses:			
<u>Annual</u> Business and Real Estate taxes (\$)	\$0	\$0	\$0
All other <u>annual</u> cash operating expenses (\$)	\$0	\$0	\$0
First debt: (classified as Rental Real Estate Debt)			
Principal owed (\$)	\$0	\$0	\$0
Interest rate (%)	0.000%	0.000%	0.000%
Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0
Second debt: (classified as Rental Real Estate Debt)			
Principal owed (\$)	\$0	\$0	\$0
Interest rate (%)	0.000%	0.000%	0.000%
Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0
Annual Depreciation:			
<u>Annual</u> non-cash depreciation expense (\$)	\$0	\$0	\$0
Depreciation Years (years remaining or 27.5, if new)	0	0	0
Active versus passive management:			
Is this an actively-managed rental? (No=0; Yes=1)	0	0	0
Planned Purchase:			
What year? (Owned now=0; Years until purchase=N)	0	0	0
Purchase expenses (% of value; non-debt; note 2% default)	2.00%	2.00%	2.00%
Planned Sale:			
Years from now until sale (0 if no sale planned)	0	0	0
Non-tax sale cost (% future value; non-debt; 8% default)	8.00%	8.00%	8.00%

8.4: Other properties (non-real estate), including businesses, valuable collections, illiquid investments, etc.

Property valuation, income, taxation, and depreciation

This section is for valuable private market assets only. All of your publicly-tradeable cash, bond, or stock assets should be entered on the Financial Assets worksheet and not here.

Enter the real dollar rate of appreciation you expect for each property. Because this is after general inflation has been removed, the expected appreciation percentage will be smaller than total appreciation with inflation included.

Enter full debt, tax, tax basis, and operating expense information about each property into VeriPlan, including expected gross income.

When you use this integrated business income functionality, it is assumed that any property is a pass-through tax entity where gross income minus debt payments minus business and real estate tax payments minus all other operating expenses will result in taxable income that flows onto the family tax return.

VeriPlan automatically transfers total projected annual taxable net income for your rental real estate and other properties to the tax logic that underlies the section of the Income worksheet that is titled: "Enter other income that is taxed at ordinary income tax rates."

The graphic below shows some of the columns. VeriPlan has ten columns for other properties (non-real estate), including businesses, valuable collections, illiquid investments, etc.

* Required entries	Property # 1	Property # 2	Property # 3
Other property name or description	Property A	Property B	Property C
* Current Market Value (\$) [even if future purchase]	\$0	\$0	\$0
Expected Real \$ Annual Appreciation (+/- % relative to the CPI)	0.00%	0.00%	0.00%
* Tax basis, if owned (\$) [Calculated for future purchase]	\$0	\$0	\$0
Gross Annual Income before debt, tax, or operating expense payments (Enter net income if debt, tax, or operating expense payments are entered)			
Gross <u>annual</u> income (\$)	\$0	\$0	\$0
Annual Business and Real Estate Taxes and Operating Expenses:			
<u>Annual</u> business and R.E. taxes (not personal taxes) (\$)	\$0	\$0	\$0
All other <u>annual</u> cash operating expenses (\$)	\$0	\$0	\$0
Debt: (classified as Investment Debt)			
Principal owed (\$)	\$0	\$0	\$0
Interest rate (%)	0.000%	0.000%	0.000%
Minimum <u>monthly</u> payment (\$)	\$0	\$0	\$0
Planned <u>monthly</u> payment, if greater than required (\$)	\$0	\$0	\$0
Planned Purchase:			
What year? (Owned now=0; Years until purchase=N)	0	0	0
Purchase expenses (% of value; non-debt; note 2% default)	2.00%	2.00%	2.00%
Planned Sale:			
Years from now until sale (0 if no sale planned)	0	0	0
Non-tax sale cost (% future value; non-debt; 8% default)	8.00%	8.00%	8.00%

8.5: Future purchase and sale automation features for residences, rental real estate, and other properties

Future purchase automation features

Sections 1, 3, and 4 all provide functionality for future purchases of residential homes, rental real estate, and other properties.

Enter information on asset values, appreciation, tax basis, debts, real estate taxes, and operating expenses, as if you already owned the property that you plan to purchase in the future.

Then, enter the number of years into the future that plan to purchase this property and VeriPlan will automatically project the future purchase by funding the required down payment plus purchase expenses from your projected financial assets net of the debt you plan to assume.

Future asset values will appreciate according to your assumptions, future debts will be paid down, interest payments and real estate taxes will be deducted according to current tax law, the tax basis will be tracked, and cash flow will be consumed to meet expense, tax, and debt payments.

Future sales automation features

Sections 1, 3, and 4 all provide functionality for future sales of homes, rental real estate, and other properties.

Enter the assumed sales price and appreciation rate plus any percent of asset value selling costs ignoring any taxes related to the sale.

For future sales long-term capital gains relative to tax basis will be projected and after applicable capital gains taxes are paid, the net proceeds of the future sale will be automatically reinvested in future cash, bond, and stock financial assets according to your investment strategy settings. For non-rental homes and vacation properties, appropriate capital gains tax exclusions will be applied automatically.

Do not use this future sales functionality if you intend to utilize some kind of real estate sale and replacement mechanism that is allowed for homeowners, because in effect you will still own a similar property. A 1031 exchange would be an equivalent mechanism for rental real estate properties.

If you already own a home and plan on exchanging that property in the future for a larger/more expensive home, you can enter the information for your current home without assuming any future sale. To model the more expensive home, add the additional value, debt, real estate tax, and operating cost difference between your current home and the future home as another property that you plan to purchase some years in the future.

8.5.1: Overview: Planning to buy a home in the future



VeriPlan takes your current dollar value entries and automatically adjusts them to reflect your expectations about any positive or negative value changes prior to the projected year of your intended home purchase.

After the number years that you set below has elapsed, VeriPlan will automatically project the purchase of your new home. At the beginning of the projection year that follows the number of years you set, VeriPlan will also automatically:

- * set up and project the value of a real estate property asset that reflects adjusted valuation, purchase costs, future real dollar growth rates, tax basis, etc.;
- * liquidate sufficient cash, fixed income, and equity assets to fund the projected home price plus purchase closing costs minus mortgage principal assumed.

Financial assets would be withdrawn from taxable accounts first. If the taxable asset balances were insufficient, then financial assets would be withdrawn from tax-deferred accounts and then from Roth accounts, in that order.;

VeriPlan's normal automated savings, investment, taxation, and withdrawal processes related to your projections will continue to:

- * set up and amortize the associated tax-deductible mortgage loan from any associated mortgage that you entered in the debt section above
- * project and adjust any taxes and any costs affected by this new home ownership; and
- * reflect this home purchase in the graphics and data worksheets.

If you currently rent your residence and you want to buy a first home, you could use this tool to evaluate the projected financial tradeoffs of renting versus owning your primary residence over your lifecycle. You could develop projections that reflect an apples-to-apples comparison of your current home rental versus the future purchase of an equivalent home. Alternatively, you could compare your current home rental to a situation in which the home you plan to purchase upgrades the quality of your housing.

You could use this tool, if you already own your primary residence -- with or without a mortgage -- and you want to purchase a second home at some point in the future. In this case, you should already have entered the information about your existing primary owned residence into VeriPlan. Therefore, the additional entries you make with this tool would focus on the future purchase of this second home. VeriPlan will automatically combine the financial effects associated with the home that you already own and the home that you plan to purchase in the future.

Alternatively, instead of buying a second home, you might want to use this tool to model the future sale of your current home and its tax-free replacement with a more expensive home. In that case, you should leave your current entries about your existing home intact in VeriPlan and simply use this tool to model the incremental changes. Similarly, you could also use this tool to model a major future renovation or expansion of a home that you currently own.

Whenever you use this home purchase tool, VeriPlan will assume that you:

- * intend to own and occupy one or two residences;
- * expect to take advantage of income tax deductions associated with mortgage interest payments and real estate taxes; and

- * want to understand financial tradeoffs and whether such a real estate purchase might be financially manageable.

Note that no home modeled with this tool should be intended for rental, because different tax rules apply to rental real estate. Furthermore, rental income would need to be recognized.

If you own a home and do not plan to purchase a second home

If you already rent or own a home and do not wish to evaluate the future purchase of a home, you do not need to use this tool. Instead, simply enter information about your housing assets, debts, taxes, and expenses on the yellow-tabbed and orange-tabbed worksheets to reflect your current housing situation.

Do the following in VeriPlan:

- * enter the current gross market value of any home that you own plus related asset information on the property worksheet,
- * enter your primary residence mortgage in the debt input table above, and
- * enter current dollar information about your annual real estate tax payments in the second-to-last column of the input table on the property worksheet.

When you use the home purchase tool, you will make entries about the number of years until you plan to purchase a home, the planned purchase price, and other information related to your expected home purchase.

The vast majority of people require mortgage financing to purchase their first or second home. When you use this tool to plan the purchase of a home, you will simultaneously use the separate debt inputs table above to enter information about the mortgage debt financing that you plan to use.

Follow these steps, as you make entries into the home purchase tool input table above:

Step 1: Enter the expected purchase price of the home in current dollars

Step 2: Enter purchase closing costs, as a percent of the purchase price

- * Such purchase closing costs typically range from 1% to 3% of the purchase price of a home. These purchase closing costs would also include the costs associated with acquiring a mortgage loan. (Note that the seller's closing costs typically are much higher. The seller normally pays the sales commission for both the buying and selling

agents/firms, which typically is about 6% of the purchase price -- in addition closing costs of 1% to 3%.)

Step 3: Decide how many years until you plan to purchase your home

- * When you set the number of years to be 1 (one) or greater, then VeriPlan will automatically implement the other functionality described on this tool worksheet.
- * If you were to enter 3 years, for example, then VeriPlan would wait a full three years and execute the home purchase transaction at the beginning of the fourth year.

At that point, VeriPlan automatically:

- * establishes a property asset equal to the purchase price, which will be included in your property asset class,
- * sets up an self-amortizing mortgage loan with the terms that you specify, and
- * withdraws the financial assets needed to fund the difference between the projected purchase price plus purchase closing costs minus the mortgage loan principal.

VeriPlan will automatically make any real dollar cost or valuation adjustments that you enter and wish to have occur up until the year of this home purchase transaction.

When you are not using a tax-deductible debt entry line on the debt inputs worksheet for an existing mortgage debt or line of credit, you can instead use it to project a future home purchase, and vice versa. Both current and future debts will display on the debts graphic.

When the number of years is set to zero, VeriPlan will NOT automatically generate a property asset to correspond with any mortgage debt that might display this line. That is because a zero years entry shuts off all of this tool's functionality. Instead, you must directly enter the current fair market value for residential homes that you already own on the property asset worksheet. When using a future purchase price, VeriPlan can automatically assign a fair market value. However, with your existing residential real estate assets, the fair market value is no longer connected to the purchase price, and your home's value may have changed significantly, since you acquired it. That is why you need to supply directly the current value and your estimate of future value growth on the property asset worksheet.

Step 4: Enter the terms of the mortgage that you would plan to take on in the future to purchase this home.

Step 5: Enter your expectation about relative real dollar percentage housing price growth BEFORE this home purchase is expected to occur

- * The BEFORE PURCHASE real dollar price appreciation percentage that you enter should be relative to general level consumer price inflation in the short-term. For example, if you expect housing values to grow at values that equal the rate of consumer price inflation in the near-term, then enter 0%.
- * The BEFORE PURCHASE relative price appreciation rate allows you to experiment with the effect of short-term real dollar changes in housing values before you plan to buy.
- * Depending on your setting, VeriPlan will decrease or increase your total required cash to purchase this home to reflect expected real dollar price changes.
- * If you expect short-term housing prices to increase/decrease relative to general inflation, then the projected real dollar cash down payment and closing costs required to complete this home purchase will also increase or decrease, respectively.

Step 6: Enter your expectation about relative real dollar percentage price growth AFTER this home purchase

- * The AFTER PURCHASE total real dollar price appreciation percentage rate should be set relative to your expectations about the general level of consumer price inflation in the long-term. If you expect longer-term housing values to grow at the rate of inflation, then enter 0%.
- * VeriPlan uses your entry to project the long-term asset value for this home after it is purchased. This projected home value will be added automatically added to the Property asset class. The home's projected real dollar value will be displayed as part of the Property asset class on VeriPlan's "total assets" graphics and corresponding data worksheets.

Step 7: Enter your average expectation about the percent of house's value that will be needed annually to maintain the structure in a condition similar to when it was purchased.

- * Annualized expenses that you should consider here relate to structural maintenance, such as roofing, painting, termite repairs, and repair and replacement of heating, air conditioning, water heaters, etc.

- * Do not include any costs related to major anticipated renovations or upgrades. Such infrequent and planned one-time expenses should instead be entered as major planned expenses on the expenses worksheet.
- * Do not include any cost assumptions related to home furnishings or periodic maintenance such as gardening or pool services. Instead, these frequently recurring expenses should be included in the annual living expense budget that you enter on the expenses worksheet.

Step 8: Enter your expectation about annual real estate taxes, as a percent of purchase price

- * VeriPlan will automatically project your future real estate taxes using this percentage. (See the taxes worksheet for more information.)

Other entries to complete the projection modeling of you future home purchase:

Purchasing versus renting a home or acquiring a second home both may involve significant differences in your living expenses and taxes. Such differences should be accounted for in a well-developed lifetime plan. The following is a category list of other entries that you may need to make in VeriPlan.

- * Adjust your projected annual ordinary living expenses for the long-term
- * Adjust your projected annual ordinary living expenses for the interim period until the home is purchased
- * Add any additional projected major planned expenses

Concerning transactions costs, residential homes are very expensive to buy and sell.

Typically, the selling owner of a home will bear the brunt of real estate transactions costs. During the sale, the selling homeowner typically pays the total sales commissions for both the selling agent/firm and the buying agent/firm. These commissions usually equal about 6% of the sales price of the home. In addition, when selling a home, the seller might also pay 1% to 2% or more in additional sales transaction costs. In effect, your primary residence usually carries roughly an 8% 'back-end' sales load each time that your home is sold.

If subsequently you purchase a replacement home, the purchase cost typically is about 2% of the purchase price -- particularly when partial mortgage financing is involved. Therefore, each "round-trip" sale and new purchase of a replacement home sale can cost about 10% of then-

current market value. At about 10%, one pair of round-trip sale and repurchase transactions is costly enough. However, if you sell and repurchase your home multiple times during your lifecycle, these transactions costs can be very large.

Concerning capital gains taxes on the sale of a home, you may or may not pay any taxes. Done properly, most homeowners can avoid recognizing significant taxes on sale and replacement transactions. If you plan to sell your primary home and repurchase another using a tax-free rollover provision of the tax code, you usually will not need to be concerned about future real estate capital gains taxes. Taxes on real estate capital gains may never be realized and eventually might be avoided entirely upon death and transfer to a spouse. Estate taxes could apply, but this is a separate matter.

Given the fact that house sales transactions cost are very high, yet capital gains taxes likely can be avoided, how should you carry the value of your primary residence in VeriPlan? You have several choices, but these two alternatives may be the most useful to the majority of people.

First, you could carry the value of your primary residence at "gross market value" with respect to potential taxes and transactions expenses. In that situation, you simply understand that VeriPlan's projected real estate values will not reflect any projected sales and repurchase costs nor any capital gains taxes. To use this gross current valuation method, just enter the current fair market value of your home in the table above.

Alternatively, you could carry the value of your home at gross market value with respect to taxes, but at net value with respect to expected sales and repurchase transactions costs. Since capital gains tax avoidance is relatively likely, potential capital gains taxes would be ignored in this method. However, if you believe that you will sell and replace your home several times during your lifecycle, then entering the current fair market value would tend to overstate substantially the projected net equity value of your home.

You can make relatively simple adjustments to the current fair market value of your home that would reflect expected transactions expenses. Because sale and repurchase transactions cost about 10% of home value, you can simply reduce the current value of your home by about 10% for each sale and replacement transaction that you expect in the future.

You might assume, for example, two future sale/repurchase transaction pairs that would reduce current fair market value by approximately 20%. If your home's current gross fair market value is \$800,000, then enter \$640,000 instead. ($\$800,000 \times (100\% - 20\%)$) equals

\$640,000.) With such an initial adjustment, VeriPlan's projected values would tend to approximate better the consumption purchasing power of your net home equity. (You should also make a note in the table above to indicate that you already assumed a prior 20% discount for anticipated transactions costs in the home value entered.

8.6: Differences between consumption-oriented and investment-oriented debts

VeriPlan distinguishes between your consumption-oriented debts and your investment-oriented debts to illustrate the savings impact of paying off debt principal. Investment-oriented debt payments are a form of savings. In contrast, consumption-oriented debts shift repayment of excess past consumption into the future, and they add the heavy burden of interest payments.

The distinction between consumption-oriented and investment-oriented debts has been added so that you can better understand when debt may be contributing to or detracting from your financial welfare. Not all debt is necessarily bad for your financial outlook. In fact, some judiciously acquired investment-oriented debts could be very good for you.

While consumption debt is deferred payment for past consumption, an investment debt is debt incurred to increase income, such as educational debts and property purchases using debt usually are. VeriPlan projects consumption and investment debts the same way from a cash flow projection standpoint, but it distinguishes these different types of debt on graphics and data output. Investment debt principal repayments are included in projected savings rates, while consumption debts repayments are not.

In Section 2 above, VeriPlan allows you to classify your currently outstanding debts as "1" for consumption-oriented debt and "2" for investment-oriented debt. Mortgage debts in the other sections are also investment debts, since they are related to the ownership of valuable property assets.

8.7: Making general inflation adjustments to your debt repayments

Future fixed dollar debt repayments will be affected by the future rate of inflation, which is unknown. With inflation (deflation), future fixed debt payments are made with dollars with less (greater) purchasing power. Higher inflation is advantageous to the borrower, but not to the

lender. Therefore, all market-based loan interest rates include an assumption for expected inflation related to the duration of the loan.

Throughout, VeriPlan uses real dollars with inflation removed to develop constant purchasing power projections. Because your future fixed dollar debt payments will be made in nominal dollars rather than in real dollars, adjustments must be made. Expected inflation needs to be removed to convert your future debt payments from nominal to real dollars.

VeriPlan does this automatically for you. It automatically adjusts your future debt payments on current debt by about 3% annually to remove the inflation factor. This adjustment is based on the compounded U.S. inflation rate for consumer prices from 1928 to the present.

The general inflation level affects both the blue-tabbed "Debt Payments" and "Debt Owed" graphics. This causes annual debt payments to decline in real dollar terms on the blue-tabbed "Debt Payments" graphic. Those debt payments are the same "nominal dollar" amounts, but as time goes on, they decline by the rate of inflation when presented in real, constant purchasing power terms. The same is true with the remaining debt principal owed.

Adjust the inflation rate embedded in your debt payments

If for some reason, you would like to adjust VeriPlan's inflation assumption related to your debt repayments, you can make that adjustment here. Enter a positive or negative inflation adjustment in the gray data entry box below.

Compounded annual Consumer Price Index (1928 to present %/year) >>	3.037%
Your - or + adjustment to the historical inflation rate (%/year) >>	0.00%
Total inflation rate used to adjust future debt repayments (%/year) >>	3.037%

8.8: Future unfunded debt tool

Excess consumption and the attendant costs of debt can be very destructive. This future unfunded debt tool allows you to set an interest rate for any future unfunded consumption that you might incur.

VeriPlan automatically accumulates an unfunded debt with unpaid interest, when your cash, bond & fixed income, and stock & equity financial assets are depleted and your projected

expenses exceed your income. If subsequent positive net income becomes available, VeriPlan will automatically retire some or all of this unfunded consumption debt.

This future debt tool enables you to choose a loan interest rate for any potential debt that you might need to incur in the future. You can set and adjust this interest rate below.

Your loan interest rate for future unfunded consumption debt:

In this section, you can set and adjust the loan interest rate for any future unfunded consumption debt that you might incur, once your financial assets are depleted.

0.00% << As a POSITIVE %, enter your assumption about the real dollar loan interest rate for your future "unfunded consumption debt," after your cash, bond, and stock financial assets have been depleted

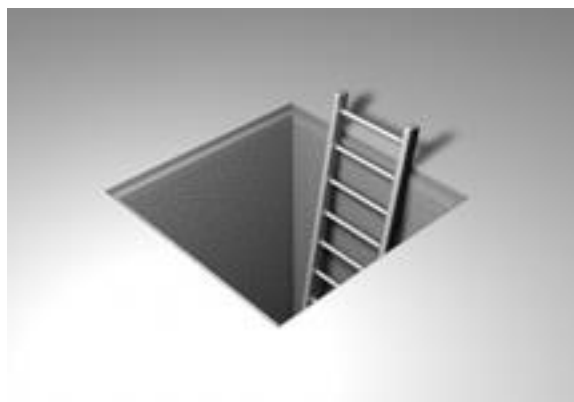
Note that this should be a "real dollar" interest rate. Typically, an expected real dollar interest rate would be about 3% lower than its corresponding nominal dollar expected interest rate. This difference is based upon the long-term, historical inflation rate for consumer prices.

Initially, VeriPlan comes configured with a 0%, user-adjustable real dollar interest rate. In effect, this 0% real dollar interest rate means that this tool is not turned on for your planning. However, if your planning projection indicates that at certain points during your lifetime you might get into a situation where your cash, bond, and stock financial assets would be depleted and you would have expenses exceeding your income, you really should run a few tests with this tool.

Do not be gentle with this interest rate. Unless you have pre-arranged a credit line, your interest rates could be very high. Think 8% to 10% as a minimum, unless you can really justify a lower interest rate. An 8% to 10% rate could be appropriate for users who are projected to have:

- a) property and other assets to use as collateral,
- b) a very good credit rating, and
- c) a pre-existing loan arrangement established before any financial crisis arose.

If you believe that these qualifications probably would not apply to your projections, then you should consider using a substantially higher interest rate. The results could be rather terrifying! Build up your assets and stay away from the edge.



In any period, when your expenses exceed your income, you must either take on debt or liquidate assets. From an economic standpoint, periods when expenses exceed income are not without a significant long-term cost. Selling your financial assets, property, or other assets to cover expenses removes the opportunity to earn a market risk premium on those assets in the future. If, instead, you borrow to pay these expenses, you must repay high loan interest expenses and principal in the future. If these alternatives were not available to you, bankruptcy would result.

During some projection years, VeriPlan might indicate that your expenses would exceed your income and it would automatically draw upon your cash, bond, and stock assets to fund this projected gap between expenses and income. Eventually, your cash, bond/fixed income, and stock/equity financial assets might have become completely depleted in making up your cumulative annual expense shortfalls. Such a situation could occur during your earning years or in retirement.

During your lifetime, this situation could reoccur more than once. If your cumulative expenses force you into debt at some point, positive net income earned subsequently might pay off this debt. Alternatively, new assets received through inheritance, for example, could also eliminate this debt. At some later point, the cycle could repeat.

VeriPlan will automatically begin to accrue an "unfunded consumption debt" for you, when

- * your current income is inadequate to meet your expenses and
- * your cash, bond/fixed income, and stock/equity financial assets are completely depleted.

Unpaid principal and unpaid interest charged at the interest rate you set below will be accumulated automatically as unfunded consumption debt.

In the situation where your projected financial assets were depleted, you could still have property and other assets to liquidate. VeriPlan does not automatically assume that you would choose to sell off your property and other assets to avoid incurring unfunded consumption debt.

VeriPlan would not know the potential liquidity of the property and other assets that you list on the property assets worksheet. Furthermore, it would not be able to assess your future willingness or ability to assume debt as an alternative to liquidating your property or other assets.

Any future decision about asset liquidation that you might make could depend on a variety of factors, including asset salability, capital gains taxes, the need to use the asset, etc. Instead of selling such assets, you might prefer to retain them and to use them as collateral for a future loan.

Because of these realistic considerations, VeriPlan uses an alternative approach. Graphically, VeriPlan projects for you the net impact of your future "unfunded consumption debt" on your portfolio's remaining property assets, after your cash, bond, and stock financial assets been depleted.

When this occurs, VeriPlan's total assets graphic and data output will illustrate the erosion of total value in your asset portfolio caused by any future unfunded consumption debt. The graphics will reflect the portfolio value erosion caused by this debt.

VeriPlan's total assets graphics add the projected "negative value" of your current and future debts to your remaining positively valued property assets. Consult the data output for each projection year, to find the projected negative real dollar values of your future unfunded consumption debt.

When you have other positively valued assets, your debts will not display directly, because of how the graphics drawing facilities of the underlying spreadsheet engine work. Nevertheless, your debts will affect how your positively valued portfolio assets are displayed. Whenever the lower edge of any positively valued asset falls below zero on the "y-axis" of a graphic, then your outstanding debts are the cause. How much your positively valued assets are pulled downward below zero will depend upon the total principal and accrued interest of your outstanding debts.

Furthermore, the higher the interest rate that you chose for your projected unfunded consumption debt, the more rapidly any future unfunded consumption debt will erode the net value of your overall portfolio assets. Your future unfunded consumption debt will not affect the graphical display of your cash, bond/fixed income, and stock/equity financial assets, because

your financial assets must be fully depleted, before VeriPlan begins to accrue any future unfunded consumption debt.

Note that your currently outstanding debts and future mortgage loans incurred through use of the home purchase tool will also affect the graphical display of your financial assets and property assets. In VeriPlan, you may have both current debt and anticipated mortgage obligations at the same time as you have positive financial assets. However, if your current net income is not sufficient to meet these required debt payments, then over time VeriPlan will automatically liquidate some or all of your financial assets to meet these debt obligations. Once your financial assets are exhausted, then VeriPlan automatically invokes its unfunded consumption debt logic, as needed.

Some considerations in selecting a loan interest rate for future unfunded consumption debt

Multiple factors can affect the choice of an appropriate loan interest rate for future unfunded consumption debt. You might wish to consider these factors:

Interest rate variability

Over the years, consumer debt interest rates are likely to vary widely, depending upon the general business and monetary environment of the time. The future debt tool uses an average real dollar loan interest rate to accrue interest on future unfunded consumption debt that you could incur at any point during your lifecycle.

While use of an average is a reasonable starting point for projection planning, interest rate variability means that actual real dollar interest rates could be lower, but also might be substantially higher at the time you would need such a loan. The likelihood of wide interest rate variability across time means that you should always test the sensitivity projection of your projections using a reasonably wide range of different interest rates. Because VeriPlan allows you to develop variations instantly, you can quickly test the sensitivity of your plan to a full range of interest rates.

In particular, you should ensure that you test significantly higher interest rates, because higher rates can be financially ruinous. For example, if you think that an average interest rate of 12% would be appropriate for you, then you might also evaluate the impact of 15%, 18%, or even 20+% interest rates.

Bond debt interest rate averages for corporations provide a rate baseline. Interest rates for individuals usually would range from significantly higher to far higher.

On the risk and returns worksheet, you will find VeriPlan's estimate of the long-term bond spread assumption for high-quality corporate debt that VeriPlan uses to estimate real dollar bond/fixed income asset class returns. This rate is somewhat lower than 3% per year. (Remember also that an additional 3 percentage points for expected inflation was already subtracted from this high quality bond/fixed income rate of return assumption.)

While this is a real dollar rate of return, it also measures the long-term average borrowing cost to these corporations before transactions expenses. To pay transactions costs, typically corporations will raise additional funds at the same market interest rates to pay their financial intermediaries.

Other large, but higher risk corporations, possessing valuable assets and positive cash flow, can have much lower quality credit ratings. Some have credit ratings that fall below investment grade into junk bond rating levels. On average over time, to raise debt, these lower rated corporations pay additional percentage interest rate points of 3%, 4%, and higher to raise capital in the credit markets. When added to the 3% real dollar interest cost to very high quality corporations, then total average real dollar interest rates of 6%, 8%, and higher would be the result.

Lower rated corporations still have valuable assets to use as debt collateral and positive cash flows. If they would pay these long-term average real dollar interest rates, then what interest rates should individuals expect realistically, particularly when they have negative cash flows and no financial assets? The answer is that market interest rates for such individuals would be far higher, perhaps astronomical, and highly variable. In fact, credit simply might not be available to such individuals, when the need arose.

Use moderate to high real dollar interest rates, only when you are projected to have substantial property and other assets to use as collateral, and when you have already established a high quality personal credit rating.

Certain factors can help individuals to obtain consumption loans at interest rates that are not completely ruinous. These distinguishing factors include:

- * having substantial property or other assets to use as collateral,
- * carefully developing a strong credit rating over a long period, and

* putting into place an unused loan arrangement long before any financial difficulty arises.

Ten percent could be a reasonable lower bound for the interest rate assumption for future unfunded consumption debt. However, a 10% real dollar interest rate would ONLY be appropriate for those who are projected to possess property and other assets and to have a very good credit rating.

If you do not anticipate having property and other assets and a very good credit rating in the future, then you should probably use a substantially higher interest rate. (See the discussion below about unsecured consumer debt.)

Arrange for emergency borrowing well in advance

You should not wait for a crisis to attempt to arrange the loan that you might need. If you can secure a long-term credit facility at a reasonable cost, you should do so well in advance of any potential need.

For example, the time to put in place a long-term home equity line of credit is when you have already built up substantial real estate equity, are receiving steady income, and have a good credit rating. Once you obtain such a line of credit, you should leave it unused. On the other hand, if you do use it, you should do so infrequently and then pay down the balance quickly and fully. If you smash this piggy bank too early, it could become part of the problem and not part of the solution.

Typically, interest rates on lines of credit secured by real estate assets will still fluctuate according to market rates in the future, but at least the line of credit would already be in place and available for an emergency. Furthermore, future line of credit interest rates would reflect the value of the real estate collateral that secures it. Such interest rates should be substantially lower than unsecured consumer credit rates.

Develop projections with very high interest rates, when you lack collateral.

Unless you have substantial assets to pledge as collateral and a very good credit rating, you are likely to pay the very high interest rates that are associated with unsecured consumer credit card debts. Without substantial property and/or other assets to use as collateral, it simply would

not be reasonable to expect to borrow at lower rates. In such circumstances, real dollar interest rates could range from 15% to 30% annually or higher.

You might think that these suggested average rates are much too high, because you already have consumer credit cards with much lower rates. First, interest rates have been at generational lows, which may have distorted perceptions of much longer-term consumer interest rate averages. Second, if your future income would be inadequate to meet your expenses and your financial assets were depleted, then it is likely that the terms of your credit cards will be at risk, as well. If a credit card company chooses unilaterally to increase dramatically your interest rate or to cancel you credit line altogether, you will have no control of the matter.

Credit card companies, of course, have an obligation to protect themselves from borrowers who cannot meet their obligations. However, the evidence is strong that predatory lending practices by many credit card companies in this largely unregulated industry have ensnared millions of borrowers. Once in debt, many people stay trapped in virtually endless cycles of indebtedness caused by high fees and escalating interest rates. If you have any doubts about this, do a search on the web for articles regarding the Credit Card Accountability Responsibility and Disclosure Act of 2009 widespread credit card industry abuses. Also look on the Federal Reserve System website's Consumer Information section, since the Fed is charged with implementation of this law.

Millions of Americans have already undermined their ability to build long-term financial security, because they carry significant, unmanageable credit card debts with very high interest rates and costs. While many consumers may become victims of predatory credit card companies, their unaffordable current consumption is at the heart of the issue. Whether caused by loss of income or another personal financial disaster or by lifestyle spending beyond one's means, excess consumption simply makes one far more financially vulnerable.

If nothing else, this future debt tool might help you to appreciate just how rapidly you could be drawn toward financial ruin through consumer debt. Usurious consumer debt interest rates combined with major setbacks such as job loss, health problems, divorce, disability, or other financial disaster can destroy well-conceived lifetime financial plans, if adequate asset buffers are not already in place.

Given your circumstances and these comments, you might decide that it would be appropriate for you to use a very high interest rate assumption in the future debt tool. If this is the

case, then you also should quickly take very aggressive steps in your financial affairs to move away from the danger of unsupportable future consumption debt. One of the most important first steps toward financial well-being is to move as rapidly as you can away from relying upon credit debt to meet current consumption needs.

Chapter 9: Taxes worksheet

- 9.1: Federal income tax rates (supplied)
- 9.2: State income tax) rates (supplied)
- 9.3: Enter your local income tax rates
- 9.4: Enter differences between your federal, state and local taxable income
- 9.5: Your federal income tax personal deductions
- 9.6: Your federal income tax adjustments, which reduce taxable income
- 9.7: Your long-term federal income tax itemized deductions
- 9.8: Property and real estate taxes
- 9.9: Social Security and Medicare payroll and retirement benefit tax rates
- 9.10: Federal qualified dividends, long-term capital gains and NIIT tax rates
- 9.11: Federal real estate tax parameters
- 9.12: Retirement account Required Minimum Distributions (RMDs)
- 9.13: Qualified Charitable Distributions (QCDs) from your traditional IRAs

Select your state of residence to activate state income taxes (required)

PULL DOWN MENU

1-Pick-Your-State

**<< Select this box and a pull down menu arrow will appear.
Click the arrow, and scroll down to find your state.**

VeriPlan supplies state income tax rates for the 50 states and DC

Introduction

VeriPlan's projections automatically use the particular federal, state, and local income tax rates and limitations that currently apply to you. VeriPlan also automatically projects your tax exemptions, adjustments, and deductions plus your property and other taxes. To prevent obsolescence, VeriPlan allows you to change these tax rates and tax limits, in case tax laws change.

Using your tax-related settings on this worksheet, VeriPlan projects your lifecycle tax obligations in different tax categories. VeriPlan's automated tax projections for these tax

categories are presented on the taxes graphic. You can set tax assumptions and enter personal information about your:

- * federal income tax rates
- * state and local income tax rates
- * Social Security (FICA) and Medicare taxes
- * federal dividend and long-term capital gains tax rates
- * federal income tax exemptions, adjustments, and deductions
- * property and other non-income taxes

This worksheet captures the key tax elements required to develop financial projections that reflect your particular tax situation. It also provides you with significant abilities to modify your tax related data, as your personal situation changes.

If we could have made this sheet more simple, we would have. However, the excessive complexity of the U.S. tax system forces this worksheet to be both extensive and adjustable. As you complete this worksheet, keep in mind that, after their efforts to earn and save money, there are two other factors that probably have the greatest impact on the overwhelming majority of people. These factors are: 1) taxes on income and assets and 2) investment costs.

Once you have entered your personal data into VeriPlan and have begun to evaluate your personal scenarios, this will become very clear to you. Financial and investment plans that ignore taxes and investment costs are just fantasies. VeriPlan can help to reduce the fantasy element in your family's financial lifecycle planning efforts.

On the tax worksheet, VeriPlan provides a variety of bold border data entry boxes for you to enter information about your situation. To find more easily your tax information for entry on this worksheet, please consult copies of your recent personal tax federal, state, and local tax returns. In addition to U.S. federal, state, and local income taxation.

From your projected earned income, VeriPlan will automatically deduct federal and state ordinary income taxes, Social Security taxes (FICA), Medicare taxes, and self-employment taxes. Using the appropriate tax filing status, tax tables, and taxable income, it will automatically determine and deduct these taxes.



In any particular projection year, if positive net earned income remains after your expense, tax, and debt payments, then these positive net earnings will be invested according to your settings on VeriPlan's investment related worksheets. If you have negative net income in any particular year, then this shortfall will be made up through withdrawals from your financial assets, which include cash, bonds/fixed income, and stock/equity assets in taxable and/or tax deferred accounts. Withdrawals will be taken according to your setting on the various worksheets.

In any particular projection year, taxes will be applied in accordance with current federal and state tax laws and rates. Ordinary income taxes and short-term and long-term capital gains taxes will be deducted from asset returns, and net earnings on investment assets will be automatically reinvested. Reinvested asset returns will be net of both these taxes and your projected investment costs. Any tax basis that you may be carrying for a particular asset will also be automatically decreased or increased, as appropriate.

Whenever you would have a current earnings shortfall, after expenses, taxes, and debt payments, then VeriPlan will automatically withdraw the necessary funds from your assets and apply the required distribution taxes. Because most individual tax payers figure their taxes on asset related gains and losses and make asset tax related cash payments in the subsequent year, VeriPlan deducts these cash payments related to asset withdrawals after the beginning of the next year.

VeriPlan will also automatically calculate appropriate taxes related to your asset income. This taxes worksheet does not ask for tax inputs related to asset yields on cash, fixed income, equity, property, real estate, business, or other assets. Separately and automatically, VeriPlan will project ordinary and capital gains taxes associated with distributions and withdrawals related to your assets.

On the stock inputs portion of the financial asset worksheet, you will supply information about annual taxable distributions related to your assets. This information will also be found on your federal tax returns. You will NOT need to supply similar information related to your cash and bonds assets. VeriPlan assumes that cash and bond interest income will equal the projected returns for these asset classes. Cash and bond interest will be taxed in the current year at federal, state, and local ordinary income tax rates.

Tax laws, rules, and regulations are incredibly complex, vary widely, and change frequently. VeriPlan provides methods to project the approximate impact of federal, state, and local taxes on your future financial situation. In addition, VeriPlan provides numerous methods for you to customize and adjust its tax and other assumptions. You should take care to understand and verify that VeriPlan's assumptions reasonably reflect your current tax situation and your expectations about the future.

While VeriPlan may be aware of some unique federal, state, or local tax laws and rules, it simply cannot incorporate them all and maintain its ease-of-use and generality. Note also that we have attempted to implement a "conservative" modeling approach, when a choice is available, that will usually over-state rather than under-state your projected tax burdens given current laws and rules. This means that your continued attention to tax optimization for your particular situation as the years go by may yield modest favorable gains relative to the specific tax assumptions that you have chosen to set in VeriPlan.

NOTE:

- * VeriPlan is updated at least once a year to incorporate new tax rates and rules. This typically happens in the Spring, after federal, state, and other government websites are updated with new information. Government website tax updates tend to happen later than one might expect. The primary reason for this is that tax authorities and their staffs are focused on tax returns for the prior year, until the primary Spring filing deadline passes.
- * When VeriPlan functionality is upgraded, then the VeriPlan User Guide will also be revised to reflect these new enhancements to VeriPlan. However, the tax tables in this user guide MAY NOT have been updated with the latest numbers and parameters that are contained in the latest version of VeriPlan.

Detailed VeriPlan Tax Projection Features video on YouTube that you can view:

Behind the scenes, VeriPlan fully automates and customizes your tax projections, so that you do not need to do back-of-the-envelope calculations or try to construct your own spreadsheet. You can focus instead on making better, more personalized, and tax-informed financial decisions.

[Automated Tax Projection Features in VeriPlan](#)

https://www.youtube.com/watch/_szbTIdZFPc

Your federal income tax filing status

VeriPlan supports the two primary U.S. federal tax filing statuses that are used by the great majority of taxpayers: 'Single' and 'Married, Filing Jointly.'

The other types of tax filing status: Qualifying Widow(er), Married, Filing Separately, and Head of Household usually are not filing classifications that are used for a long period and are not appropriate for lifetime projections. For more information, see below.

You do not need to select the 'Single' or 'Married, Filing Jointly' tax filing status on this worksheet. VeriPlan automatically checks your answer to the question: "Should VeriPlan develop lifecycle projections for 1 or 2 earner/users?" on the Income worksheet. Depending on your answer, VeriPlan selects a 'Single' or 'Married, Filing Jointly' tax filing status for you.

This is your current answer to this question on the income worksheet about the number of users:

2	<< 1 is for one VeriPlan earner/user and 2 is for two VeriPlan earners/users
---	---

Your answer to this question cannot be changed here. Instead, you could change it on the income worksheet.

This is the federal tax filing status that VeriPlan will use throughout your projections, unless you change the number of users on the income worksheet:

Married, Filing Jointly

What to do if you have recently used another tax filing status on your federal income return:

If your current federal tax filing status is one of the following: 'Qualifying Widow(er),' 'Married, Filing Separately,' and 'Head of Household' please consider the following, if you wish to use VeriPlan:

Those who file as a 'Qualifying Widow(er)' should probably develop VeriPlan projections using the 'Single' filing status and should indicate "1" user on the income worksheet. 'Qualifying Widow(er)' is a transitional filing status that could only apply for one to three years. Thereafter, unless you remarry, you would probably file as 'Single' or 'Head of Household,' if you qualify. Most widow(er)s would probably use the "Single" filing status in VeriPlan. For the first few years that they are a "Qualified Widow(er), then their actual tax payment probably would be lower than VeriPlan would project using the 'Single' filing status.

The 'Married, Filing Separately' filing status is sometimes used by still married persons who live separately. If you are in this situation, you should consider whether this status will persist for most of your lifecycle. Then, make the appropriate choice in VeriPlan, concerning whether to develop a projection for one or two users. For others, the 'Married, Filing Separately' filing status is an optimization that may reduce taxes in a particular year for two married persons who are together, when compared to the 'Married, Filing Jointly' filing status. Such persons should just develop VeriPlan projections for two users. In the future, if you may sometimes gain an additional tax advantage from filing as 'Married, Filing Separately,' but the great majority of married taxpayers do not find that filing separately is advantageous. However, in any year that filing as 'Married, Filing Separately, enables lower tax payment, then that advantage would constitute a financial 'upside' for you compared to VeriPlan's tax projections.

Those who qualify under the tax rules to file as 'Head of Household' probably would find that VeriPlan's 'Single' projections would overstate their projected tax obligations, while the 'Married, Filing Jointly' status would understate those obligations substantially. You may wish to run projections with both classifications to understand the outer bounds of VeriPlan's projections.'

Taxes and unmarried earner/users in the same household

Unmarried VeriPlan users in the same household, who do not plan to marry soon, should develop separate projections for one user that would be taxed at 'Single' ordinary income tax rates.

In particular, if you are younger and currently single, you might instead chose "Married, Filing Jointly." You might do this, if you feel it is very likely that you will marry soon and remain so through your lifetime. However, if you chose to use a federal tax filing status that is different than how your currently file, then you also should keep this in mind when you set other parameters in VeriPlan. For example, your earned income, debts, assets, tax-deferrals, expenses, and many other factors can differ significantly for married versus single persons.

If you want to model two unmarried user/earners in VeriPlan, you should understand how VeriPlan manages taxation. VeriPlan's logic is focused on developing appropriate projections for one person filing with "Single" tax status or for two people filing with "Married, Filing Jointly" tax status. If you wish to develop projections for two unmarried earner/users in the same household, who will remain unmarried, you must use a different approach. You would need to develop separate Single filing status projections, and then evaluate the results from those separate VeriPlan projections.

If unmarried persons were to combine their assets into a single VeriPlan projection model, and they were to use either the Single or Married, Filing Jointly filing statuses, then doing this would create very significant projection distortions. Combining financial resources and developing a joint VeriPlan projection and using a married tax filing status above would only be appropriate, if you anticipate marrying soon.

If you do not anticipate that you will marry soon, but you do operate as one household, then you should develop two separate VeriPlan projections with separate income, assets, expenses, debts, etc. that each use the Single tax filing status. You should give care to allocating joint expenses, debts, and other potentially shared items between the two projections to ensure that everything is included, but not double-counted. This use of VeriPlan conforms to the Terms of Use. VeriPlan is licensed "only for personal, non-commercial use by one (1) household." VeriPlan "may be used by you and by the members of your immediate family who reside together in the same household with you."

9.1: Federal income tax rates (supplied)

Depending up your tax filing status, VeriPlan automatically applies federal income tax rates and breakpoints to every projection. This section lists those tax rates and breakpoints. First, it lists the VeriPlan supplied standard federal tax tables, Next, it supplies similar federal tax tables, which are user changeable.

The standard and the user changeable tax rate and breakpoint tables have the same format. The standard rate table has light yellow boxes, which are not user editable, while the user changeable table has bold border entry boxes. Each contains both federal Schedule X, which is the tax rate schedule for the "Single" filing status and federal Schedule Y-1, which is the same tax rate schedule for both "Married filing jointly" filing status.

Each table has a box indicating the calendar tax year for these tax schedules. If you update the tax rate schedules for a new year, then update the bold border box, too. Because of the significant impact that these tax rates and breakpoints can have on any projection, take care in making any changes.

Single and Married, Filing Jointly federal income tax rate tables provided by VeriPlan:

Federal Schedule X -- Single		
Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
\$0.00	\$0.00	10.00%
\$11,000.00	\$1,100.00	12.00%
\$44,725.00	\$5,147.00	22.00%
\$95,375.00	\$16,290.00	24.00%
\$182,100.00	\$37,104.00	32.00%
\$231,250.00	\$52,832.00	35.00%
\$578,125.00	\$174,238.25	37.00%

Federal Schedule Y-1 -- Married Filing Jointly		
Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
\$0.00	\$0.00	10.00%
\$22,000.00	\$2,200.00	12.00%
\$89,450.00	\$10,294.00	22.00%
\$190,750.00	\$32,580.00	24.00%
\$364,200.00	\$74,208.00	32.00%
\$462,500.00	\$105,664.00	35.00%
\$693,750.00	\$186,601.50	37.00%

VeriPlan is updated at least once a year to incorporate new tax rates and rules. The tax parameters above may not be the most recent.

Alternative, user-adjustable federal income tax rate tables

If you need to, you can modify the federal tax rates that are listed in the tables above.

Use this two-step process:

- * Step One: Carefully follow the directions to edit the bold border federal tax tables below
- * Step Two: Use the selector box that follows to activate your modified federal tax tables

Step One: HOW TO MODIFY FEDERAL TAX RATE TABLES BELOW

Depending on your federal tax filing status, modify either the "Single" or the "Married Filing Jointly" federal tax rate table below. If you expect to switch between these tax filing statuses, when you do any "what-if" projection modeling, then you should modify BOTH tax filing status tables below.

From the IRS < <http://www.irs.gov/> >, find the federal tax rate tables for the current year which list by filing status the federal:

- * taxable income breakpoints,
- * cumulative tax payments up to each breakpoint, and
- * % tax rates above each breakpoint.

User modifiable federal income tax rate tables:

Enter the federal tax rate information, starting at the bottom of the tables with the highest bracket, and then work upward

If you update the tax rate schedules for a new year, then note the tax year in bold border box below. Because of the significant impact that these tax rates and breakpoints can have on any projection, verify the accuracy of your changes.

Federal Schedule X -- Single			
	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
G) Next Lower >	\$0.00	\$0.00	10.00%
F) Next Lower >	\$11,000.00	\$1,100.00	12.00%
E) Next Lower >	\$44,725.00	\$5,147.00	22.00%
D) Next Lower >	\$95,375.00	\$16,290.00	24.00%
C) Next Lower >	\$182,100.00	\$37,104.00	32.00%
B) Next Lower >	\$231,250.00	\$52,832.00	35.00%
A) Enter Highest >	\$578,125.00	\$174,238.25	37.00%

Federal Schedule Y-1 -- Married Filing Jointly			
	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
G) Next Lower >	\$0.00	\$0.00	10.00%
F) Next Lower >	\$22,000.00	\$2,200.00	12.00%
E) Next Lower >	\$89,450.00	\$10,294.00	22.00%
D) Next Lower >	\$190,750.00	\$32,580.00	24.00%
C) Next Lower >	\$364,200.00	\$74,208.00	32.00%
B) Next Lower >	\$462,500.00	\$105,664.00	35.00%
A) Enter Highest >	\$693,750.00	\$186,601.50	37.00%

Step Two: USE THIS FEDERAL INCOME TAX RATE SELECTOR

1	<< Enter 1 to <u>use the VeriPlan supplied federal tax rates</u> OR Enter 2 to <u>substitute your modified federal tax rates</u>
---	---

* You may switch back and forth between your modified federal tables and the standard VeriPlan supplied tables.

9.2: State income tax rates (supplied)

Select one of the 50 U.S. states or Washington, D.C. at the top of this worksheet.

VeriPlan provides recent state income tax rate tables for the 50 United States and the District of Columbia. VeriPlan automatically applies your state's current variable, flat, or no ordinary income tax rates and limits.

You can choose the state tax rate table that VeriPlan will use to project your state taxes using real, constant purchasing power dollars. Supplied state income tax rates were the latest available when VeriPlan was released.

Alternatively, if you wish to modify any state's tax rates, you can. Instead of altering the original state tax data directly, VeriPlan uses the same method provided above for modifying federal tax rates. VeriPlan allows you to fill in an alternative user state tax entry table. When you select it, this alternative state tax rate schedule will be used by VeriPlan to develop projections of your state taxes. Please follow the directions carefully, when completing your customized form. Note that the state tax rate schedules supplied with VeriPlan will remain intact and will not be overwritten. You can use them for reference, when you make your custom changes.

Do not add any local income tax rates in your state income tax rates, because VeriPlan collects information about your local income taxes in a separate section further below.

Comparing state income tax rates

If you wish to compare the income taxes of two states, simply compare two different projections when the only difference is the state income tax selection. Inevitably, comparing a state with higher income tax rates to a state with lower or zero income tax rates will demonstrate that lower tax rate states seem to be advantageous. However, you should exercise caution. While states with lower income tax rates may appear to be more attractive, lower or no income tax states will often substitute other taxes, fees, and levies to compensate or will provide reduced government services. When you evaluate moving to other states for state income tax reduction purposes, investigate all taxes and fees in the other state to determine whether the "grass really is greener."

In addition, people who evaluate moving to another state to save on income tax payments most often do so in the context of retirement planning. While working, people tend to be constrained to reside in a particular state by the realities of commuting. Upon retirement, potential mobility increases and residing in different lower tax state can become more feasible. Simultaneously, however, retirement income also tends to be lower for most people, as well. Thus, it is important to evaluate state tax rate differences at the level of projected retirement income, rather than comparing the state income tax rates that would have applied to higher pre-retirement earned income.

One of the state income tax rate tables provided by VeriPlan:

NEW_YORK					
SINGLE Taxpayer			MARRIED Taxpayer, Filing Jointly		
Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
\$0.00	\$0.00	4.31%	\$0.00	\$0.00	4.31%
\$13,900.00	\$600.00	5.85%	\$27,900.00	\$1,202.00	5.85%
\$80,650.00	\$4,504.00	6.25%	\$161,550.00	\$9,021.00	6.25%
\$215,400.00	\$12,926.00	6.85%	\$323,200.00	\$19,124.00	6.85%
\$1,077,550.00	\$71,984.00	9.65%	\$2,155,350.00	\$144,626.00	9.65%
\$5,000,000.00	\$450,500.00	10.30%	\$5,000,000.00	\$419,135.00	10.30%
\$25,000,000.00	\$2,510,500.00	10.90%	\$25,000,000.00	\$2,479,135.00	10.90%

State tax notes:

The seven highest state tax rate brackets are provided for each state. Microsoft Excel's limits on nested logical functions necessitate limiting graduated state tax calculations to the highest seven brackets. These top seven tax brackets have the greatest effect on your projected annual state taxes. These seven brackets are enough for 45 of the 50 states plus the District of Columbia.

For states with more than 7 brackets, VeriPlan will calculate the taxes by taking a weighted average of the lowest brackets that exceed seven brackets. To the extent that your projected state taxable income in any projection year is below the lowest breakpoint, then VeriPlan's projections would very mildly or trivially overstate your state tax obligations. If your projected annual income is higher than these lower brackets for these six states, then there would be no overstatement at all of projected taxes due. Using this weighted average tax method for the lower

brackets for these six states will not have a material impact on your projections, even if your projected income in some years is very low. This information about calculation methods is provided here for those who might be curious.

Alternative, user adjustable state income tax rate tables

If you need to, you can modify your state tax rates, which are listed in the table above. Use this two-step process:

- * Step One: Carefully follow the directions to edit the bold border state tax tables below
- * Step Two: Use the selector box that follows to activate your modified state tax tables

Step One: HOW TO MODIFY STATE TAX RATES AND BREAKPOINTS BELOW

In the bold border boxes of the modifiable state tax rate table below, enter tax rates and breakpoints for either the "Single" or the "Married Filing Jointly" tax filing status. If you expect to switch your tax filing status, when you do any "what-if" projection modeling, then you should modify both "single" and "married filing jointly" tax tables below, as needed.

From your state tax authorities, obtain the tax rate tables for the current year which list by filing status the:

- * taxable income breakpoints,
- * cumulative tax payments up to each breakpoint, and
- * % tax rates above each breakpoint.

You can find your state tax authorities with a search engine, or you might try the Federation of Tax Administrator's quick lookup map at: <http://www.taxadmin.org/fta/link/default.html>

User modifiable state income tax rate tables:

Enter your state tax rate information, starting at the bottom of the tables with the highest bracket, and then work upward

- * Use your VeriPlan supplied state tax tables as a reference for how your modified chart should look. Some of the dollar or percentage numbers will change from year to year, but the structure is likely to be very similar.
- * If your state uses fewer than 7 brackets, just enter zeros in the topmost lines.

* If your state has a flat tax rate, just enter the percentage rate on the bottom line with an income breakpoint of \$0, and \$0 cumulative taxes. Leave all other lines above on the table as zeros.

Verify the accuracy of your entries, before activating these tables with the selector below

				state name	<< Enter the state name for reference			
Enter HIGHEST Brackets AT BOTTOM First and Work Upward	State -- SINGLE filing status				State - MARRIED FILING JOINTLY filing status			
	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint	Enter HIGHEST Brackets AT BOTTOM First and Work Upward	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint	
	G) Next Lower >	\$0.00	\$0.00	0.000%	G) Next Lower >	\$0.00	\$0.00	0.000%
	F) Next Lower >	\$0.00	\$0.00	0.000%	F) Next Lower >	\$0.00	\$0.00	0.000%
	E) Next Lower >	\$0.00	\$0.00	0.000%	E) Next Lower >	\$0.00	\$0.00	0.000%
	D) Next Lower >	\$0.00	\$0.00	0.000%	D) Next Lower >	\$0.00	\$0.00	0.000%
	C) Next Lower >	\$0.00	\$0.00	0.000%	C) Next Lower >	\$0.00	\$0.00	0.000%
	B) Next Lower >	\$0.00	\$0.00	0.000%	B) Next Lower >	\$0.00	\$0.00	0.000%
	A) Enter Highest >	\$0.00	\$0.00	0.000%	A) Enter Highest >	\$0.00	\$0.00	0.000%

Step Two: USE THE STATE INCOME TAX RATE SELECTOR

1 << Enter 1 to use the VeriPlan supplied state tax rates
OR Enter 2 to substitute your modified state tax rates

You may switch back and forth between your modified state tax tables and the standard tables supplied with VeriPlan.

9.3: Enter your local income tax rates

VeriPlan automatically applies any local variable or flat ordinary income tax rates and limits that you supply in this section.

Use the local income tax selector in this section to apply:

- * no local taxes,
- * flat tax rates,
- * variable tax rates, or
- * New York City income tax rates, which are provided as an example.

In addition to federal and state income taxes, localities within the states, such as cities or school districts, may also assess taxes on your income. Many local city, school district, or other

income taxes are simple flat rate assessments against income. However, in other situations local income taxes are graduated with different tax rates assessed at different income levels. New York City has such a graduated local income tax, which is assessed on residents. VeriPlan provides New York City local tax rates, which can be updated. By following the directions, you can also enter graduated income taxes for any other locality.

Note that this section collects information about your local INCOME based taxes. Other local taxes, such as property taxes, should be entered in the section above entitled: "Your property and real estate taxes."

VeriPlan provides three methods to enter your income local taxes, and you may choose one of them:

- * a flat percentage rate on your taxable income
- * a flat percentage rate on your income in excess of a certain level
- * a graduated, multilevel tax rate system similar to federal income taxes and most state income taxes.

To enter local income taxes rates, fill in the applicable local income tax boxes under one of the three choices and then use the Local Income Tax Selector that follows to activate your choice.

Choice #1: Flat rate local income taxes

Use this data entry box to enter the total percentage of your flat rate local income taxes

<< Enter the total percentages for any flat rate local income taxes that you pay
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

If there is a minimum income threshold, before you begin paying these flat rate local income taxes, enter it here.

<< Enter any "Taxable Income" threshold that your income must exceed before local flat rate taxes apply

If there is no minimum income, then enter \$0.

Concerning any upper income limits on your local income taxes, you can supply information about your total local taxable income below in the section titled: "Differences between your federal, state and local taxable income." VeriPlan will use this information to limit your income subject to local taxes.

Choice #2: Graduated, user modifiable local income tax rate tables:

If your pay graduated local income taxes in any locale, use the bold border boxes in the table below to enter your local tax rates.

If you pay New York City local income taxes, see Choice #3 below.

Enter your local tax rate information, starting at the bottom of the tables with the highest bracket, and then work upward.

Enter tax rates and breakpoints for either the "Single" or the "Married Filing Jointly" tax filing status. If you expect to switch your tax filing status, when you do any "what-if" projection modeling, then you should modify both "single" and married filing jointly tax tables below.

As a model, you could use the New York City tax tables from Choice #3 below as a reference model for how your chart should look. The dollar or percentage numbers will differ, but the structure is likely to be similar.

If your locality uses fewer than 7 brackets, just leave zeros in the topmost lines.

Verify the accuracy of your entries, before activating this table with the selector below.

<< Enter your locality's name for referer

	Local -- SINGLE filing status				Local - MARRIED FILING JOINTLY		
	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint		Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
Enter HIGHEST Brackets AT BOTTOM First and Work Upward				Enter HIGHEST Brackets AT BOTTOM First and Work Upward			
G) Next Lower >	\$0.00	\$0.00	0.000%	G) Next Lower >	\$0.00	\$0.00	0.000%
F) Next Lower >	\$0.00	\$0.00	0.000%	F) Next Lower >	\$0.00	\$0.00	0.000%
E) Next Lower >	\$0.00	\$0.00	0.000%	E) Next Lower >	\$0.00	\$0.00	0.000%
D) Next Lower >	\$0.00	\$0.00	0.000%	D) Next Lower >	\$0.00	\$0.00	0.000%
C) Next Lower >	\$0.00	\$0.00	0.000%	C) Next Lower >	\$0.00	\$0.00	0.000%
B) Next Lower >	\$0.00	\$0.00	0.000%	B) Next Lower >	\$0.00	\$0.00	0.000%
A) Enter Highest >	\$0.00	\$0.00	0.000%	A) Enter Highest >	\$0.00	\$0.00	0.000%

Choice #3: New York City graduated income tax rate tables provided by VeriPlan:

For the convenience of those who pay graduated local income taxes in New York City, VeriPlan supplies local income tax rates for NYC. These NYC local tax rate tables can also serve as a model for those who wish to complete the local graduated income tax tables for their own locality above in Choice #2.

If these VeriPlan supplied NYC tax rates need to be modified, you should enter your updates in Choice #2 above, and then enter a 2 in the local income tax selector box below. This will activate the rates that you supply and override VeriPlan's NYC local income tax rates.

New York City					
SINGLE Taxpayer			MARRIED Taxpayer, Filing Jointly		
Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint	Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint
\$0.00	\$0.00	0.000%	\$0.00	\$0.00	0.000%
\$0.00	\$0.00	0.000%	\$0.00	\$0.00	0.000%
\$0.00	\$0.00	0.000%	\$0.00	\$0.00	0.000%
\$0.00	\$0.00	3.078%	\$0.00	\$0.00	3.078%
\$12,000.00	\$369.00	3.762%	\$21,600.00	\$665.00	3.762%
\$25,000.00	\$858.00	3.819%	\$45,000.00	\$1,545.00	3.819%
\$50,000.00	\$1,813.00	3.876%	\$90,000.00	\$3,264.00	3.876%

LOCAL INCOME TAX METHOD SELECTOR: ACTIVATE YOUR CHOICE WITH THIS LOCAL INCOME TAX SELECTOR

3

<< Enter 0 (zero) for NO local income taxes
 Enter 1 to use FLAT local tax rates that you entered above
 Enter 2 to use the GRADUATED, USER MODIFIED local income table above
 Enter 3 to use the VeriPlan supplied NEW YORK CITY income tax rates

9.4: Enter differences between your federal, state and local taxable earned income

This taxable earned income differentiator is optional. It is recommended for those who are still working.

Do not use this section if you are no longer working or do not pay state income taxes

Some states and localities adjust your federal taxable income subject to taxation -- sometimes substantially. If you are still working and expect that your future state or local taxable income will differ from your federal taxable income, VeriPlan can automatically tax different amounts of federal, state, and local taxable income.

If this situation applies to you, enter your recent federal, state, and local taxable income in this section. Then, use the selector to activate this capability. You do not have to use this differentiator, if you live in a state with no income taxes. VeriPlan already knows that from the state you selected at the top of this worksheet.

Use this method to adjust for differences between your federal, state, and local taxable income:

- A) Consult your most recent federal, state, and local tax returns to determine:
 - 1) your total taxable federal income
 - 2) your total taxable state income
 - 3) your total taxable local income, if you are subject to local income taxes. If, because of fluctuating income you used an average of several recent years for other assumptions that you entered into VeriPlan, then do the same with these taxable income entries. Also, if for some reason you believe that part of recent differences between your federal, state, and local taxable incomes will not be sustained over the long-term, then make appropriate adjustments. Remember that you are entering these taxable income figures so that VeriPlan can develop taxable income ratios to use across your lifecycle projections through age 65, unless you change this cut off age.
- B) Enter these federal, state, and local taxable income figures in the three bold border entry boxes below.
- C) Use the selector to activate this taxable income difference method.

Step #1: Enter your Federal, State, and Local "Taxable Income" from recent tax filings in these boxes

Enter a taxable income number in each of these three bold border boxes.

<< Enter your most recent annual FEDERAL "Taxable Income"

<< Enter your most recent annual STATE "Taxable Income"

<< Enter your most recent annual LOCAL "Taxable Income"

Enter an age for tax differentiation to stop

<< At what age for Earner #1 should these projection tax differentiations stop? (Default = 65)

This age cut-off is arbitrary and most people should leave it at age 65. You can set it lower or higher, if you plan to retire early or work longer. In retirement, depending upon differential state tax rules, VeriPlan will automatically adjust state income taxation of Social Security retirement benefits and withdrawals and RMDs from traditional retirement accounts. See the Move-States worksheet for more information.

Step #2: Enter a 1 to activate this taxable income differentiator; Enter a 0 to NOT use it. (Default = 0)

<< Enter 1 to activate this taxable income difference method; enter 0 (zero) to turn off this method

If you get a RED warning, because you have a zero value for either State or Local taxable income, but you only pay one and not the other kind of tax, ALWAYS ENTER THE SAME AMOUNT AS YOUR FEDERAL TAXABLE INCOME in the state or local boxes.

If you use VeriPlan's inter-state moving features on the "Move-States" worksheet, which allow you to plan a future move to another US state, VeriPlan will automatically stop using your federal, state, and local taxable income differentiators above in the year of your planned move.

Why you DO NOT need to use this tax differentiator for Social Security benefits or taxable retirement plan withdrawals and RMDs

You should NOT USE this federal, state, and local taxable income differentiator feature, if you are currently receiving Social Security retirement benefits and/or you are already taking withdrawals or required minimum distributions (RMDs) from traditional tax- advantaged retirement accounts.

For the vast majority of retirees, differences between federal versus state and local levels of taxable income are primarily due to differences in the taxable amount of Social Security retirement income and retirement plan withdrawals. VeriPlan automatically handles state by state Social security retirement income benefit taxation differences for you. See the Move-States worksheet for more information.

At the state level, the taxability of Social Security benefits and of federally taxable retirement plan withdrawals can vary widely. Regarding Social Security retirement benefits, some states follow the federal taxation model, while others provide a wide variety of Social Security retirement income exclusions. Most states do not tax Social Security retirement benefits at all. Most states do not tax Social Security benefits, either because they explicitly exclude Social Security income from state taxation or the state has no income tax at all.

State level taxation of withdrawals and RMDs from tax-advantaged retirement accounts varies significantly, as well. Some states follow the federal taxation model, while other states provide exclusions that usually vary in dollar amount and are age dependent.

VeriPlan also automatically handles state by state taxation differences with respect to retirement plan withdrawals. The Move-States worksheet explains this and allows you to make adjustments for your state, if you choose.

Since VeriPlan automatically handles state level taxation of Social Security income and retirement plan withdrawals, using the tax differentiator in this section would distort your income taxation in retirement. This is why it only applies through age 65 for Earner #1, unless you change the age above. Furthermore, if you plan to move to another state in the future, VeriPlan will automatically switch your state and local income taxation.

9.5: Your federal income tax personal deductions

In the bold border boxes below you can enter information about personal U.S. federal income tax exemptions for you and your spouse, if any. VeriPlan also provides bold border boxes to enter the current ages of up to 10 of your dependents, which you should enter in descending order starting with the oldest person and moving down to the youngest.

There are two reasons that you should enter the ages of your dependents. These reasons are that children grow up and elderly dependents die. Both children and the elderly can cease being your dependents from a tax standpoint at some time during your lifecycle projection. VeriPlan

will automatically project the number of yearly dependent deductions in your household from a taxation standpoint using the age information that you provide.

Because younger persons will grow up and cease to be dependents, VeriPlan supplies an additional bold border user data entry box for you to enter the average age when you believe that your children will last to be your dependents from the point-of-view of income taxation. You should consult current IRS rules about this matter, but generally, if your children continue with post-secondary education, they may continue to be your dependents into their early twenties.

The other reason for collecting age related information is that you may support elderly persons and, therefore, you may qualify for tax deductions. In the bold border box provided, you should enter the average expected age of death for you older dependents, however unpleasant setting such a number may seem to you. To estimate the age of adult dependents' eventual mortality, you may be the best judge of the situation, their health, and their likely remaining longevity. You might also wish to consult average mortality estimates from actuarial tables. A reference to the IRS's mortality table is provided below the bold border data entry box.

Finally, federal tax laws (regarding practically everything) are complex and subject to change. Therefore, VeriPlan supplies several additional bold border data entry boxes with the federal deduction dollar amounts and phase-out limits that it uses to calculate the value of your federal deductions. If these amounts were to change, you can enter new figures to reflect these changes. Otherwise, simply leave the numbers as they are.

Your maximum potential standard deduction

Standard federal tax deductions

**Married
Filing Jointly:**

Single:

\$27,700

\$13,850

\$27,700

<<< The maximum Standard Deduction you COULD claim based on your filing status and entries to the right (automatic entry)

The standard deduction above will increase, if blindness deductions are claimed below.
The 65 or older deduction addition will be added internally, when ages are 65 or older.

The 65 or older deduction is automatically added to the standard deduction

VeriPlan will automatically add 65 or older deductions to the standard deduction for Earner #

\$1,850

<< 65 or older deduction \$ value added for a Single taxpayer

\$1,500

<< 65 or older deduction \$ value added for Each Married Joint Filer

Blindness exemption for Earner #1 and/or #2 (This will be automatically added to the standard deduction above.)

Blindness deduction for Earner #1 and/or #2 (This will be automatically added to the standard deduction above.)

0	<<< Enter 1, if Earner #1 or Earner #2 is blind. Enter 2, if both are blind. Enter 0 (zero),
\$1,850	<< Blindness Deduction \$ Value added to standard deduction for a Single taxpayer
\$1,500	<< Blindness Deduction \$ Value added to standard deduction for Each Married Joint Filer

Number of your exemptions for dependents

The 2017 "Tax Cuts and Jobs Act" suspended and eliminated the (then \$4,050) per-person tax exemption for each single and joint tax filer through 2025. Qualifying tax exemptions for children and other dependents are NOT in effect for this period, either

9.6: Your federal income tax adjustments, which reduce taxable income

VeriPlan can automatically project up to 6 different adjustments to your taxable federal income. VeriPlan also automatically manages differential growth rates and phase-outs related to these 6 taxable income adjustments.

Federal income tax law allows you to make income adjustments that reduce your reportable income and, therefore, reduce your taxes. See Form 1040 for the lines with your currently claimed adjustments. VeriPlan allows you to enter up to six adjustments that you expect will continue for at least a few years. Do not enter any one-time events.

For each of these six income adjustments, VeriPlan provides three bold border data entry boxes for the current dollar amount, the number of years that an adjustment is expected to continue, and an inflation adjustment factor. The inflation adjustment factor would be used to enter any expected negative or positive percentage growth rate difference between expected inflation. If the dollar amount you enter is in real dollars and is expected to grow with the rate of inflation, then enter 0%. If it is in nominal dollars and the dollar amount will not grow, then enter -3% (negative three percent).

DO NOT INCLUDE ANY ADJUSTMENTS FOR:

* IRAs or for self-employed SEP, SIMPLE, and other tax-advantaged retirement plans.

Taxes related to such retirement savings plans are calculated automatically by

VeriPlan. It uses your inputs on the tax-advantaged plans worksheet to make these automated projection calculations.

- * Self-employment taxes. VeriPlan automatically calculates and projects self-employment taxes related to the actively-managed business income that you report for either earner on the income worksheet. Self-employed persons are allowed to take a deduction for 50% of self-employment taxes paid. This deduction is taken as an adjustment to gross income on Form 1040 and not as an itemized deduction on Schedule A. Again, VeriPlan manages this automatically, so you **SHOULD NOT** enter self-employment taxes as an adjustment in any of the bold border user data entry boxes below.

Six of these reportable income adjusters are provided

Reportable Income Adjustment #1 (There are 5 more like this one.)

\$0	<< Enter the dollar amount for Adjustment #1
100	<< Enter the number of years that Adjustment #1 is expected to continue
0.00%	<< Enter the expected annual real growth rate for this income source relative to the base year

^^^ Type a number with the % sign, and verify that your percentage entry is what you intend

9.7: Your long-term federal income tax itemized deductions

VeriPlan automatically projects your multi-year federal income tax deductions.

VeriPlan will automatically choose the maximum or most beneficial of either the standard deduction method or the itemized deduction method in each year of your projections. For VeriPlan to develop its projections, you need to supply the maximum standard deduction that you could have claimed on your most recent tax return. In addition, you need to provide information about your itemized deductions from your recent Form 1040, Schedule A, if you filed one.

VeriPlan's projections use your recent deductions as a baseline to project your future deductions. If you did not use the itemized deduction method, but expect to begin to do so in the near future, you could instead enter estimates of what you itemized deductions will be. (Usually, the purchase of a primary residence and associated mortgage with deductible interest is the triggering event when many begin to itemize their deductions.)

Similar to the method used above for your income adjustments, for most major categories of your itemized deductions on Schedule A, VeriPlan provides three bold border data entry boxes for a) the current dollar amount, b) the number of years that a deduction is expected to continue, and c) an inflation adjustment factor. The inflation adjustment factor would be used to enter any expected negative or positive percentage growth rate difference between expected inflation. If the dollar amount you enter is in real dollars and is expected to grow with the rate of inflation, then enter 0%. If it is in nominal dollars and the dollar amount will be fixed, then enter -3% (negative three percent). If you expect that a particular deduction will continue throughout all years of your projections, just enter 100 in the bold border box for the number of years you expect a deduction to continue.

You do not need to be concerned about any limitations on those categories of itemized deductions that have such limitations. VeriPlan automatically will calculate and project any limitations based on current tax laws. bold border data entry boxes are supplied, which indicate the current limitations that VeriPlan applies to its projections. If the tax laws were to change, you could use these data entry boxes to reflect those changes.

Your Itemized Deductions

If you itemize deductions, enter your itemized deduction totals from selected sections of Form 1040, Schedule A. Ignore any limitations on total deductions, because VeriPlan will manage these limits automatically.

"Medical and Dental Expenses" deductions

\$0	<< Enter your total annual "Medical and Dental Expenses" prior to any limitation
* VeriPlan will calculate any income related limitation that would apply.	
100	<< Enter the number of years that you expect these deductions to continue
0.00%	<< Enter the expected annual real growth rate for this income source relative to expected inflation
^^^ Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend	

Percent of gross income limitations on medical and dental deductions

7.50%	<< % of gross income limitation for taxpayers under age 65
7.50%	<< % of gross income limitation, if any single or married tax
^^^ Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend	

The 2017 "Tax Cuts and Jobs Act" temporarily reduced the medical deduction income limitation percentage from 10% to 7.5% for tax years 2017 and 2018. Then, the SECURE Act,

which became law in December 2019, made 7.5% permanent. Therefore, VeriPlan uses 7.5% annually for lifetime projections.

Overall limitation of itemized deductions for state and local income taxes, sales taxes, and real estate taxes

The 2017 "Tax Cuts and Jobs Act" limited total family itemized deductions for state and local income taxes, sales taxes, and real estate taxes combined. This maximum combined deduction limitation is \$10,000 annually through 2025, and it applies to single taxpayers and married taxpayers filing jointly. If this limitation is changed in the future, you can enter the revised limitation amount in the box below. If this limitation is eliminated in the future, just enter ten 9s below (9999999999 with no commas). This will set the limit astronomically high and therefore irrelevant to calculations.

\$10,000

 <<< **Annual maximum federal itemized deduction for all state and local tax payments**

If the tax law changes for this limitation, you can change it above. Note that you should continue to include all of your state and local income taxes, sales taxes, and real estate taxes, as appropriate, elsewhere in VeriPlan. VeriPlan will automatically implement this limitation of total state and local tax deductions in any projection year that this maximum would apply to you.

"Taxes You Paid" deductions

For most users, VeriPlan will automatically calculate any "Taxes You Paid" itemized deductions. Further down this worksheet, you will supply information about these deductible taxes: a) property and real estate taxes, b) state income taxes, and c) local income taxes. For each year of any projection, VeriPlan will automatically calculate these taxes and include them in your federal "taxes you paid" deductions.

However, some VeriPlan users from states and localities, which have lower or no income taxes, may find it advantageous to deduct their annual state and local sales taxes instead. Federal tax law allows them to deduct either the actual sales taxes they paid based upon their receipts or a standard sales tax allowance from tables supplied by the IRS. If a taxpayer elects to deduct their state and local sales taxes, they cannot also deduct their state and local income tax payments. This is an "either-or-and-not-both" choice.

For those taxpayers who elect to deduct their state and local sales taxes rather than their state and local income taxes, VeriPlan allows them to choose this method. First, they need to select the sales tax deduction method using the selector box below. Then, in the box that follows they need to enter the annual amount of their sales tax deductions from their most recent federal tax return. (If you believe that your most recent state and local sales tax deduction was abnormal, then enter an annual average of the past few years, if you have this information.) You do not need to estimate a sales tax growth rate, because VeriPlan will automatically project that your sales tax deductions will be proportional to any growth in your expenses. Also, if you select that sales tax method, VeriPlan will automatically include your projected property and real estate taxes in this federal deduction.

Note: Because AL, FL, NH, NV, SD, TN, TX, WA, and WY do not have an income taxes on earned income, if you reside in one of these states you might prefer to use sales tax deductions in your projections.

Choose to deduct either: 1) your state and local INCOME taxes OR 2) your state and local SALES taxes

1 << Enter 1 to deduct your state and local INCOME taxes OR
Enter 2 to deduct your state and local SALES taxes

With either selection, VeriPlan will automatically add your projected property and real estate taxes

Only if you elect to use the state and local SALES TAX method (a 2 in the selector above), do you need to enter this amount:

\$0 << Enter your ANNUAL "State and Local general SALES TAXES" deductions

- * Ignore this box, if instead, you want VeriPlan to deduct your state and local INCOME taxes.
- * If you wish to deduct your state and local income taxes, you can simply leave a 1 in the bold border selector box above. VeriPlan will automatically calculate your state income taxes, local income taxes, and property and real estate taxes for your projected deductions. Any dollar amount in the bold border state and local sales tax data entry box will be ignored.

"Interest You Paid" deductions

**** DO NOT ENTER ANY INTEREST PAID ON RESIDENTIAL MORTGAGES AND DEDUCTIBLE HOME EQUITY LINES OF CREDIT (HELOCs) RELATED TO ANY OF THE UP TO 5 HOMES THAT YOU HAVE ENTERED IN SECTION 1 OF THE 'PROPERTY+DEBT' WORKSHEET.**

VeriPlan automatically applies the \$10,000 annual limitation on state income taxes, sales taxes, and real estate taxes. It also removes all HELOC interest from tax deduction calculations, per the 2017 "Tax Cuts and Jobs Act."

(Deductions for interest payments each year that are related to tax-deductible mortgages on your residence(s) will be calculated automatically by VeriPlan and will added to the other deductible interest that you have indicated above. Simply take the total reported on Schedule A and subtract any interest related to tax-deductible mortgages that you reported on your most recent tax return. Tax deductible mortgage interest expense on your residence(s) can be a very significant itemized deduction for many people and usually declines over time. On the debts worksheet, you will be asked to enter all your debts and their repayment terms. The debts worksheet will separately identify up to three tax-deductible debts related to your principal residences.)

Most people will NOT have any additional interest deductions and will enter \$0 here.

\$0	<< Enter ANY ADDITIONAL annual "Interest You Paid" deductions (
100	<< Enter the number of years that you expect these deductions to continue (If
0.00%	<< Enter the expected annual real growth rate for this income source relative to

"Gifts to Charity" deductions

\$0	<< Enter your total annual "Gifts to Charity" (See Form 1040, Schedule A)
100	<< Enter the number of years that you expect these deductions to continue (If p
0.00%	<< Enter the expected annual real growth rate for this income source relative to t

DO NOT ENTER ANY CASUALTY AND THEFT LOSSES from Schedule A. (See Form 1040, Schedule A)

Such expenses should not recur regularly and thus are not useful for projections.

"Job Expenses and Most Other Miscellaneous Deductions"

The 2017 "Tax Cuts and Jobs Act" suspended and eliminated tax deductions for job expenses and for other miscellaneous deductible expenses through 2025. As a result, within VeriPlan, this tax job expenses and for other miscellaneous deductible expenses logic has been retained and hidden due to the uncertainty over whether these tax exemptions might be restored in the future.

Overall limitations on itemized deductions related to adjusted gross income

The 2017 "Tax Cuts and Jobs Act" suspended the overall limitation on itemized deductions related to higher adjusted gross incomes (sometimes known as the Pease limitation) through 2025. As a result, within VeriPlan, this income related itemized deduction limitation logic has been retained and hidden due to the uncertainty over whether these itemized deduction limitations might be restored in the future.

9.8: Property and real estate taxes

VeriPlan automatically projects your total property, real estate, and other assessment taxes that you enter on the Property+Debt worksheet.

Each year, you may pay personal property, real estate, and/or other recurring state or local assessment taxes, which are not related to your income. For your projections, VeriPlan uses these sources to derive your property, real estate, and other assessment taxes:

- * VeriPlan automatically includes your CURRENTLY OWNED property and real estate tax entries from the Property+Debt worksheet.
- * In addition, it automatically projects annual real estate taxes on FUTURE home, rental real estate, and other property purchases, using your entries on the Property+Debt worksheet.

These property, real estate and other assessment taxes will be projected forward in real dollars and grow with the rate of general consumer price inflation.

For clarification, note that these property, real estate, and other assessment taxes would NOT include any of the following taxes, which should be entered elsewhere:

- * sales or utilities taxes, which should be part of your annual expenses on expenses worksheet

- * income taxes, exemptions, adjustments, or deductions – including federal, state, or local income taxes; Social Security (FICA) taxes; and Medicare taxes. (These taxes are entered elsewhere on this worksheet.)
- * taxes related to securities assets and asset transactions, including distributions, dividends, and capital gains taxes, which VeriPlan projections automatically calculate for you, when realized.

Your current Real Estate and Property Taxes entered on the Property+Debt worksheet

\$0	Real estate taxes on currently owned personal residences and vacation homes (Section 1)
\$0	Real estate taxes on currently owned rental real estate properties (Section 3)
\$0	Real estate and property taxes on currently owned other properties and businesses (Section 4)
\$0	Total current annual property and real estate taxes from the Property+Debt worksheet

Note the VeriPlan automatically applies the \$10,000 annual limitation on state income taxes, sales taxes, and real estate taxes. It also removes all HELOC interest from tax deduction calculations, per the 2017 "Tax Cuts and Jobs Act."

9.9: Social Security and Medicare payroll and retirement benefit tax rates

The section lists the FICA (Social Security and Medicare) payroll tax rates and income limits that VeriPlan uses to generate projections. If federal law changes regarding this information, these rates and thresholds are user changeable.

VeriPlan automatically projects either employee or self-employment taxes, as appropriate.

Your tax payments INTO the Social Security (FICA) system:

6.20%	<< FICA personal tax rate
\$147,000.00	<< The maximum earnings per employee, which are subject to FICA taxes.

Your tax payments INTO the Medicare system:

1.45%	<< Basic Medicare personal tax rate
^^^	Type a number <u>with the % sign</u> , and verify that your percentage en
no maximum limit	<< The maximum employee earnings, which are subject to

Your additional tax payments INTO the Medicare system:

0.90%	<< Additional Medicare personal tax rate
Taxable ordinary income thresholds, when the additional Medicare tax is applied	
\$200,000.00	<< Single
\$250,000.00	<< Married Filing Jointly
no maximum limit	<< The maximum employee earnings, which are subject to additional Me

Note that employee contributions to tax deferred plans can reduce the total amount of earned income that is subject to federal and state income taxation. However, these tax-deferred account contributions DO NOT reduce the amount of an employee income, which is subject to current Social Security (FICA) and Medicare taxes.

Self-employment, FICA, and Medicare taxes:

When you enter any annual pre-tax actively-managed / self-employment income in the bold border boxes on the income worksheet, VeriPlan will automatically project and apply self-employment taxes and tax deductions related to this income.

Your self-employment income will be taxed at two-times the personal tax rates for FICA (Social Security and Medicare) subject to any applicable income limitations. Also, a 50% income tax deduction is allowed for these self-employment tax payments, which VeriPlan manages automatically. Both these self-employment taxes and deductions would be reported on your Form 1040, Schedule SE. For your regular employment income reported on the income worksheet, VeriPlan will automatically project and apply personal FICA and Medicare taxes at one-times these tax rates, subject to income limitations, and there is no allowable deduction for these personal tax payments. VeriPlan uses the user-adjustable FICA and Medicare tax rates and income limits above to perform these operations.

Taxation of your Social Security benefit payments RECEIVED in retirement

Federal income tax rules related to retirement benefit payments received from the Social Security Administration are quite complex. If you try to figure out the design of this tax system either from the SSA.gov or IRS.gov websites or from tax forms, you are likely to become frustrated. When tax worksheets just provide numerous lines of "add this, divide that, transfer this, subtract that, multiply this, take the larger (smaller) of this, etc.," then comprehension is lost.

The most coherent description of federal Social Security benefit income tax provisions and their history that I have found on the SSA.gov website is in Issue Paper No. 2015-02 from December 2015. Titled "Income Taxes on Social Security Benefits" by Patrick J. Purcell, this paper describes this tax system and its history. The primary purpose of this paper was to analyze the increasing minority of taxpayers who are encountering some taxation of their Social Security benefits. Congress did not index the tax brackets listed below for inflation, when these income taxes were enacted in 1983 and 1993. Over time more senior citizens are paying federal income tax on some of their Social Security retirement benefits.

The 50% tax bracket below was enacted in 1983 and the tax proceeds are credited to the Social Security Old-Age, Survivors, and Disability Insurance Trust Funds. The 85% tax bracket was enacted in 1993, and the incremental tax revenues above the 50% bracket are credited to the Medicare Hospital Insurance Fund.

Part of the complexity of this Social Security tax system is due to its Modified Adjusted Gross Income test, which includes 50% of Social Security benefits paid plus other AGI income subject to taxation, such as traditional retirement account withdrawals / RMDs, and pension and annuity payments. Note that Social Security retirement benefit tax calculations use "gross" Social Security benefit entitlements, which are the monthly amounts before any reductions for Medicare Part B or D or for IRMAA premium surcharge reductions. For more information, see the yellow-tabbed Medicare worksheet.

To get a sense of how much these Social Security benefit income taxes affect retirees, Purcell divided retirees into quartiles according to income and projected forward to 2050 the median percentage of Social Security benefit income that each quartile would pay in the future. The bottom two income quartiles are expected to pay no federal income taxes on their retirement benefits. The third quartile with increasing total income will have a median of about 10% of their benefits be subject to taxation. The fourth and highest income quartile will have a median of about 15% of their benefits be subject to taxation. These percentages are medians for each quartile, so for the upper two retirement income quartiles, there will be variation around these median percentages of Social Security benefits subject to federal income taxation.

VeriPlan implements this taxation system for those filing as single and married, filing jointly. It automatically used the various rules, rates, and breakpoints below to project the dollar portion of your future Social Security benefits that would be subject to taxation. That portion is

then added to your other projected ordinary federal taxable income and federal taxes are projected.

Note that fewer than ten states tax Social Security benefits. For more information, see the article on state taxation of Social Security retirement benefits and of withdrawals / RMDs from traditional tax-advantaged retirement accounts on the red-tabbed Retirement Planning worksheet. Also, see the yellow-tabbed Move-States worksheet for VeriPlan's implementation of Social Security retirement benefit income taxes at the state level.

If federal tax law were ever to change, these tax rates and income breakpoints are user-changeable in the bold border boxes below.

If 50% of Social Security payments + all other income are:	Income test if Married	S.S. income that is subject to tax for Married		Income test for Single, Head of Household, & Married Filing Separately	S.S. income that is subject to tax for Single, Head of Household, & Married Filing Separately
less than or equal to >>	\$32,000.00	0.00%	OR	\$25,000.00	0.00%
up to >>	\$44,000.00	50.00%		\$34,000.00	50.00%
greater than >>	\$44,000.00	85.00%		\$34,000.00	85.00%

9.10: Federal qualified dividends, long-term capital gains and NIIT tax rates

View these two detailed Long Term Capital Gains calculation videos on YouTube:

[How US federal long-term capital gains taxes are calculated \(Part 1 of 2\)](#)

<https://www.youtube.com/watch/VbcwgketmOA>

This video explains US federal long-term capital gains (LTCG) taxes and how they are calculated. It includes graphics that show the connection between LTCG taxation and the US graduated ordinary income tax system for married couples filing jointly and for single filers.

[How US federal long-term capital gains taxes are calculated \(Part 2 of 2\)](#)

<https://www.youtube.com/watch/zJCii0-LGPs>

This video provides an example that includes tax forms of how US federal long-term capital gains (LTCG) taxes are calculated for a married couple selling their home and downsizing to a vacation property that they already own.

VeriPlan automatically applies qualified dividend, capital gains, and NIIT taxes.

VeriPlan uses the following federal tax rates and income breakpoints to project taxes on qualified dividends and long-term capital gains. If federal law changes regarding this information, these rates and breakpoints are user changeable.

Federal long-term capital gains tax rates:

0.00%	<< Long term capital gains tax rate below the 15% breakpoint.
15.00%	<< Long term capital gains tax rate below the 20% breakpoint.
20.00%	<< Long term capital gains tax rate above the 20% breakpoint.

Taxable ordinary income breakpoints, when long-term capital gains tax rates increase to 15%:

\$44,625.00	<< Single
\$89,250.00	<< Married Filing Jointly

Taxable ordinary income breakpoints, when long-term capital gains tax rates increase

\$492,300.00	<< Single	from 15% to 20%:
\$553,850.00	<< Married Filing Jointly	

Note that the 2017 "Tax Cuts and Jobs Act" broke the linkage between ordinary income tax bracket breakpoints and long term capital gains breakpoints, due to inflation indexing methods.

Adjust the federal "Net Investment Income Tax"

VeriPlan automatically applies the Net Investment Income Tax (NIIT) that was first applied in 2013. VeriPlan uses the following federal tax rates and income thresholds to project NIIT taxes. If federal law changes regarding this information, these rates and thresholds are user changeable.

The Net Investment Tax Rate tax rate is:

3.80%	<< Net Investment Tax Rate
-------	----------------------------

Adjusted gross income thresholds, which trigger the possible application of the NIIT

\$200,000.00	<< Single
\$250,000.00	<< Married Filing Jointly

The NIIT may be applied, when adjusted gross income exceeds the thresholds above. If so, the NIIT rate is multiplied by the LESSER of either:

- A) Annual investment income (interest, dividends, capital gains, rental and royalty income, non-qualified annuities, passive business activities, etc.) or
- B) the amount that adjusted gross income exceeds the thresholds above.

9.11: Federal real estate tax parameters

VeriPlan automatically projects taxes related to residential (personal homes) real estate, including interest deductions on mortgage debt and capital gains due on future home sales. VeriPlan uses the parameters described in this section. While these tax parameters are unlikely to change from year to year, if the tax laws change, then you can update these tax parameters in this section.

Capital gains exclusions on the sale of home residential property

VeriPlan automatically assesses capital gains taxes on sales of your home(s) real estate, if the projected gains exceed the exclusions provided by the tax code. To understand these tax rules download and read the relevant publications from the IRS.GOV website, including Publication 523 "Selling Your Home."

These are the capital gains exclusions for sales of your personal home(s).

\$250,000.00	<<< Maximum Capital Gain exclusion for a Single Taxpayer
\$500,000.00	<<< Maximum Capital Gain exclusion for Married Taxpayers Filing Jointly

If the tax law changes, you can change them here:

Note also that these capital gains exclusions can be used only once in two years, assuming that all other requirements have been met. Therefore, if you schedule future sales of appreciated homes less than three years apart in Section 1 of the PROPERTY+DEBT worksheet, then VeriPlan will not provide any capital gain exclusion for the second sale. In practice, if you were fortunate enough to have multiple homes with substantial capital gains, you would probably sequence the sales with sufficient time in between so that you could take advantage of multiple capital gains exclusions.

Home mortgage acquisition debt limit for interest deductions on two residential properties

The 2017 "Tax Cuts and Jobs Act" reduced the total amount of mortgage indebtedness on a principal residence and on a second residence that can give rise to tax deductible interest through 2025. Therefore, VeriPlan uses these lower mortgage limits for lifetime projections. However, in 2026, these limits will revert back to the prior, higher amounts of \$1,000,000 for married taxpayers filing jointly and \$500,000 for single taxpayers.

VeriPlan automatically limits annual home mortgage interest deductions, if projected interest deductions exceed the deductions provided by the tax code. To understand these tax rules download and read the relevant publications from the IRS.GOV website, including Publication 936 "Home Mortgage Interest Deduction."

In general, the federal tax code sets annual dollar limits on interest deductions related to home mortgages used to acquire residences for up to two residence properties at any one time. If you plan to own more than two residences at any point in your projections that all would carry such mortgage debt, then VeriPlan will automatically use the two (2) property debts that would provide the highest total mortgage interest deductions up to the maximum allowable for your Single or Married, Filing Jointly income tax filing classification.

These are the annual interest deduction limits on two personal home residence(s).

\$375,000.00	<<< Maximum mortgage interest tax deduction for a Single Taxpayer
\$750,000.00	<<< Maximum mortgage interest tax deduction for Married Taxpayers I

If tax laws change, adjust them here:

Annual limit for interest deductions for Home Equity Lines of Credit (HELOCs)

The 2017 "Tax Cuts and Jobs Act" eliminated tax deductions related to payments on home equity lines of credit through 2025. In 2026 and thereafter, HELOC interest again becomes deductible under prior rules. While VeriPlan does not currently project tax deductions for HELOC interest payments, this functionality has been retained for future use.

You should note that HELOC interest could still be deductible if the funds are only used to improve the property against which the HELOC is secured. Given the higher standard deduction, for most people HELOC interest will not be deductible, but if you so itemize and do qualify to deduct HELOC interest, classify your HELOC as a "No=0" in Section 1 of the yellow-tabbed Property+Debt worksheet.

VeriPlan automatically limits annual home equity lines of credit interest deductions, if projected interest deductions exceed the deductions provided by the tax code. To understand these tax rules download and read the relevant publications from the IRS.GOV website, including Publication 936 "Home Mortgage Interest Deduction."

In general, the federal tax code sets annual dollar limits on interest deductions related to HELOCs related to your home residence properties. VeriPlan will automatically limit your HELOC interest deductions if your projections indicate that HELOC interest payments would exceed the allowable limits below.

These are the annual HELOC interest deduction limits on home residence(s).

\$0.00	<<< Maximum HELOC interest tax deduction for a Single Taxpayer
\$0.00	<<< Maximum HELOC interest tax deduction for Married Taxpayers

If tax laws change, adjust them here: (Single was \$50,000; Married was \$100,000)

Special Loss Allowance for Active Participation in rental real estate

In general, the federal tax code does NOT allow rental real estate losses to offset earned income. However, there is a Special Loss Allowance for Active Participation that is limited by income. For rental properties entered in Section 3 of the PROPERTY+DEBT worksheet, if your projected income would allow you to utilize this special loss allowance in any year, then VeriPlan will automatically calculate and project it for you. However, if you DO NOT want to utilize this special allowance, you can turn this functionality off below. (See IRS Publication 527, "Residential Rental Property")

Do you want to take advantage of the Special Loss Allowance if your projected income would permit it?

1	<< Enter 1 to use the Special Allowance, when available (Default = 1) Enter 0, if you would NOT use the Special Allowance
----------	--

These are the tax parameters for the Special Allowance.

\$25,000.00	<<< Annual Maximum Special Loss Allowance for Active Participation
\$100,000.00	<<< Beginning of Phaseout for Maximum Special Loss Allowance for Active Participation
\$150,000.00	<<< End of Phaseout for Maximum Special Loss Allowance for Active Participation
50%	<<< Rate of Phaseout for Maximum Special Loss Allowance for Active Participation

If the tax law changes, you can change them here.

9.12: Retirement account Required Minimum Distributions (RMDs)

RMDs and traditional retirement accounts

VeriPlan automatically projects traditional retirement account RMDs and associated income taxes based upon current account values that you enter on the yellow-tabbed Financial Assets worksheet and based upon your various settings regarding future contributions on the yellow-tabbed Tax-Advantaged Plans worksheet. The blue-tabbed Asset Flows graphic and the green-tabbed Graphics Data worksheet provide these RMD projections.

Traditional retirement accounts, such as IRA, 401k, 403b, 457 accounts, provide significant tax incentives to save for retirement. In most circumstances, your contributions allow you to reduce your current taxable income and resulting income taxes. Furthermore, asset appreciation within these accounts is not taxed over the years. However, the other side of the bargain with this retirement account incentive system is that your withdrawals are subject to future income taxes.

If you need to withdraw traditional retirement account assets in retirement to meet expenses, those withdrawals are subject to income taxation. Some people, however, would not need to make withdrawals to meet retirement expenses, because they have enough other income sources and/or other taxable assets to spend. As such, they undoubtedly would prefer not to make withdrawals that would require tax payments.

Nevertheless, traditional retirement account owners are subject to Required Minimum Distributions (RMDs) in retirement -- whether or not they need the money for expenses. This is the other side of the tax bargain associated with traditional retirement account assets. In general, contributions during working years reduce taxable income and thus lower taxes. RMDs in retirement reverse the deal forcing distributions that are taxed. Nevertheless, for most people saving on taxes earlier in life is more advantageous even if one has to pay taxes on RMDs in retirement.

Initial ages for Required Minimum Distributions

RMDs are calculated using a standard formula that divides: A) the end-of-prior-year total asset value across traditional retirement accounts by B) the remaining number of years in your life expectancy. Remaining years of life expectancy are based upon the IRS's updated Uniform Lifetime Life Expectancy and Distribution Period Tables used for purposes of determining Minimum Required Distributions.

Prior to 2020, the initial age for Required Minimum Distributions was the tax year within which one reached the age of 70 and 1/2. With the enactment of the first SECURE Act ("1.0") in December 2019, this initial RMD age was raised to 72.

In December of 2022 the second SECURE Act 2.0, was signed into law. This second act raised the initial RMD age to 73 beginning in 2023. An additional provision provided for a subsequent increase in the initial age of RMDs to 75 starting in 2033.

Normally, VeriPlan would allow you to modify tax inputs, but the existing legal provision to increase the initial RMD age from 73 in 2023 to 75 in 2033 calls for a different approach.

If the year that you are using VeriPlan is later than the year in this gray box, change it to the current year

VeriPlan will use the year you enter below to adjust the start of RMDs in your projections in relation to the yellow box information below. Starting in 2023, if Earner #1's current age as entered on the Income worksheet is less than 65, then RMDs would begin at age 75. Use of VeriPlan in later years would reduce this age difference, so when you update the entry below to the current year, VeriPlan will make the appropriate adjustment.

Note that SECURE Act 2.0 language as passed may have overlap for those born in 1959 as to whether age 73 or age 73 initial RMDs are required. VeriPlan calculates that anyone who reaches 73 before 2033 would be subject to RMDs at 73 rather than 75.

<< Enter the current calendar year, when you are using VeriPlan

2023	<< Reference year for age 73 RMDs
73	<< The initial RMD age legally in effect in 2023.

2033	<< Reference year for age 75 RMDs
75	<< The initial RMD age legally in effect in 2033.

75	<<< the Initial RMD starting age for Earner #1 given his or her current age
75	<<< the Initial RMD starting age for Earner #2 given his or her current age

If you are already required to take RMDs, you can override this just below, and your current age will be shown above.

Are you already required to take RMDs?

VeriPlan's has tried to automate RMDs, but the recent legal changes have made the initial RMD age a moving and receding target. There can be situations where you may need to indicate whether you currently required to take RMDs. This is particularly the case for married couples, when there is an age differential and Earner #2 is older than Earner #1.

Below you can indicate whether Earner #1 and/or Earner #2 are already required to take RMDs. If you indicate yes, then your answer will override other logic. If you do not indicate an answer, VeriPlan will proceed with its knowledge of your current ages. VeriPlan will only use these answers, if the user is at least 70 now, because 70 & 1/2 used to be the initial RMD age.

<< Is Earner #1 already required to take RMDs
(Yes = 1; No = 0; Default = 0)

<< Is Earner #2 already required to take RMDs
(Yes = 1; No = 0; Default = 0)

Note: The questions above relate to RMDs based on your own traditional retirement assets and NOT to any inherited retirement assets you may own.

RMDs, when there are traditional asset ownership and age differences between spouses

When married, RMDs are still determined on a per person basis, which will depend upon spouse's relative ages and the asset balances owned by each spouse. On the "Financial Assets" input worksheet, VeriPlan does not require married couples to associate currently held traditional retirement account assets or any other assets by which spouse holds title to the asset account.

VeriPlan provides a solution to this potential situation in the following section. You can enter apportionment percentages totaling 100% for the two spouses. With this information and the known age differential, VeriPlan can project RMDs individually for each spouse.

Apportioning married couple's traditional retirement account assets for RMD calculations

On the "Financial Assets" input worksheet, VeriPlan does not require married couples to associate currently held traditional retirement account assets or any other assets by which spouse holds the title of the asset account. Yet, when Required Minimum Distributions do begin in retirement, actual RMD tax calculations would be done on a per-spouse basis, which will depend upon their relative ages and the asset balances owned by each spouse.

For most couples, the primary earner will be set as Earner #1 in VeriPlan, and usually the bulk of the family's traditional retirement account assets will accumulate in that person's name. Earner #1's age then will determine the calculation of RMDs that must be taken and be reported as ordinary taxable income on the tax returns of couples filing as married filing jointly.

If married persons are the same age, then total taxable RMDs would be the same no matter how ownership is allocated. Even a year or a few years age difference will normally not have a material effect on VeriPlan's lifetime financial projections.

Nevertheless, if the age difference between a married couple is substantial and/or the bulk of the traditional retirement account assets will accumulate in accounts owned by Earner #2, instead of earner #1, then greater projection distortions could occur.

As a solution to this potential situation, you can use the table below to estimate approximate overall ownership shares of total traditional retirement assets when you retire and become subject to RMDs. Enter your estimate of spousal ownership shares in the table below, so that both shares total 100%. Estimates to the nearest 5% would be sufficient. When formulating these proportional ownership estimates, think about relative account balances in traditional retirement account assets that you already have and also about each spouse's future plans to contribute to employer sponsored retirement plans and IRAs.

Each spouse's estimated portion traditional retirement account assets

100.0%	<< Earner #1's estimated future portion traditional assets
0.0%	<< Earner #2's estimated future portion traditional assets
<hr/>	
100.0%	<< Total (MUST TOTAL 100%)

If you do enter proportions above, then VeriPlan will differentiate RMDs related to your relative ages and your estimated relative ownership of traditional retirement account assets. As a default, if you do not change the numbers above, then VeriPlan's RMD calculations will be based upon the age of Earner #1.

A choice for the initial RMD tax year: double taxation or two year spreading

In years past, IRS rules have allowed a taxpayer to take their first year's IRA RMD up to April of the following year. However, for all subsequent years your RMDs must be taken prior to the end of each tax year. This means that if you wait until AFTER the end of your first calendar year of RMDs to make your RMD withdrawal prior to April, then you must also make the next RMD withdrawal before the end of that same calendar year. Doing this would "double up" your IRA RMD in that initial year and would perhaps push you into higher marginal tax brackets. Therefore, making your first RMD withdrawal before the end of the initial calendar tax year might save on your total taxes.

RMDs as retirement "income" or a taxation event

RMDs are simply a mechanism to assess income taxes on mandatory asset withdrawals. Some people think of RMDs as retirement income, and in a sense, RMDs could be construed as such. However, these withdrawals must be taken whether or not you actually need the after tax proceeds to meet your expenses. If you do, you spend the proceeds. If not, you just deposit the funds into a taxable asset account.

Those who have saved significant amounts in traditional retirement accounts and who have proportionally modest expenses, could see the level of their RMDs rise substantially over retirement. Retirees who do not need to withdraw assets to meet expenses and who experience net asset growth exceeding RMDs will find that their taxable RMDs would escalate over the years. Escalating account values (the numerator) divided by a diminishing expected lifespan (the denominator), results in increasing RMDs as the years go by. While this is a nice problem to

have compared to the alternative of having inadequate retirement assets, this can result in substantial, escalating income taxes later in retirement.

Inherited retirement accounts (inherited in 2020 and after)

You should enter information about retirement accounts that you expect to inherit in the future into Section 6 of VeriPlan's yellow-tabbed Income worksheet.

The first SECURE Act ("1.0") became law in December 2019 and has significantly changed the treatment of inherited traditional and Roth retirement accounts. With the enactment of the SECURE Act 1.0, a beneficiary must now withdraw all assets from an inherited traditional or Roth retirement account within 10 years. There are a few exceptions, but in general, one can no longer bequeath assets to beneficiaries who could benefit from those accounts across their lifetimes.

Regarding both traditional and Roth retirement accounts that are inherited, there are no longer any annual required minimum distributions. Instead, the beneficiary of an inherited traditional or Roth retirement account is required to empty the account within ten years, paying taxes on distributions from traditional inherited retirement accounts.

Older inherited retirement accounts (inherited in 2019 and before)

You should enter information about retirement accounts that you inherited before 2020 into Section 6 of VeriPlan's yellow-tabbed Income worksheet.

Prior to the first SECURE Act ("1.0"), inherited retirement accounts were sometimes referred to as "stretch accounts," because they were subject to lifelong Required Minimum Distributions related to the life expectancy of the beneficiary. With a long life expectancy for younger beneficiaries, RMDs in earlier years tended to be small and assets in these stretch accounts could grow dramatically over long periods. If you had already inherited a retirement account in 2019 or before, the old rules will still apply and be "grandfathered" in for those accounts. You can continue to take RMDs and perhaps own the account far longer than the ten years allowed for accounts inherited in 2020 or later.

For inherited traditional retirement account before 2020, RMDs begin at the point of inheritance, and they are based upon your remaining expected lifespan thereafter. As with your own traditional retirement accounts to which you contribute, RMDs on inherited traditional

retirement accounts are subject to income taxation. VeriPlan projects these inherited traditional RMDs and associated taxes for you automatically. The blue-tabbed Asset Flows graphic and the green-tabbed Graphics Data worksheet provide these RMDs. After age 70, inherited traditional RMDs are combined with regular traditional account RMDs.

Because Roth retirement accounts that you have contributed to are not subject to future taxes, there are no RMDs related to these accounts. However, if you did inherit a Roth retirement account before 2020 that account is subject to RMDs based upon your remaining lifespan. Roth inherited account RMDs on accounts inherited before 2020 are simply a method to force assets out of a Roth accounts either to be used to pay an heir's expenses and/or to be reinvested in the heir's taxable accounts. VeriPlan projects these inherited Roth account RMDs for you automatically. The blue-tabbed Asset Flows graphic and the green-tabbed Graphics Data worksheet provide these projected annual RMD amounts.

9.13: Qualified Charitable Distributions (QCDs) from your traditional IRAs

Overview

The Tax Cuts and Jobs Act of 2017 doubled the standard deduction. That seemed appealing, until one realized that personal exemptions were eliminated on a per person basis. Higher standard deductions eliminated or reduced the tax incentive to donate to charity for many.

Qualified Charitable Distributions (QCDs) are an appealing alternative to charitable deductions for older, charitably inclined people with traditional IRA assets. A QCD distribution reduces taxable ordinary income and transfers traditional IRA assets from one's portfolio to a qualified charity. When you are subject to Required Minimum Distributions (RMDs) from your traditional IRAs, QCDs can also satisfy some or all of those RMDs. In existence since 2006, the QCD transfer mechanism was made "permanent" in the tax code in 2015.

Traditional IRA owners age 70 & ½ or over can transfer up to \$105,000 (as of 2024) to charity tax-free each year through the QCD rules. The rules are complex, so read IRS documents carefully, work with your IRA custodian, and seek professional assistance, if needed.

Your IRA custodian must make QCD transfer(s) from your traditional IRA account directly to one or more IRS qualified charities that you designate. You must obtain a receipt for the QCD transfer(s) from each of those charities.

Through tax year 2023, the per person QCD limit was \$100,000. The QCD is now indexed to inflation, and the maximum rose to \$105,000 for the 2024 tax year, for example. QCD transfers are on a per-person basis, so each member of a married couple can use the QCD mechanism, which potentially doubles the maximum annual QCD transfer limit.

The QCD option is available regardless of whether the IRA owner takes the standard deduction or itemizes deductions on Schedule A. However, no deduction is available for the QCD transfer, because transferred QCD amounts are not taxable.

QCD transfers must be reported on your federal income tax return, and the IRA owner should receive Form 1099-R from their IRA trustee that shows any IRA distributions made during the calendar year, including both regular distributions and QCDs. If you have some tax basis in your traditional IRA accounts due to nondeductible contributions, this can proportionally reduce QCD deductibility. Also, if you are making additional contributions to any traditional IRA in a particular year, those contributions will offset the tax exclusion of the QCD.

Calendar year QCDs count toward the IRA owner's RMDs for the year. If you intend to satisfy most or all of your IRA RMD obligation via the QCD mechanism, do your QCDs earlier in the year before taking personal distributions. RMD rules count the "the first dollars out" toward the RMD, but the text of IRS materials have said that QCDs will offset RMDs as long as they are made before the end of the calendar tax year. Distributions to you personally or checks made to you do not count.

Confirm with your IRA custodians whether you can take RMDs and utilize the QCD mechanism for your particular IRA. Again the rules are ridiculously complex. Confirm what may or may not be allowable for your inherited IRAs, SEP IRAs, and SIMPLE IRAs, which are other forms of traditional IRAs.

You should note that the QCD mechanism only applies to traditional IRAs and not to traditional retirement assets in 401k, 403b, or 457 employer plans that would also require RMDs. The solution to this would be to rollover retirement assets from your employer plan(s) into a traditional rollover IRA, if you are eligible to do such a rollover and you intend to make greater QCD transfers than the RMDs associated your current traditional IRA assets would require.

Also, note that QCDs can have a significant effect on the Roth conversion decision -- particularly if you plan for substantial QCDs over multiple years. QCDs alter the tax payback

investment model for Roth conversions, making Roth conversions less attractive financially. See the Roth Analysis worksheet for more information.

In future years, update this annual per person QCD tax free transfer limit from traditional IRAs

<input type="text" value="\$105,000.00"/>	<<< Annual per person QCD tax free transfer limit from traditional IRAs
<input type="text" value="2024"/>	<< Calendar tax year for federal tax information

Your planned Qualified Charitable Distributions (QCDs) from ages 70 to age 100

When you enter planned QCD dollar transfer amounts in the table below, VeriPlan will do the following:

- 1) Reduce your annual taxable income by the total amount of your planned annual QCD transfers to charities
- 2) Remove the amount of the QCD transfer from your traditional retirement assets
- 3) VeriPlan will validate whether you are of sufficient age and have sufficient traditional IRA assets to make your planned QCDs. You should make entries downward on the table below.
- 4) If you are married and both spouses own traditional IRA assets, you must first use the apportionment mechanism in the "Retirement account Required Minimum Distributions (RMDs)" section immediately above on this worksheet.

How to use this year-by-year QCD planning table for Earner #1 and Earner #2

- 0) Of course, your current age entries on the Income worksheet should first be correct
- 1) Earner #1 should make planned QCD entries in Column C. Cells over 70 in Column C are user changeable. Make QCD entries only in rows where Column B shows that you have traditional retirement assets.
- 2) Earner #2 should make planned QCD entries in Column F. All cells in Column F are user changeable. Make QCD entries only in rows where Column E shows that you have traditional retirement assets.

3) Age differences up to 15 years will be managed by automatically by VeriPlan. Ages for Earner #1 are fixed from 55 to 100 in Column A. The age of Earner #2 is in Column D and each row is offset by the age difference.

4) Because users can be of various ages, Columns B and E will note one of three things:

4a) "Already Older" will be noted, when older than the applicable row entry age in Column A or D.

4b) "QCD Min. Age=70" will be noted, when younger than the applicable row entry age in Column A or D, but not yet 70.

4c) The individual's traditional retirement asset dollar balance will be listed for any age when QCD transfers are allowed.

5) Column G is the total of the users valid entries in Columns C and F. VeriPlan performs automatic QCD entry validation by checking for sufficient ages and sufficient assets.

6) Because Column B and E assets are apportioned and not segregated by spouse, user entries in Columns C and F will affect subsequent year asset values in Columns B and E.

A	B	C	D	E	F	G
55 to 100 Age Range for Earner #1	Earner #1's Traditional Retirement Assets (Beginning Balance)	Enter Earner #1's year-by-year over age 70 QCD transfer amounts	Corresponding Age of Earner #2	Earner #2's Traditional Retirement Assets (Beginning Balance)	Enter Earner #2's year-by-year QCD transfer dollar amounts	Total QCD for Earner #1 and #2 (Sufficient Age and Assets Validated)
55	QCD Min. Age=70	\$0	65	QCD Min. Age=70	\$105,000.00	\$0.00
56	QCD Min. Age=70	\$0	66	QCD Min. Age=70	\$0.00	\$0.00
57	QCD Min. Age=70	\$0	67	QCD Min. Age=70	\$0.00	\$0.00
58	QCD Min. Age=70	\$0	68	QCD Min. Age=70	\$0.00	\$0.00
59	QCD Min. Age=70	\$0	69	QCD Min. Age=70	\$0.00	\$0.00
60	QCD Min. Age=70	\$0	70	\$2,381,457.88	\$105,000.00	\$105,000.00
61	QCD Min. Age=70	\$0	71	\$2,438,976.67	\$0.00	\$0.00
62	QCD Min. Age=70	\$0	72	\$2,552,617.87	\$0.00	\$0.00
63	QCD Min. Age=70	\$0	73	\$2,671,173.23	\$0.00	\$0.00
64	QCD Min. Age=70	\$0	74	\$2,794,855.25	\$105,000.00	\$105,000.00
65	QCD Min. Age=70	\$0	75	\$2,870,250.51	\$0.00	\$0.00
66	QCD Min. Age=70	\$0	76	\$2,942,941.42	\$105,000.00	\$105,000.00
67	QCD Min. Age=70	\$0	77	\$2,961,310.55	\$0.00	\$0.00
68	QCD Min. Age=70	\$0	78	\$3,023,310.54	\$0.00	\$0.00
69	QCD Min. Age=70	\$0	79	\$3,083,849.76	\$105,000.00	\$105,000.00

70	\$3,088,911.95	\$0.00	80	\$3,088,911.95	\$105,000.00	\$105,000.00
71	\$3,090,738.73	\$0.00	81	\$3,090,738.73	\$105,000.00	\$105,000.00
72	\$3,089,375.32	\$0.00	82	\$3,089,375.32	\$0.00	\$0.00
73	\$3,137,666.66	\$0.00	83	\$3,137,666.66	\$0.00	\$0.00
74	\$3,182,797.15	\$0.00	84	\$3,182,797.15	\$0.00	\$0.00
75	\$3,223,656.04	\$0.00	85	\$3,223,656.04	\$0.00	\$0.00
76	\$3,193,200.51	\$105,000.00	86	\$3,193,200.51	\$105,000.00	\$210,000.00
77	\$3,047,878.98	\$0.00	87	\$3,047,878.98	\$0.00	\$0.00
78	\$3,003,574.12	\$0.00	88	\$3,003,574.12	\$105,000.00	\$105,000.00
79	\$2,898,093.39	\$0.00	89	\$2,898,093.39	\$0.00	\$0.00
80	\$2,838,497.14	\$0.00	90	\$2,838,497.14	\$0.00	\$0.00
81	\$2,770,615.69	\$105,000.00	91	\$2,770,615.69	\$105,000.00	\$210,000.00
82	\$2,587,137.02	\$0.00	92	\$2,587,137.02	\$0.00	\$0.00
83	\$2,505,213.10	\$0.00	93	\$2,505,213.10	\$0.00	\$0.00
84	\$2,414,544.77	\$0.00	94	\$2,414,544.77	\$0.00	\$0.00
85	\$2,315,712.31	\$105,000.00	95	\$2,315,712.31	\$0.00	\$105,000.00
86	\$2,155,375.39	\$0.00	96	\$2,155,375.39	\$0.00	\$0.00
87	\$2,045,076.32	\$0.00	97	\$2,045,076.32	\$0.00	\$0.00
88	\$1,927,037.17	\$0.00	98	\$1,927,037.17	\$0.00	\$0.00
89	\$1,803,674.60	\$10,500.00	99	\$1,803,674.60	\$0.00	\$10,500.00
90	\$1,669,395.01	\$0.00	100	\$1,669,395.01	\$0.00	\$0.00
91	\$1,538,445.85	\$0.00	101	\$1,538,445.85	\$0.00	\$0.00
92	\$1,405,661.63	\$0.00	102	\$1,405,661.63	\$0.00	\$0.00

NOTE: For its internal processes, VeriPlan does not distinguish between traditional retirement assets in IRAs versus other types of traditional retirement asset accounts. VeriPlan aggregates all of your traditional retirement assets, including traditional IRAs, inherited IRAs, SEP IRAs, SIMPLE IRAs, and traditional employer plan assets (e.g. 401k, 403b, 457, etc.) To utilize the IRA-only QCD mechanism in real life, you must be able to rollover those other, non-IRA, traditional retirement assets into an IRA for subsequent QCD transfers out of that traditional IRA.

Chapter 10: Plan to Move to Another State in the Future

10.1: State level income taxation of Social Security retirement benefits – 50 States & DC

10.2: State level income taxation of traditional retirement withdrawals & RMDs -- 50 States & DC

10.3: Plan to move to another state in the future

Overview

Sometimes people living in higher income tax states think that, when they retire, they can save on taxes by moving to another state. Other people might want to move to another state for a higher paying career opportunity. In both situations, people want to understand the tax implications. This VeriPlan Move-States worksheet can help you with your analysis.

A person should do their due diligence research before planning a significant move to another state. VeriPlan's state and local tax evaluation features can help you to determine whether the "tax grass" might indeed be greener in your move-to state. Mistakes can be made in this area. Residents of higher income tax states may benefit from higher incomes while working. They might just assume that retiring in a no income tax or low income tax state would obviously be more advantageous. However, in retirement when earned income goes away, taxation can shift in unfamiliar ways.

Those considering a move to another state for a better, higher paying career opportunity can use this Move-States tool to compare projected current state versus move-to state and local taxes for the remainder of their career and retirement. VeriPlan helps you to evaluate the taxation differences when moving from your current state of residence to another state at some point in the future. In that future moving year, VeriPlan's projections will switch to the tax system of your move-to state. Thereafter, your projections will assess your "move-to" state taxes for the remainder of your life.

In addition, if you have been paying local income taxes in your current state of residence, those taxes would cease in our projections in the year that you move to your new state. If your move-to state has additional local tax levies, you can enter a fixed annual dollar amount and/or a flat percentage of income with exclusions below.

When one moves, there obviously is a question about where to live and buying versus renting. During the move year to another state, you might want to enter moving expense and rental expenses in Section 3 of the Expense worksheet. Regarding the purchase and sale of residential real estate in the future you should note that VeriPlan has automated this for you on the Property+Debt worksheet. It is also helpful to use VeriPlan's Comparison Tool to compare differences between continuing to live in your current state versus moving to another state.

Taxation of Social Security income and traditional retirement withdrawals & RMDs

For those planning to move once they retire, it could be true that they will save on state and local taxes in their new, move-to state, but often that is not the case. The primary reason is that once one retires, their tax situation will change significantly. Those "high" state and local income taxes on earned income will go away and taxable income tends to drop significantly.

Most states and localities do not tax Social Security retirement benefits. Only nine states tax Social Security retirement benefits and some of those states provide additional exclusions compared to the income-related Social Security retirement benefit tax exclusions at the federal level. The section below provides information on state level Social Security benefit tax exclusions. In addition, the section titled "Adjust Social Security and Medicare payroll and retirement benefit tax rates" on the Taxes worksheet summarizes federal income taxation policies and exclusions related to Social Security income in retirement.

Withdrawals from traditional tax-advantaged retirement accounts are another potential source of state and local retirement taxation. The states vary in their taxation of traditional tax-advantaged retirement account withdrawals and RMDs. However, a key thing to keep in mind is the total amount you will have accumulated in traditional retirement account by retirement and their potential appreciation thereafter. When a retiree has much higher total balances in these accounts, state level tax policies can make a difference. (Retirement taxation of these withdrawals and RMDs is another good reason to understand the concepts behind portfolio asset tax location optimization, which is discussed on the red-tabbed Optimizations worksheet.)

Twelve states do not tax traditional retirement account withdrawals and RMDs. This is primarily because the majority of those states do not have a state income tax, but some of these states intentionally do not tax traditional retirement plan withdrawals and RMDs.

Of the remaining states that do tax some portion of traditional retirement account withdrawals and RMDs about twenty of these states offer some level of dollar exclusion from taxation on a per person basis, compared to the amount of traditional retirement withdrawals and RMD income taxed at the federal level. The remaining states do not offer any added exclusions and tax on the federal adjusted gross income. A handful of states that do offer some per person dollar exclusion will claw back that exclusion at higher income levels using a phase out.

10.1: State level income taxation of Social Security retirement benefits -- 50 States & DC

Most US states and the District of Columbia DO NOT TAX Social Security retirement benefit income, either because Social Security retirement income is intentionally excluded from state income taxation or because the state has no income tax. In effect, the nine remaining states that tax some portion of Social Security retirement income are Connecticut, Kansas, Minnesota, Missouri, Montana, New Mexico, Rhode Island, Utah, and Vermont.

Three additional states: Colorado, Nebraska, and West Virginia are sometimes found on lists of states taxing Social Security retirement benefits. However, recently these three states have either eliminated, will soon eliminate, or have effectively eliminated state income taxation on Social Security retirement benefits. Therefore, VeriPlan classifies these three states as no income tax states with respect to Social Security retirement benefits.

For these remaining nine states, VeriPlan's lifetime projections limit the amount of Social Security retirement income subject to state taxation according their rules. For all remaining states and DC, Social security retirement income is fully excluded from state level taxation.

If you are one of the lucky persons who is also subject to a local income tax and you make local income tax settings above on the Taxes worksheet, then it will be assumed that state taxable income rules will determine whether Social Security retirement income is also taxed at the local level.

If you use VeriPlan's features below, which allow you to plan for a move to another state in the future, you will not need to do anything regarding Social Security retirement income taxation in your "move-to" state. VeriPlan will manage this automatically for you.

The nine taxing states below use adjusted gross income (AGI) exclusions for single filers and for married, filing jointly filers. Below these AGI limits Social Security retirement benefits usually are not taxed at the state level. Above these AGI dollar limits, the tax rules will vary by state -- ranging from exclusions from as high as 75% down to 0% (no exclusion).

- 1) **Connecticut:** Single filers with AGI of less than \$75,000 and married couples AGI below \$100,000 do not pay state income taxes on Social Security benefits. 75 percent of benefits above those thresholds are tax-exempt.
- 2) **Kansas:** Single and married filers with AGI up to \$75,000 are exempt from state income taxes on Social Security benefits. Above that regular taxes apply.
- 3) **Minnesota:** For 2022, single filers with AGI under \$64,670 could exclude \$4,260 of federally taxable Social security benefits. For married couples with AGI under \$82,770 that exclusion was \$5,450. These rather small exclusions phase out at higher incomes.
- 4) **Missouri:** From age 62 onward a single filer with an AGI under \$85,000 and married couples with AGI under \$100,000 are exempt. When AGI is above these AGI thresholds, there is a partial deduction.
- 5) **Montana:** Montana follows federal income rules, and taxes AGIs above \$25,000 for a single filer and \$32,000 for a couple.
- 6) **New Mexico:** Taxes Social Security retirement income above an AGI of \$100,000 for single filers and \$150,000 for couples.
- 7) **Rhode Island:** Taxes Social Security retirement income above an AGI of \$95,800 for single filers and \$119,750 for couples. AGI exclusions apply to those who have reached full retirement age of 66/67.
- 8) **Utah:** The federal income calculation determines how much Social Security retirement income is taxable at the state level. Then, tax credits are used to reverse some state income taxation. AGI up to \$37,000 for single filers and up to \$62,000 for couples is effectively tax exempt. Above that 25% of Social Security income is excluded from taxation.
- 9) **Vermont:** Taxes Social Security retirement income above an AGI of \$50,000 for single filers and \$65,000 for couples. There is a phase out for the next \$10,000 of AGI, and the remainder is taxed at normal state tax rates.

10.2: State level income taxation of traditional retirement withdrawals & RMDs -- 50 States & DC

VeriPlan automates the projection of state level income taxation related to traditional retirement account withdrawals and RMD income taxation.

In general, some states are classified "no tax" states, because they intentionally do not tax traditional retirement plan withdrawals and RMDs. Some other states are "no tax" states simply do not have a state income tax.

Of the states that do tax traditional retirement withdrawal and RMD income, some just follow the federal income taxation model. Other states will have exclusions and will not tax some dollar amount of the income on a per person basis. In addition, some states have minimum ages for qualifying for these exclusions. Furthermore, some states eliminate these exclusions, when federal Adjusted Gross Income (AGI) exceeds certain levels. AGI is gross income BEFORE deductions or exemptions.

If you are one of the lucky persons who is also subject to a local income tax and you make local income tax settings above on the Taxes worksheet, then it will be assumed that state taxable income rules will determine whether traditional retirement withdrawal and RMD income is also taxed at the local level

Given the variety of state level approaches to taxing traditional retirement withdrawals and RMDs, VeriPlan uses this general model.

- 1) States are classified as either as "taxing states" (Yes=1) or "no tax states" (No=0) For taxing states, regular income tax rates will be applied after applying any of these exclusions:
- 2) How much is the state's per person income exclusion, if any (zero dollars or higher)
- 3) Is there a minimum age test to qualify for the exclusion? (zero or the minimum age for the exclusion)
- 4) Is there an AGI threshold to eliminate the state's exclusion for single tax filers? ...for married, joint filers? (dollar threshold)
- 5) If there is an AGI threshold, then any dollar exclusion will be phased out dollar for dollar above that threshold.

About twenty states offer some level of exclusion of income from taxation (#2 above) compared to the amount of traditional retirement withdrawals and RMD income taxed at the federal level. These exclusions are per person dollar exclusions rather than percentage exclusions. Regarding #4 and #5, only a handful of states will offer some dollar exclusion and then take it back at higher income levels with a phase out.

The yellow boxes below will show you the taxation parameters for your state, depending upon your state selection at the top of this worksheet.

Your current state's income tax parameters for taxing traditional retirement withdrawals and RMDs

NEW_YORK	<<<< Your state
1	<<<< Does your state tax traditional retirement account withdrawals (Yes=1; No=0)
\$20,000	<<<< Does your state offer a per person income exclusion? (zero dollars or higher)
59.5	<<<< Is there a minimum age test to qualify for the exclusion? (zero or the minimum age)
2	<<<< "1" for a "single filer" taxpayer; "2" for two "married, joint filers"
\$0	<<<< Any AGI threshold to eliminate the exclusion for single tax filers? (dollar threshold)
\$0	<<<< Any AGI threshold to eliminate the exclusion for married, joint filers? (dollar threshold)

Pennsylvania (PA) will tax under age 59.5 but not when over 59.5. VeriPlan classifies PA as a "does tax" state, but VeriPlan's exclusion is set at \$99,999,999,999 for over 59.5, which effectively eliminates tax above that age.

Change your state's income tax parameters for taxing traditional retirement withdrawals and RMDs

Because states may change their tax rules over time, the section below with gray data entry boxes will allow you to update your own state's tax rules for traditional retirement account withdrawals and RMDs. If your state changes its taxation of traditional retirement account withdrawals and RMD income, you can make taxation parameter updates. Then, VeriPlan will use tax parameters that you have provided instead of the parameters in the yellow boxes above.

Do you want to change your current state's tax parameters?

If you choose "Yes," VeriPlan will replace the parameters above with your entries below.

This is "either / or" for these two sets of parameters, which means you should figure out the revised parameters. However, if your current state was taxing traditional retirement withdrawal and RMD income and then stops taxing, just enter 1 to use your parameter set and then put zeros in the other boxes below.

<<<< Use my tax entries below instead of those supplied by VeriPlan (Yes=1; No=0)

<<<< Does your state tax traditional retirement account withdrawals (Yes=1; No=0)

<<<< Does your state offer a per person income exclusion? (zero dollars or higher) (

<<<< Is there a minimum age test to qualify for the exclusion? (zero or the minimum

<<<< The Single (1) versus Married Jointly (2) tax filing status from the Inco

<<<< Any AGI threshold to eliminate the exclusion for single tax filers (dollar threshold) (Defai

<<<< Any AGI threshold to eliminate the exclusion for married, joint filers (dollar threshold) (D

In the next section, if you plan to move to another state, you will be able to see that "move-to" state's taxation of traditional retirement withdrawals and RMDs. Also, you will be able to change your "move-to" state's tax parameters.

10.3: Plan to move to another state in the future

At the top of the Taxes worksheet, you should have chosen your current state of residence for tax purposes.

<< This is your CURRENT state residence from the adjacent Taxes workshseet

<< Age of Earner #1, when you plan to move to another state (Default=120)

The entry must be at least one year greater than Earner#1's current age.

The default is age 120, which means you will NOT move to another state.

<< This is the current age of Earner #1 (from the Income worksheet)

<< The number of years until you plan to move to another state

"Same State" will appear, when your age entry indicates moving after age 100.

Choose the state that you plan to move to (required)

PULL DOWN MENU

MONTANA

<< Select this box and a pull down menu arrow will appear.
Click the arrow, and scroll down to find your state.

VeriPlan supplies state income tax rates for the 50 states and the District of Columbia.

Move-to State income tax rate tables for the state you have selected to move to in the future

			MONTANA					
SINGLE Taxpayer					MARRIED Taxpayer, Filing Jointly			
Taxable Income Breakpoint	Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint	Taxable Income Breakpoint		Cumulative tax payment UP TO this breakpoint	% Tax Rate ABOVE this breakpoint		
Bracket "A"	\$0.00	\$0.00	1.00%	Bracket "A"	\$0.00	\$0.00	1.00%	
Bracket "B"	\$3,600.00	\$36.00	2.00%	Bracket "B"	\$3,600.00	\$36.00	2.00%	
Bracket "C"	\$6,300.00	\$99.00	3.00%	Bracket "C"	\$6,300.00	\$99.00	3.00%	
Bracket "D"	\$9,700.00	\$196.00	4.00%	Bracket "D"	\$9,700.00	\$196.00	4.00%	
Bracket "E"	\$13,000.00	\$326.00	5.00%	Bracket "E"	\$13,000.00	\$326.00	5.00%	
Bracket "F"	\$16,800.00	\$494.00	6.00%	Bracket "F"	\$16,800.00	\$494.00	6.00%	
Top Bracket "G"	\$21,600.00	\$656.00	6.75%	Top Bracket "G"	\$21,600.00	\$656.00	6.75%	

Additional taxes in the state you are planning to move to

Low rate or no income tax states often levy additional taxes and fees that are assessed at the state and/or local level. After researching taxes in the state that you plan to move to, below you can enter both:

- * total annual fixed dollar state and local taxes, and/or
- * additional local flat rate income taxes below

Enter total annual dollar extra fees and taxes to pay in the "move-to" state (

\$0

<< The total annual dollar fees and taxes you would pay (Default = \$0

DO NOT include any real estate taxes related to properties you will own in your "move-to" state. Instead, those real estate taxes would be associated with property(ies) you would buy. Those entries are made on the yellow-tabbed Property+Debt worksheet. VeriPlan allows you to enter information about properties that you plan to purchase in the future, and it automatically handles the real property projection calculations for you.

Enter the average percentage of local income taxes you would pay in your "move-to" state (optional)

Use this data entry box to enter the percentage of your flat rate local income taxes

0.00%

<< **Enter the total percentages for any flat rate local income taxes that you pay**

If there is a minimum threshold, before you begin paying flat rate local income taxes, enter it here.

\$0

<< **Enter any "Taxable Income" threshold that your income must exceed before local flat rate taxes apply**

If there is no minimum income, then enter \$0. (Default = \$0)

"Move-to" state taxation of Social Security retirement benefit income

You will not need to do anything regarding Social Security retirement income taxation in your "move-to" state. VeriPlan will manage this automatically for you. Most states do not tax Social Security retirement benefit income, but some do. Please refer to the section above titled "State level income taxation of Social Security retirement benefits -- 50 States & DC" for more information, if the yellow box below indicates that your "move-to" state DOES TAX some Social Security income.

Your "move to" state **DOES TAX** **Social Security retirement income**

"Move-to" state taxation of traditional retirement withdrawals & RMD income

You will not need to do anything regarding traditional retirement withdrawals & RMD income taxation in your "move-to" state. VeriPlan will manage this automatically for you. States vary in their tax policies regarding traditional retirement withdrawals & RMDs. Please refer to the section above titled "State level income taxation of traditional retirement withdrawals & RMDs -- 50 States & DC" for more information.

In a yellow box below you can see whether your "move-to" state taxes traditional retirement withdrawals and RMDs.

If you are one of the lucky persons who would be subject to a local income tax within the state you intend to move to and you make local income tax settings above in this section, then it will be assumed that state taxable income rules will determine whether traditional retirement withdrawal and RMD income is also taxed at the local level.

If your "move-to" state does tax traditional retirement withdrawals and RMDs, the other yellow boxes will indicate

- 1) How much is the state's per person income exclusion, if any (zero dollars or higher)
- 2) Is there a minimum age test to qualify for the exclusion? (zero or the minimum age for the exclusion)
- 3) Is there an AGI threshold to eliminate the state's exclusion for single tax filers? ...for married, joint filers? (dollar threshold)
- 4) If there is an AGI threshold, then any dollar exclusion will be phased out dollar for dollar above that threshold.

MONTANA	<<<< Your "move-to" state
Yes	<<<< Does your "move to" state tax traditional retirement account withdrawals (Yes=
\$4,640	<<<< Does your "move to" state offer a per person income exclusion? (zero dollars or
0.0	<<<< Is there a minimum age test to qualify for the exclusion? (zero or the minimum i
2	<<<< "1" for a "single filer" taxpayer; "2" for two "married, joint filers"
\$40,980	<<<< Any AGI threshold to eliminate the exclusion for single tax filers? (dollar threshol
\$43,300	<<<< Any AGI threshold to eliminate the exclusion for married, joint filers? (dollar thre:

Pennsylvania (PA) will tax under age 59.5 but not when over 59.5. VeriPlan classifies PA as a "does tax" state, but VeriPlan's exclusion is set at \$99,999,999,999 for over 59.5, which effectively eliminates tax above that age.

Change your "move-to" state's parameters for taxing traditional retirement withdrawal and RMD income

Because states may change their tax rules over time, the section below with gray data entry boxes will allow you to update your "move to" state's tax rules for traditional retirement account withdrawals and RMDs. If that state changes its taxation of traditional retirement account withdrawals and RMD income, you can make taxation parameter updates. Then, VeriPlan will use tax parameters that you have provided instead of the parameters in the yellow boxes above.

Do you want to change your "move-to" state's tax parameters?

If you choose "Yes," VeriPlan will replace the parameters above with your entries below.

This is "either / or" for these two sets of parameters, which means you should figure out the revised parameters. However, if your "move-to" state was taxing traditional retirement withdrawal and RMD income and then stops taxing, just enter 1 to use your parameter set and then put zeros in the other boxes below.

<<<< Use my tax entries below instead of those supplied by VeriPlan (Yes=1; No=0) (Default)

<<<< Does your "move-to" state tax traditional retirement account withdrawals (Yes=1; No=0)

<<<< Does your "move-to" state offer a per person income exclusion? (zero dollars or higher)

<<<< Is there a minimum age test to qualify for the exclusion? (zero or the minimum age)

<<<< The Single (1) versus Married Jointly (2) tax filing status from the Income Tax Return

<<<< Any AGI threshold to eliminate the exclusion for single tax filers (dollar threshold) (Default)

<<<< Any AGI threshold to eliminate the exclusion for married, joint filers (dollar threshold) (Default)

Chapter 11: Retirement worksheet

- 11.1: Choose simultaneous retirement, if you are a working couple
- 11.2: Enter your Social Security retirement and disability payments and ages when payments will begin
- 11.3: Enter your pension, annuity, and deferred compensation payouts
- 11.4: Reduce the Social Security Administration's payment projections
- 11.5: Adjust your ordinary living expenses for retirement
- 11.6: Adjust the growth rate of your living expenses and healthcare expenses in retirement
- 11.7: Change your real dollar earnings potential after age 65

Introduction



Use this retirement worksheet to set and adjust your intended retirement ages. You can also select to retire simultaneously or to retire in separate years, when each earner reaches his or her planned retirement age. You can also adjust your expected ordinary living expenses in retirement and the growth rate of those expenses during retirement relative to the rate of inflation.

With this retirement worksheet, you can enter your current or projected retirement income entitlements from the U.S. Social Security Administration for one or both primary earner/users. You can decide whether you want VeriPlan to project automatically that your initial Social Security payments would be based on the planned retirement age of either earner/user. Alternatively, you can choose when Social Security payments will begin for either earner -- at any age from 62 to 70.

If you expect to have pension, annuity, and/or deferred compensation income, you can enter information below. You can control taxation of payments and direct deposits into taxable, traditional retirement, or Roth retirement accounts.

In addition to the retirement entries and user controls for you on this worksheet, VeriPlan also provides the **Tax-Advantaged Plans** worksheet that can help you with your retirement planning. That tax-advantaged plans worksheet collects information about your employer-sponsored defined contribution plans. It also explains how VeriPlan projections automate the tax rules associated with traditional IRAs and Roth IRAs. The tax-advantaged plans worksheet also provides two powerful tools that allow you to control your projected contributions to traditional and Roth IRAs and employer-sponsored retirement plans

To a very great extent, VeriPlan has automated the development of your projections by incorporating current tax laws and rules associated with tax-advantaged retirement incentive programs. While simultaneously providing powerful "what-if" user retirement planning controls, VeriPlan hides the substantial complexity of the tax laws that are associated with personal and employer-sponsored defined contribution retirement plans.

11.1: Choose simultaneous retirement, if you are a working couple

If there are two earners, both earners could retire simultaneously. Alternatively, Earner #2 might retire at a different age, and VeriPlan will automatically manage these differences in planned retirement ages.

<< Enter 1 for both Earners to retire **SIMULTANEOUSLY**, at the Earner #1 retirement age above; OR
^^ << Enter 0 for each to retire at his or her chosen retirement age above -- possibly in a different year.
* If there is no Earner #2, then just enter a 0.

Change your retirement ages on the Income worksheet (not here)

Adjust your intended retirement ages at the top of the yellow-tabbed Income worksheet.

<< The planned retirement age of Earner #1

<< The planned retirement age of Earner #2

11.2: Enter your Social Security retirement and disability payments and ages when payments will begin

Overview

VeriPlan will project individual Social Security retirement payments based upon either:

- * the current retirement benefits being received by Earner #1 and/or Earner #2
- * the future retirement benefits entitlements of Earner #1 and/or Earner #2

Note: Do not reduce your retirement benefit entries in this section, because of any concerns that you may have about the financial viability of the Social Security system. Enter the benefit amounts that the U.S. Social Security Administration currently provides to you. You will have an opportunity in Section 4 lower down on this worksheet to set a risk adjustment factor regarding whether you expect to receive 100% of your Social Security retirement entitlement payments in the future or a lower percentage.

A) CURRENT monthly Social Security RETIREMENT benefits that you are ALREADY RECEIVING

(If you are receiving Social Security DISABILITY benefits before Full Retirement Age, use Section E further down and NOT this section.)

Is Earner #1 and/or Earner #2 already receiving monthly Social Security retirement benefit payments?

When either earner is already receiving Social Security retirement benefits, the "gross" monthly benefit should be entered below. To be clear, your "gross" monthly benefit is that retirement benefit amount that you would receive, before any deductions for Medicare Part B and/or Part B health insurance premium payments that you have chosen to have taken out of your Social Security check. In addition, if you have higher income from other sources and are currently subject to IRMAA premium subsidy reductions, your gross monthly benefit is the amount BEFORE any of these IRMAA subsidy reductions. VeriPlan automatically projects any IRMAA subsidy reductions. For more information, see the yellow-tabbed Medicare worksheet.

When you are receiving retirement benefits, the "Your Social Security Statement" document will not provide payment information. Instead, you should have received another document from the SSA that might be titled "Your New Benefit Amount" or "Your 20xx Social Security Cost of Living Adjustment" or another document. If you are receiving retirement benefits and do not have a recent document with the benefit amount and deductions, contact the SSA.

EARNER #1:

Is Earner #1 already receiving monthly Social Security retirement benefit payments? (yes or no)

<< Enter 0 for "No", or 1 for "Yes" (Default =0)

<< Current age of Earner #1

If YES, how much is Earner #1's current GROSS monthly Social Security retirement benefit payment, without any Medicare reductions?

<< Enter the GROSS MONTHLY Social Security retirement payment being received currently

EARNER #2:

Is Earner #2 already receiving monthly Social Security retirement benefit payments? (yes or no)

<< Enter 0 for "No", or 1 for "Yes" (Default =0)

<< Current age of Earner #2

If YES, how much is Earner #2's current GROSS monthly Social Security retirement benefit payment, without any Medicare reductions?

<< Enter the GROSS MONTHLY Social Security retirement payment being received currently

Note that if you have already reached your age 66/67 Full Retirement Age and are already receiving benefits, you have the right to suspend your payments for various periods up to age 70. While you do this, your benefits will earn delayed retirement credits. When you resume payments, the SSA will recalculate and increase your check, which means that you will also receive subsequent higher dollar COLA inflation adjustments, because your base benefit check would be larger.

B) Your Monthly Social Security retirement benefit entitlements that would BEGIN IN THE FUTURE

Historically, the Social Security Administration (SSA) has provided estimates of future monthly retirement benefits at:

- * Age 62, which is the earliest age to claim benefits, but results in the smallest check paid over your lifetime and perhaps that of your surviving spouse
- * Age 66/67 which is a sliding scale for "Full Retirement Age" depending on your year of birth.
- * Age 70, which the latest age to claim with delayed credits resulting in the largest check paid over your lifetime and perhaps that of your surviving spouse

Therefore, VeriPlan uses this age 62, 66/67, and 70 entitlement input model.

Note that the Social Security amendments of 1983 have gradually raised over decades the "Full Retirement Age" for Social Security benefits from age 65 to 67. Those born in 1960 or later have a full retirement age of 67. VeriPlan supports your acceptance of Social Security retirement benefits at any age between 62 and 70 for either spouse, if a married couple. VeriPlan uses interpolation between the SSA's benefit estimates for ages 62, 66/67, and 70 to determine benefit amounts in the years between. The box asking whether you were born before, in, or after 1957 box below allows VeriPlan to align your Full Retirement Age closer to 66 or 67, when interpolating, since 1957 is the mid-point of 66 and 6 months.

Lower in this section, Earner #1 and Earner #2 can choose when their Social Security retirement payments would begin either in the year of their planned retirement or at another age between 62 and 70.

For married couples, Social Security provides a spousal benefit that can be 50% of the other spouse's full retirement age entitlement. In some situations, this 50% spousal entitlement can result in a larger check than that spouse would receive based upon his or her own work record. Using the rules of the SSA, VeriPlan will automatically determine and project the highest benefit available based either on the individual's work record or the 50% spousal benefit. Section D below explains this. Note that the Social Security rules will reduce this 50% spousal benefit, when the spousal benefit is claimed prior to the spouse's full retirement age, and VeriPlan also takes this into account.

Enter your monthly "gross" age 62, 66/67, and 70 benefit entitlements that would BEGIN IN THE FUTURE

Please input your Social Security retirement payment information below. You can obtain this information from your most recent Social Security Administration (SSA) statement (printed or online) or from the SSA's online calculators. Statements use "today's dollars." When using an SSA system calculator, choose "today's dollars" and do not select "future" or "inflationary" dollars.

EARNER #1 -- Enter your MONTHLY age 62, 66/67, and 70 Social Security retirement payment estimates

\$0	<< Enter MONTHLY Social Security Payment for an Age 62 retirement. (Enter the <u>benefit</u> of Ear
\$0	<< Enter MONTHLY Social Security Payment for an Age 66/67 retirement. (Enter the benefit of
\$0	<< Enter MONTHLY Social Security Payment for an Age 70 retirement. (Enter the benefit of Ear

EARNER #1 -- Determining the nearest age between 66 or 67 of "full or normal" Social Security retirement

0	<< Enter 0, if Earner #1 was born in or before 1957; Enter 1, if Earner #1 was born after 1957
---	--

EARNER #2 -- Enter your MONTHLY age 62, 66/67, and 70 Social Security retirement payment estimates

\$0	<< Enter MONTHLY Social Security Payment for an Age 62 retirement. (Enter the benefit of Ear
\$0	<< Enter MONTHLY Social Security Payment for an Age 66/67 retirement. (Enter the benefit of
\$0	<< Enter MONTHLY Social Security Payment for an Age 70 retirement. (Enter the benefit of Ear

EARNER #2 -- Determining the nearest age between 66 or 67 of "full or normal" Social Security retirement

0	<< Enter 0, if Earner #2 was born in or before 1957; Enter 1, if Earner #2 was born after 1957
---	--

Entering information, if you are under age 62

The SSA estimates the different initial payments that you would receive, if you were to accept payments at ages 62, 66/67, or 70. These three initial retirement ages are the format the SSA has used in its statements. A retiree can accept payments at any point between age 62 and 70. Retirement payments will increase according to the SSA's formulas the longer one waits. Using these three SSA retirement payment estimates for age 62, 66 to 67 (which is termed Full Retirement Age - FRA), or age 70, VeriPlan will interpolate to determine your payment, if you chose to begin retirement payments at other ages between 62 and 70.

Entering information, if you are over age 62 and are NOT YET receiving retirement payments

Statements will vary, given your age, so use this data entry guidance. If you are between Age 62 and 66 to 67 (which is termed Full Retirement Age - FRA), enter the lowest age amount into the Age 62 box above. Then enter the Age 66/67 and Age 70 amounts in those boxes above. If you have reached 66 to 67 (FRA) or are older, then enter that FRA amount in both the Age 62 and Age 66/67 boxes along with the Age 70 amount in the Age 70 box. With these entries, VeriPlan will be able to interpolate your retirement benefit amount for any age you select up to 70.

C) At what FUTURE ages would you like your Social Security retirement payments to begin between 62 and 70?

You can claim your Social Security benefits in any month between ages 62 and 70. It might be advantageous to wait as long as you can, even until age 70 for those who can afford to wait. See the red-tabbed Optimizations worksheet for a discussion of Social Security claiming.

EARNER #1 -- Do you want to use an initial Social Security payment age that is different than Earner #
For your reference, Earner #1's retirement age set on the Income works

<< Enter 1 (one) to use a different age; Enter 0 (zero) to use Earner #1's retirement age

EARNER #1 -- What alternative Earner #1 age for initial Social Security retirement payments do you w

<< Enter an initial Social Security payment age for Earner #1 from 62 to 70

* Age entries are restricted from age 62, which is the earliest that payments are possible, up to age 70, which is the latest that it would make financial sense to delay receiving current payments in exchange for higher future payments.

EARNER #2 -- Do you want to use an initial Social Security payment age that is different than Earner #
For your reference, Earner #2's retirement age set on the Income works

<< Enter 1 (one) to use a different age; Enter 0 (zero) to use Earner #2's retirement age

EARNER #2 -- What alternative Earner #2 age for initial Social Security retirement payments do you w

<< Enter an initial Social Security payment age for Earner #2 from 62 to 70

* Age entries are restricted from age 62, which is the earliest that payments are possible, up to age 70, which is the latest that it would make financial sense to delay receiving current payments in exchange for higher future payments.

Note: If you have had earned income in the past from which Social Security (FICA) taxes were taken, periodically you should review the information that the SSA has for you. If you receive a printed statement in the mail, review it. In addition, you

can set up an account with the SSA. It is a very good idea to check each Earner's statement every year, so that you can verify that the Social Security Administration has an accurate record of your earnings history.

If some of your earnings history is not recorded, you may be able to correct this situation. If a substantial part of your earnings history is missing, then this could reduce your Social Security retirement benefits. For example, retirement payments are determined using the highest inflation indexed compensation for 35 of your working years. If in a typical 40 year working career, you have more than five missing or zero compensation years, then your payments could be lowered. If information is missing for years when you had higher compensation, that can hurt, as well. A 2005 study by the Center for Retirement Research at Boston College reported that the average working man and woman, respectively, have 6 and 13 years of zero earnings in their records. The causes could either be years without earnings and/or missing records.

D) Social Security retirement benefits, including retirement benefits for spouses, that would BEGIN IN THE FUTURE

For married couples, Social Security provides a spousal benefit that can be 50% of the other's spouses full retirement age entitlement. In some situations, this 50% spousal entitlement can result in a larger check than that spouse would receive on his or her own work record. Using the rules of the SSA, VeriPlan will automatically determine and project the highest benefit available based either on the individual's work record or the 50% spousal benefit.

When a married worker claims Social Security retirement benefits based upon his or her work record, the spouse may be eligible for a benefit based on the worker's earnings. The spousal benefit can be as much as half of the worker's "primary insurance amount," depending on the spouse's age at retirement.

In most circumstances, the spouse must be at least age 62. If the spouse begins receiving benefits before "full retirement age," the spouse will receive a reduced benefit.

The worker can also delay claiming Social Security benefits past full retirement age up to age 70, while accruing delayed retirement credits that would increase the monthly check by 8%

annually. While claiming is delayed, spousal benefits cannot be paid on that worker's earning record.

Delayed claiming credits do not increase the spousal benefit. The most the spouse can receive is 50 percent of the worker's "primary insurance amount," which means half the monthly benefit the worker was entitled to at full retirement age.

If a spouse is eligible for a retirement benefit based on his or her own earning records, and if that benefit is higher than the spousal benefit, then the Social Security Administration will pay the retirement benefit. Otherwise, SSA pay the spousal benefit.

When the spouse has claimed benefits on his or her earnings record, prior to the spouse's Full Retirement Age (FRA), there is a further reduction in spousal benefits beyond the 50% benefit the spouse would have received on and after the spouse's FRA. VeriPlan calculates this reduction assuming that the spouse's FRA would be at the midpoint between 66.5 and age 66 and 67, depending upon the answer to the before, during, or after 1957 questions above. The Social Security Administration (SSA) website states its lovely formula for these additional reductions as follows:

"A spouse can choose to retire as early as age 62, but doing so may result in a benefit as little as 32.5 percent of the worker's primary insurance amount. A spousal benefit is reduced $\frac{25}{36}$ of one percent for each month before normal retirement age, up to 36 months. If the number of months exceeds 36, then the benefit is further reduced $\frac{5}{12}$ of one percent per month."

Summarized from an example also provided on the SSA website, "if the (other) worker's spouse were to receive benefits 36 months before his or her normal retirement age," the SSA would first take 50%, and then would "compute the reduction factor, which is 36 times $\frac{25}{36}$ of one percent, or 25 percent. Applying a 25 percent reduction to the" 50% of the other spouse's FRA results in a "final spousal benefit (that) is 37.5 percent of the primary insurance amount" meaning the other spouse's FRA dollar entitlement.

Projected ANNUAL real dollar Social Security retirement benefit amounts, including spouses that would BEGIN IN THE FUTURE

Given your future Social Security benefit entitlements and the claiming age settings above in Sections B and C, these are the gross ANNUAL (not monthly) real dollar Social Security retirement benefit amounts projected by VeriPlan. Note that this chart DOES take into account retirement benefits that are already being received from Section A and also any disability payments in Section E that would convert to retirement payments at Full Retirement Age. The numbers in this chart also include any Social Security funding Reduction Factor that you may have entered in Section 4 below.

Age	Earner #1	Earner #2	Total Yearly Social Security Benefit
62	\$0	\$0	\$0
63	\$0	\$0	\$0
64	\$0	\$16,218	\$16,218
65	\$0	\$16,218	\$16,218
66	\$0	\$16,218	\$16,218
67	\$0	\$16,218	\$16,218
68	\$0	\$16,218	\$16,218
69	\$40,236	\$20,102	\$60,338
70	\$40,236	\$20,102	\$60,338
71 to 100	\$40,236	\$20,102	\$60,338

Given the Social Security rules and the user's entries above, these are the parameters that VeriPlan has used to calculate retirement benefits. In addition, note that these parameters will reflect any reduction percentage that you have entered in Section 4 below related to your personal concerns about long-term Social Security system funding. (The chart above also includes any Social Security disability benefits that will convert from disability benefits to retirement benefits at one's Full Retirement Age. Social Security disability benefits can be found on the green-tabbed Graphics Data worksheet as part of the Social Security Benefit Income column in the Income graphic data section.)

Earner #1 (for retirement benefits that would begin in the future)

\$0	<<< Estimated Full Retirement Age personal benefit based upon own work record without either reductions or delayed retirement credits
50.00%	<<< Spousal benefit percentage of spouse's FRA, IF spousal benefits exceed personal benefits AND the claim is made before reaching one's personal FRA

Earner #2 (if any, for retirement benefits that would begin in the future)

\$0	<<< Estimated FRA personal benefit based upon own work record without either reductions or delayed retirement credits
50.00%	<<< Spousal benefit percentage of spouse's FRA, IF spousal benefits exceed personal benefits AND the claim is made before reaching one's personal FRA

E) Social Security DISABILITY benefits for those below their Social Security Full Retirement Age

If the Social Security Administration has determined that you are disabled and you are currently receiving Social Security disability benefits, VeriPlan will project these Social Security disability benefits for you. As long as you continue to be disabled according to the SSA, these benefits would continue until your Social Security "Full Retirement Age" and then would convert to retirement benefits at the same benefit level.

Therefore, if you are SINGLE and disabled under Social Security, you would not have to enter above any Age 62, 66/67, and 70 benefits, because each of those benefit entries would be the same as your current gross monthly disability benefit before any reduction for any Medicare medical insurance premium payments. However, if you are MARRIED, you should enter your current gross disability payment in each of the Age 62, 66/67, and 70 retirement benefit boxes above. Then, VeriPlan can check whether your spousal benefit would be higher. Note that after being on Social Security disability for two years, recipients are placed on Medicare, as well, so there would be a difference between your gross disability benefit entitlements and the amount of the check that you actually are receiving. Use the gross entitlement before Medicare reductions - not the check.

Is Earner #1 receiving Social Security disability payments now?

<< Enter 1 (one) for YES; Enter 0 (zero) for NO (Default = 0)

<< Enter the \$ MONTHLY Social Security DISABILITY PAYMENT for Earner #1

Is Earner #2 receiving Social Security disability payments now?

<< Enter 1 (one) for YES; Enter 0 (zero) for NO (Default = 0)

<< Enter the \$ MONTHLY Social Security DISABILITY PAYMENT for Earner #2

When you enter Age 62, 66/67, and 70 benefits above, all entries would be the same as your current monthly gross disability benefit amount. These Age 62, 66/67, and 70 entries will affect the Social Security spousal benefits projections for a married couple.

A spousal benefit is potentially payable when the other spouse is receiving disability benefits. VeriPlan implements the over age 62 spousal disability benefit, but not the spousal benefit related to caring for a qualifying child. When you enter Age 62, 66/67, and 70 retirement benefits above for the disabled spouse, then VeriPlan can project spousal benefits. These could be a 50% spousal payment based on the the disabled spouse's benefit. Alternatively, the non-disabled spouse could have a sufficiently high retirement benefit, such that 50% of that spouse's retirement benefit would be greater than the disabled spouse's gross disability benefit itself.

Because VeriPlan assumes that a person currently on Social Security disability will have their disability benefits converted to retirement benefits at Full Retirement Age, deferred retirement credits will not be earned for delaying receipt of retirement benefits. Nevertheless, if a person is in this situation and can afford to do so, they may be able to suspend their retirement benefits for some months or years after Full Retirement Age up to age 70 and earn delayed retirement credits for doing so. Note, however, that if their spouse is receiving any benefits associated with this person's work record, then those benefits would also be suspended for the same period.

11.3: Enter your pension, annuity, and deferred compensation payouts

In the input table in below, you can enter information on up to 10 pensions, annuities, and/or deferred compensation payouts for Earner #1 and/or Earner #2.

PENSIONS: Regarding your traditional pensions funded by employer sponsored "defined benefit" pension plans,

ENTER ONLY COMMITTED RETIREMENT PENSION PAYMENTS TO BE RECEIVED ON A MONTHLY BASIS

- * If you intend eventually to take your pension as a lump sum, do not enter anything in this section. Instead, enter the current asset valuation as a bond on the Financial Assets worksheet.
- * In a "defined benefit" pension plan, an employer commits to make specified payments during retirement. These "defined benefit" plans are different from personal or employer sponsored "defined contribution" retirement plans, such as IRAs and

401(k)s, into which employees and/or employers might make contributions. In a "defined contribution" plan, future payments are not specified nor are future payments guaranteed. The future value of a "defined contribution" plan depends upon your contributions, any employer contributions, investment appreciation, administrative and investment costs, withdrawal rates, etc.). You should enter information about your participation in employer-sponsored defined contribution plans on the yellow-tabbed Tax-Advantaged Plans worksheet.

- * For your current "defined contribution" asset holdings, such as cash, bond, stock, or other assets held in your 401(k), 403(b), 457, individual IRA, SEP-IRA, SIMPLE-IRA, or similar accounts, enter these assets on the Financial Assets worksheet. The cash, bond, or stock asset input table to use will depend on the kind of investment asset that you own. The type of account is coded, as defined in the next note.
- * Note that for each of your individual assets that you enter on its asset class worksheets, VeriPlan has a column to indicate whether it is: A) a currently taxable account asset (coded 1), B) a traditional tax-deferred retirement account asset (coded 0), or C) a Roth retirement account asset (coded 2). VeriPlan projects each of your assets separately and uses these account taxability code entries to determine if and when assets will be taxed. VeriPlan explains how it does this on the tax-advantaged plan worksheet.

ANNUITIES: Regarding your annuities, **only if** you have signed a contract for monthly annuity payments (or know that you will sign a monthly payments contract), should you enter information about these annuity contracts in the table below.

ENTER ONLY SPECIFIED AND COMMITTED ANNUITY PAYMENTS TO BE RECEIVED ON A MONTHLY BASIS.

- * If you own an annuity that has not yet been converted into a monthly payment stream, you could either:
 - A) Enter it as a monthly annuity payment in the table below, if you are strongly inclined to annuitize, OR

- B) You could enter the asset value on the Financial Assets worksheet. Most annuities are bond like, but some could be classified as equities. Also, fill in the cost characteristics of the annuity on the Financial Assets worksheet.

DEFERRED COMPENSATION: Deferred compensation plans can have a wide variety of forms.

- * Some deferred compensation plans are qualified defined contributions plans such as 401(k), 403(b), and 457 plans that have standardized rules. Do not use this input table for your qualified defined contributions plans. Instead, use the yellow-tabbed Tax-Advantaged Plans worksheet.
- * Other deferred compensation plans are non-qualified, and they defer compensation and thus taxation on that compensation until it is received at a later time. Typically payments begin at retirement and continue for a fixed period thereafter, but some deferred compensation plans also allow for "in service" distributions prior to retirement usually associated with specified life events. The employee may have a choice in the composition of the underlying assets. Assets could be more stable in value, held in diversified funds, or could be subject to potential appreciation, such as stock shares or stock options.
- * In general, taxes are due when payments are received. Since the payments usually occur in retirement when total income is lower, taxes would be lower. In addition, because these plans defer current compensation while working, they reduce taxes in those years.
- * VeriPlan allow for flexibility regarding whether deferred compensation payments would be made into taxable accounts or retirement accounts. You should investigate the tax treatment of payments from your deferred compensation. Typically, non-qualified plan payments are subject to income taxation and are deposited into taxable accounts. However, there are qualified deferred compensation arrangements where payments could be made into a traditional retirement account such as an IRA. Plans might facilitate moving payments into Roth accounts, but these payouts would typically be made with dollars that have already been subject to income taxation and

thus are after-tax and would have a tax basis. A conversion may be required for them to be deposited into a Roth account.

Input table for pension, annuity, and deferred compensation payouts

You should only enter MONTHLY payment values into Column C of the table below. Only if you enter a monthly dollar payment amount into Column C, do you need to be concerned with setting the proper values in any of the other columns for that particular row. When Column C is set to zero dollars, VeriPlan ignore any values in the other columns.

For further information on making entries to this table, see the column-by-column instructions BELOW this table.

The relationship between taxation of payments (Column G) and type of deposit account (Column J)

Note that Column J allows you to indicate whether payments will be deposited into a traditional retirement account (= 0); into a taxable account (= 1); or into a Roth account (= 2). There is a relationship between the type of account into which payments would be deposited and Column G, the % of each payment that would be subject to income taxes upon payment.

Because VeriPlan cannot know the particular tax situation, it will allow any combination of settings between Columns G and J. It is up to you to make the correct settings, given your particular situation. This guidance may be instructive.

- * When payments are deposited into taxable accounts (= 1), Column G should probably be set at 100%. If for some reason, taxes have previously been assessed on a portion of the underlying assets, then adjust the taxation percentage proportionally.
- * If payments are to be deposited into a traditional tax-deferred retirement account (= 0), Column G should probably be set at 0%, since that is the whole point of tax-deferral.
- * If payments are to be deposited into or promptly converted into a Roth account, then Column G should be set at 100%. Similar to taxable account deposits, if the underlying assets have a partial tax basis, then adjust the taxation percentage accordingly.

Type in all your entries -- DO NOT COPY-AND-PASTE ANY ENTRIES ON THIS CHART

Do not enter any expected Social Security payments on the input table below. Instead Social Security information is collected above on this worksheet.

*** Enter MONTHLY AND NOT ANNUAL PAYMENT AMOUNTS in Column C**

--- A --- Indicate if for Earner #1 or for Earner#2 (ENTER 1 or 2)	--- B --- ENTER Name of Pension, Annuity, or Deferred Compensation payout (Use Column K for notes)	--- C --- <u>MONTHLY</u> payment * expected (ENTER \$/MONTH)	--- D --- ENTER Number of Years that payments would continue (Enter 100, if perpetual)	--- E --- Do payments begin at your planned retirement age? (ENTER 0 for No; ENTER 1 for Yes)	--- F --- Age that payments will begin, IF NOT at Retirement (ENTER AGE EQUAL TO OR GREATER THAN INITIAL AGE OF EARNER)
1	Pension-Annuity - Def/Comp #1	\$0.00	100	1	100
1	Pension-Annuity - Def/Comp #2	\$0.00	100	1	100
1	Pension-Annuity - Def/Comp #3	\$0.00	100	1	100
1	Pension-Annuity - Def/Comp #4	\$0.00	100	1	100
1	Pension-Annuity - Def/Comp #5	\$0.00	100	1	100
1	Pension-Annuity - Def/Comp #6	\$0.00	100	1	100

Column C.

II T at : R AN DF	--- G --- % of each payment that would be taxable on average (ENTER %)	--- H --- Rate of real payment growth or decline <u>UNTIL</u> payments begin (ENTER % -- See note below); If nominal dollars, Enter MINUS 3%)	--- I --- Rate of real payment growth or decline <u>AFTER</u> payments begin (ENTER % -- See note below); If nominal dollars, Enter MINUS 3%)	--- J --- Type of account where payments will be deposited (ENTER 0 for a traditional retirement account; ENTER 1 for a taxable account; Enter 2 for a Roth account)	---
	100%	0.00%	0.00%	1	CLIC
	100%	0.00%	0.00%	1	CLIC
	100%	0.00%	0.00%	1	CLIC
	100%	0.00%	0.00%	1	CLIC
	100%	0.00%	0.00%	1	CLIC

Note that all ten table rows are not included in the graphics above.

Notes about the columns of the pension and annuity payout input table

- * Column A -- Indicate if for Earner #1 or for Earner#2 VeriPlan automatically relates payments to user ages, which may differ. Therefore, enter a 1 or a 2 to specify Earner #1 or Earner #2, respectively.
- * Column B -- Name of Pension, Annuity, or Deferred Compensation program (Enter names to distinguish between your various income sources.
- * Column C -- MONTHLY payment expected (ENTER \$/MONTH) Enter only MONTHLY expected payments. VeriPlan will automatically convert to annual amounts.

- * Column D -- ENTER Number of Years that payments would continue (Enter 100, if perpetual) Some payments may be limited by time and others will not be. VeriPlan will automatically calculate the duration of payments.
- * Column E -- Do payments begin at retirement? (ENTER 0 for No; ENTER 1 for Yes) VeriPlan will automatically relate your pension or annuity either to each earner's planned retirement age or to Column F's commencement age. If you have indicated in Column E that payments for a particular pension or annuity will begin at the retirement age of either Earner #1 or Earner #2, then any age entered for that particular pension or annuity in Column F will be ignored. (You set your planned retirement ages near the top of this worksheet.)
- * Column F -- Age that payments will begin, IF NOT at Retirement (ENTER AGE EQUAL TO OR GREATER THAN INITIAL AGE OF EARNER) If you entered a zero in Column E, then VeriPlan will begin payments at the age you specify in Column F for the particular earner specified in Column A. A cell will turn red, when you enter a number below one's initial age.
- * Column G -- % of each payment, which on average would be taxable (ENTER %) Taxation of pensions and annuities can be highly complex. Do your best to estimate the average percentage of expected payments that will be subject to taxation. (In column G, remember to type your number with a % sign and verify that your percentage entry is what you intend.)

The Impact of Inflation BEFORE and AFTER Payments Begin (Columns H and I)

Pension and annuity payments may or may not increase in relationship to inflation up to and beyond the point that you expect to begin to receive payments.

Inflation adjustments to Column H and Column I will usually be zero or below (negative). Purchasing power protection in excess of inflation would be very rare and certainly would be something that your pension or annuity provider would emphasize to you. On the other hand the lack of or less than adequate purchasing power protection might tend to be obscured.

Column H -- Rate of real payment growth or decline UNTIL payments begin (ENTER a %)

- * In column H, remember to type your number with a % sign and verify that your percentage entry is what you intend.

- * Enter 0% (zero percent), if expected payments will rise with consumer inflation up until the point that they begin.
- * Alternatively, enter -3% (negative three percent), if expected payments are currently quoted in nominal or non-inflation protected dollars.
- * If partial inflation protection is provided, then enter a percentage in between -3% and 0%.

Column I -- Rate of real payment growth or decline AFTER payments begin (ENTER a %)

- * In column I, remember to type your number with a % sign and verify that your percentage entry is what you intend.
- * Enter 0% (zero percent), if expected payments will rise with consumer inflation after the point that they begin.
- * Alternatively, enter -3% (negative three percent), if payments would receive no inflation after they commenced.
- * If partial inflation protection is provided after payments begin, then enter a percentage in between -3% and 0%.

Column J -- Notes Use Column J for any descriptive or special information that you wish to record.

11.4: Reduce the Social Security Administration's payment projections

There are significant concerns about the long-term financial solvency of the Social Security system, and it may be prudent to make certain downward adjustments. There are a variety of potential and realistic solutions, but US government political paralysis and inaction on this topic have increased risk to seniors the further into the future that one attempts to peer.

In this section, you can scale back the amount of your projected Social Security payments, if you wish. VeriPlan provides an adjustment below which allows you to reduce your Social Security estimates by a percentage of your choosing.

By how much should VeriPlan reduce payment estimates from the Social Security Administration?

<< Enter your Social Security retirement payment **REDUCTION factor (between 0% and 100%)**
 ^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

For example, if you enter 10% in the gray box above, then VeriPlan will reduce by that percentage the applicable Social Security payments that you entered in the section near the top of this worksheet. Stated another way, VeriPlan would project that your Social Security payments during retirement will be 90% of those dollar amounts.

11.5: Adjust your ordinary living expenses for retirement

In this section, you can adjust your ordinary living expenses in retirement relative to your projected expenses during the year that precedes the retirement of Earner #1.

Unless you make adjustments in this section and/or in the following section, VeriPlan will project that upon retirement your ordinary expenses from the expenses worksheet will equal your living expenses immediately prior to the retirement of Earner #1. Any adjustment to the real dollar growth rate of your living expenses that you set on the expenses worksheet will also cease, as well.

Unless you make adjustments below, during retirement your living expenses would remain the same in real, constant purchasing power dollar terms throughout your retirement. To adjust the level of your retirement expenses, in this section, VeriPlan allows you to make a one-time adjustment to your projected overall real dollar living expenditure level relative to your projected expenses in the year prior to the retirement.

After retirement, VeriPlan will project that your retirement-adjusted living expenditure level would continue to grow with the rate of inflation. In effect, all of VeriPlan's projections test whether your income and assets in retirement might be adequate to sustain a constant purchasing power expenditure budget, until Earner #1 reaches age 100. However, if you want to project that your retirement living expenses would grow or decline relative to the rate of general consumer price inflation, VeriPlan also allows you to model growth rate differences in following section.

Set this control to adjust your ordinary living expenses in retirement (default = 100%)

100% << Enter your living expenses in retirement as a % of your living expenses just prior to retirement
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* For example, if you expect a 5% decline in your ordinary living expenses in real, constant purchasing power terms, then enter 95% in the bold border user data entry box above.

* For the majority of persons, this living expense adjustment would probably be in the range of 90% to 100%, but could be higher or lower.

Estimating living expenses in retirement relative to living expenses prior to retirement

It is important to take some care in making retirement expense adjustment estimates for your particular situation. Advisors' estimates range widely for this ratio of expenses in retirement versus expenses just prior to retirement. Depending upon the source and the assumptions being used, you can find estimates ranging from 60% to 100% and even higher. Such a wide range in rules-of-thumb regarding retirement expenses versus pre-retirement expenses, could lead to a very wide range of possible projection outcomes. Retirement expense assumptions that are too low or too high can make lifecycle plans appear to be either feasible or not feasible, when the opposite may be true.

The academic finance literature on income replacement rates in retirement is helpful in thinking about the projected expense ratio in retirement that you might use in VeriPlan. Studies demonstrate that for the average person, consumption of everyday goods and services decreases in retirement. However, these declines are usually mild and not very significant relative to total expenses. Furthermore, a minority of retirees will even increase their expenditure rates in retirement, at least initially. Because the pre- and post-retirement ordinary expenditure drop off is probably less than 10% for the majority of retirees, that is why VeriPlan suggests above a ratio of 90% to 100% for most retirees' projections.

11.6: Adjust the growth rate of your living expenses and healthcare expenses in retirement

In this section, you can set the expected real dollar growth rate of your ordinary living expenses and healthcare expenses in retirement.

Most people do not need to adjust retirement expenses relative to general inflation and should NOT use these adjusters.

You should not under- or over-estimate retirement expense growth or decline in real dollar terms. Academic studies indicate that expenses normally fall in retirement, so a small negative adjustment would be most typical. On the average, total living expenses tend to decline as one

ages in retirement, even though healthcare expenses could increase as a portion of those overall declining living expenses. For this reason VeriPlan provides two complementary retirement adjusters.

Given that ordinary living expenses and healthcare expenses may experience different rates of growth during retirement, VeriPlan provides two complementary retirement inflation controls:

- A) for ordinary retirement living expenses without healthcare expenses and
- B) for retirement healthcare expenses separately.

On the red-tabbed "Retirement Planning" worksheet, there is a section titled "Health care expenses in retirement," which discusses a Vanguard/Mercer study on retirement healthcare expenses. As that study indicates, there can be significant variation around this median expenses that are related to personal health status and risk, age, Medicare insurance coverage, geography, and income.

Remember that VeriPlan projections use "real, constant purchasing power dollars" that have already had the general long-term, compounded average CPI inflation component removed. The purpose of VeriPlan's inflation adjuster tools is to allow you to test how unusually low or unusually high sustained inflation in relationship to the long-term inflation average might affect your lifetime plan. Please do not make the error of putting in a number for average inflation, because that will significantly distort your projections. For more information, see the section on " Inflation and Real, Constant Purchasing Power Dollars" on the red-tabbed **Optimizations** worksheet.

In the bold border user date entry box below, simply enter a small positive or negative annual percentage change relative to the rate of inflation. Then, VeriPlan will automatically and steadily adjust your annual retirement expense budget in real terms upward or downward, respectively. This control is similar in operation to the control that VeriPlan provides for expense growth during normal working years on the expenses worksheet.

How do you expect your GENERAL (non-healthcare) EXPENSES to grow or decline in retirement relative to the average inflation rate?

0.00%

<< Enter your assumption about the real percentage growth of your ORDINARY LIVING EXPENSES WITHOUT healthcare costs relative to inflation AFTER the retirement age of Earner #1

^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* If you expect your expenses to grow at the rate of inflation, then leave the 0% default.

* If you use any adjustment, it probably would be within the -1% to +1% per year range.

* NOTE THAT YOU SHOULD NOT UNDER- OR OVER-ESTIMATE EXPENSE GROWTH IN REAL TERMS.

How do you expect your HEALTHCARE-ONLY EXPENSES to grow or decline in retirement relative to the average inflation rate?

0.00%

<< Enter your assumption about the real percentage growth of your HEALTHCARE EXPENSES relative to inflation AFTER the retirement age of Earner #1

^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* If you expect your expenses to grow at the rate of inflation, then leave the 0% default.

* If you use any adjustment, it probably would be within the -1% to +1% per year range.

* NOTE THAT YOU SHOULD NOT UNDER- OR OVER-ESTIMATE EXPENSE GROWTH IN REAL TERMS.

If you use this tool to make a retirement expense growth rate adjustment, that adjustment would usually be within the -1% to +1% per year range -- even though annual adjustment entries between -5% and +5% are allowed.

As discussed in Section 2 of the "Expenses" worksheet, VeriPlan provides an inflation adjustment tool for your working years, which allows you to grow your ordinary living expenses at a rate that is different than inflation up until the retirement age of Earner #1. Thereafter, unless you use a non-zero % value above in this section for post-retirement expense growth, VeriPlan would project that your ordinary living expenses would grow at a rate equal to inflation up until age 100. This retirement inflation rate adjustment would take effect in your projections and override VeriPlan's default logic starting with the age that Earner #1 plans to retire. Earner #1's projected retirement age can be any age -- before, after, or equal to age 65, as long as it is equal to or greater than his or her current age.

11.7: Change your real dollar earnings potential after age 65

Much older workers may face significant erosion of real dollar wage rates. In this section, you can adjust VeriPlan's assumptions about real dollar wages for ages over 65. As a default, your projections will NOT assume any decline in real dollar earnings potential in old age.

The personal constraints of aging and the many significant societal disincentives against continuing to work beyond age 65 can limit potential real wage growth for older workers. Older

workers tend usually to experience a decline in real wages -- often a very significant real wage decline.

Therefore, VeriPlan can project an erosion in real earnings ability should either Earner #1 or #2 work beyond normal retirement age. With the settings below, VeriPlan can project that the unadjusted* real wages of Earner #1 and #2 would decline in real dollar terms beginning at age 66. It would be appropriate to assume a much steeper decline in real dollar income during very old age, because workers usually have a reduced inclination and/or ability to perform the same volume of work, as they did earlier in life.

* Notes:

- 1) You can use positive numbers below and assume an increase in the earnings rate and
- 2) These earned income assumptions will NOT affect any earned income adjustments that you might make for either Earner on the yellow-tabbed Income worksheet.

Below in the yellow box table VeriPlan has provided some suggested wage decline assumptions, but you are not obligated to accept VeriPlan's assumptions about this subject. If you intend to work significantly beyond Age 65, you can enter your own real wage decline assumptions in the bold border data entry boxes in the table below to the left. You can get a better understanding of the effects of these real wage decline assumptions, by inspecting the blue-tabbed Income graphic and the green-tabbed Graphics Data output.

In the bold border user data entry table below, enter annual real wage decline or increase assumptions for EITHER earner as percentage numbers INCLUDING the percent sign, using percentages from -100% to 100%. To speed your data entry, VeriPlan will use a single annual real wage decline assumption across each half-decade. For example, if you enter - 5% in the 81 to 85 age range for Earner #2, VeriPlan would lower Earner #2's real wages from age 81 to 85 by 5% and would repeat this process for each of these five years.

**User-Adjustable
Annual Real Earnings Change
Assumptions (-%)**

Age Ranges	Earner #1	Earner #2
66-70	0.00%	0.00%
71-75	0.00%	0.00%
76-80	0.00%	0.00%
81-85	0.00%	0.00%
86-90	0.00%	0.00%
91-95	0.00%	0.00%
96-100	0.00%	0.00%

**VeriPlan's suggested
Real Dollar Wage Decline Assumptions:**

Age Ranges	Earner #1	Earner #2
66-70	0.00%	0.00%
71-75	-2.00%	-2.00%
76-80	-4.00%	-4.00%
81-85	-7.00%	-7.00%
86-90	-10.00%	-10.00%
91-95	-10.00%	-10.00%
96-100	-10.00%	-10.00%

While VeriPlan's percentage drop-offs in the yellow table above may appear rather severe, few very old workers are able to earn wage rates comparable to what they earned in their "prime" earning years. Most will also work fewer hours, if they have a choice. Even very old professional workers, who are still in high demand and able to command competitive hourly rates, will experience substantial total real wage declines, if they reduce the volume of work that they do.

If you do not wish to use any real wage decline assumptions over age 65, then leave all of the values in the bold border user data entry table above to 0%. If you expect stronger earnings rates you wish to assume an increase in real wages over age 65, you can easily do that. Simply use positive percentage values in the table above that are greater than 0%. Refer to the income graphic to view the impact of the over 65 wage rate assumptions that you enter here.

For your reference, remember that VeriPlan can project that your real dollar or constant purchasing power earned wage and salary income and actively-managed business income will

grow UP TO AGE 65 according to the real growth rates that you entered on the income worksheet.

For your reference, your assumption for:

* Earner #1's real dollar, constant purchasing power earned income growth up to age 65 is:	0.00%
* Earner #2's real dollar, constant purchasing power earned income growth up to age 65 is:	0.00%

You CANNOT change these percentages here. They can only be changed on
of the Income worksheet.

Chapter 12: Medicare worksheet

12.1: Medicare Part A, B, C, & D insurance overview and the initial enrollment period

12.2: Your monthly Medicare insurance and retirement healthcare cost entries

12.2 (a): Turn on VeriPlan's age 65+ Medicare and healthcare expense features

12.2 (b): Monthly Medicare Part B (medical) insurance premiums

12.2 (c): Medicare Part B -- Monthly Supplemental Insurance (Medigap) premiums

12.2 (d): Medicare Part C -- Monthly Medicare Advantage insurance premiums

12.2 (e): Medicare Part D -- Monthly Medicare Drug insurance premiums

12.2 (f): Additional age 65+ out-of-pocket expenses not covered by Medicare and associated insurance

12.2 (g): Are healthcare expenses part of your annual Ordinary Expenses estimate on the Expenses worksheet?

12.2 (h): Late Medicare enrollment penalties for Part B and Part D

12.3: Medicare Part B and Part D premiums, including Income-Related Monthly Adjustment Amounts (IRMAA)

12.1: Medicare Part A, B, C, & D insurance overview and the initial enrollment period

For retirees, Medicare has four major components (The heading descriptions in quotes were taken from the Medicare.gov website):

1) **Part A (Hospital Insurance):** "Helps cover inpatient care in hospitals, skilled nursing facility care, hospice care, and home health CARE"

Part A is part of "original Medicare," and most beneficiaries do not pay a premium for Part A insurance coverage. (The only beneficiaries who will pay a Part A premium are those with fewer work credits than the minimum required to qualify for free Part A coverage.)

2) **Part B (Medical Insurance):** "Helps cover: Services from doctors and other health care providers, outpatient care, home health care, durable medical equipment (like wheelchairs,

walkers, hospital beds, and other equipment), many preventive services (like screenings, shots or vaccines, and yearly “Wellness” visits)”

- * Part B is part of "original Medicare," and beneficiaries pay standardized monthly premiums that cover portion of the true cost of the insurance premium, and that portion is related to his or her income. This monthly premium can be paid by the beneficiary directly to Medicare, but more often if a beneficiary is receiving monthly Social Security benefits, this Part B premium will be deducted directly from a beneficiary's Social Security check. The basic premium covers 80% of Medicare approved medical expenses. Retirees can either pay the remaining 20% (or sometimes more) out of pocket.
- * Alternatively, to pay for Part B medical costs not paid by Medicare, beneficiaries may qualify for "Medicare Supplemental Insurance (Medigap): Extra insurance you can buy from a private company that helps pay your share of costs in Original Medicare. Policies are standardized, and in most states named by letters, like Plan G or Plan K. The benefits in each lettered plan are the same, no matter which insurance company sells it." Medigap plans are available through a marketplace maintained by Medicare. Medigap private insurance plans involve an additional monthly insurance premium.

3) **Part C (Medicare Advantage):** Medicare Advantage plans are comprehensive plans, which are not part of "original Medicare."

Medicare Advantage plans are normally private HMOs (health maintenance organizations) or PPOs (preferred provider organizations) and all are regulated by the Federal Center for Medicare Services (CMS). Medicare Advantage plans also available through a marketplace maintained by Medicare. Medicare Advantage plans include Medicare parts A and B and some include Medicare D (drug coverage). Medicare Advantage Plans are subsidized by the government and these insurance plans may or may not involve a monthly premium paid by the beneficiary. You cannot have Medigap insurance at the same time as a Medicare Advantage plan.

4) **Part D (Drug coverage):** "Helps cover the cost of prescription drugs (including many recommended shots or vaccines). You join a Medicare drug plan in addition to Original Medicare, or you get it by joining a Medicare Advantage Plan with drug coverage. Plans that

offer Medicare drug coverage are run by private insurance companies that follow rules set by Medicare."

Medicare's Age 65 seven month "Initial Enrollment Period"

Close to a person's 65th birthday, Medicare offers an seven-month initial enrollment period that extends from three months prior to your 65th birthday month to three months after your 65th birthday month. Only in a few special situations can you (or should you) delay signing up for Medicare.

Because almost the entire population reaching age 65 signs up simultaneously during this initial enrollment period, insurance companies must offer a standardized supplemental Medigap insurance plan to everyone. Insurance companies cannot use "underwriting" to exclude those with poor health. However, during Medicare's subsequent annual open enrollment periods, insurance companies can decline to offer Medigap supplemental insurance policies to those who do not already have a similar Medigap plan with another insurance carrier. Therefore, this initial enrollment period can be very important to those with health problems who wish to obtain supplemental insurance.

12.2: Your monthly Medicare insurance and retirement healthcare cost entries

In this section, you will enter needed information about your healthcare related finances. With this information and standard information from Medicare VeriPlan will automatically project your annual retirement healthcare insurance and out-of-pocket medical expenses. Turn these features on in Section 4a). The Medicare system is a monthly, per person billing system. Most dollar entries made below will be monthly amounts.

12.2 (a): Turn on VeriPlan's age 65+ Medicare and healthcare expense features

YOUR MUST FIRST TURN ON VeriPlan's automated age 65+ Medicare and healthcare expense projection features.

<<<< Change to a "1" (one) to turn on VeriPlan's age 65+ Medicare and healthcare features (Default = 0 (off))

Unless you change the box above to a 1 (one), VeriPlan will ignore any entries

12.2 (b): Monthly Medicare Part B (medical) insurance premiums

All Medicare enrollees pay the same, standard monthly Part B medical insurance premium -- whether you pay this premiums directly or it is deducted from your Social Security check(s).

VeriPlan uses this monthly Part B premium amount in the yellow box below individually for Earner #1 and Earner #2 after age 65.

<<<< **The standard monthly Part B (medical) ("base level 0") insurance premium for individual enrollees**

If you are using VeriPlan in a subsequent year and want to update the then current standard monthly Part B premium, enter it in the gray box below

<<<< Enter the MONTHLY standard Part B (medical) premium for a future year (Current monthly premium is the default .)

<<<< Calendar year for this standard monthly Medicare Part B |

- * VeriPlan will ignore any user entry that is lower than the standard Part B monthly premium amount in the yellow box above. While the "level 0" Part B premium declined for the first time ever from 2022 to 2023 by \$5.20 monthly, historically annual increases are the norm.
- * DO NOT include any adjustments above for the Medicare's "Income-Related Monthly Adjustment Amounts" (IRMAA) associated with Medicare Part B and Part D insurance premiums. If your projected retirement income in future years would be sufficiently high, VeriPlan will automatically take into account Medicare's IRMAA adjustments for Medicare Part B and Part D. See the IRMAA chart in the section below. If you enter a larger amount above for the monthly Medicare Part B premium payment, then VeriPlan will automatically scale future IRMAA adjustments in the table below according to Medicare's formula. Therefore, if you made any IRMAA additions above they would add a multiplicative projection error to your model.

12.2 (c): Medicare Part B -- Monthly Supplemental Insurance (Medigap) premiums

Since many VeriPlan users will not have reached Medicare age 65 and will not have made any Medicare insurance choices yet, as a default VeriPlan will assume below that each individual would choose a comprehensive Medigap supplemental insurance plan.

Medigap supplemental insurance limits out-of-pocket medical expenses. Medicare pays 80% of approved charges and the beneficiary must pay the remainder out-of-pocket, if they do not have supplemental insurance.

If you have Medigap insurance now, enter your current monthly premium amount(s) below. If instead, you have Medicare Advantage insurance, enter \$0 here for any person who has a Medicare Advantage plan. Then, enter any Medicare Advantage monthly premium that you may pay in the next section below.

<input type="text" value="\$200.00"/>	<<<< Enter Earner #1's monthly Part B Supplemental Insurance (Medigap) premium
<input type="text" value="\$200.00"/>	<<<< Enter Earner #2's monthly Part B Supplemental Insurance (Medigap) premium

Note: The \$200 per month per person default is a ballpark approximation of the potential monthly premium cost.

12.2 (d): Medicare Part C -- Monthly Medicare Advantage insurance premiums

If a person has a Medicare Advantage insurance plan, enter the monthly premium below. Those on Medicare Advantage plans will also pay the standard monthly base level Medicare Part B premium in Section 4a) above.

If a person has a Medicare Advantage plan, make sure that the Medigap entry for that person in the section immediately above is \$0. Individuals can have either a Medicare Advantage or a Medigap insurance policy. They cannot have both at the same time.

Medicare Advantage plans may or may not charge a monthly premium. A few may even provide a premium rebate. The gray data entry boxes below allow for both positive and negative dollar entries.

<input type="text" value="\$0.00"/>	<<<< Enter Earner #1's monthly Part C Medicare Advantage premium (\$0 default,
<input type="text" value="\$0.00"/>	<<<< Enter Earner #2's monthly Part C Medicare Advantage premium (\$0 default,

12.2 (e): Medicare Part D -- Monthly Medicare Drug insurance premiums

Since many VeriPlan users will not have reached Medicare age 65 and will not have made any Medicare insurance choices, as a default VeriPlan will assume that the user will choose a Part D pharmacy insurance plan.

If you have Medicare Plan D insurance now, enter your current monthly premium amount(s) below. If a person has a Part C Medicare Advantage plan that does NOT require an extra monthly premium for Part D drug insurance, then enter \$0 below.

<input type="text" value="\$50.00"/>	<<<< Enter Earner #1's monthly Part D drug insurance premium (\$50 default)
<input type="text" value="\$50.00"/>	<<<< Enter Earner #2's monthly Part D drug insurance premium (\$50 default)

Note: The \$50 per month per person default is a ballpark approximation of the potential premium cost.

12.2 (f): Additional age 65+ out-of-pocket expenses not covered by Medicare and associated insurance

In this section, you can enter additional monthly age 65+ out-of-pocket medical expenses not covered by Medicare and associated insurance.

As much as retirees might hope that all medical costs will be covered by the various Medicare insurance policies above, retirees often pay cash for additional out-of-pocket medical expenses. Insurance plans often have deductibles and out-of-pocket maximums. Furthermore, you may have to pay out-of-pocket for vision care, dental care, and for other medical supplies and treatments that insurance does not cover.

<input type="text" value="\$100.00"/>	<<<< Enter Earner #1's monthly additional out-of-pocket medical expenses (\$100 default)
<input type="text" value="\$100.00"/>	<<<< Enter Earner #2's monthly additional out-of-pocket medical expenses (\$100 default)

The \$100 per month per person default is a ballpark approximation of healthcare expenses FOR THOSE WHO ALSO HAVE A MEDIGAP SUPPLEMENTAL INSURANCE PLAN. If

you DO NOT plan to have supplemental Medigap insurance coverage, it would be appropriate to assume higher individual out-of-pocket healthcare expenses.

On the red-tabbed "**Retirement Planning**" worksheet, there is a section titled "Health care expenses in retirement," which discusses a Vanguard/Mercer study on retirement healthcare expenses. The \$100 per person per month is a rough estimate of median out-of-pocket healthcare expenses for a person with Medigap supplementary insurance. As the Vanguard/Mercer study indicates, there can be significant variation around this median expenses that are related to personal health status and risk, age, Medicare coverage, geography, and income.

12.2 (g): Are healthcare expenses part of your annual Ordinary Expenses estimate on the Expenses worksheet?

Note: This section asks for an ANNUAL dollar amount rather than a MONTHLY dollar amount.

Before age 65 and Medicare, you normally will include self-paid medical insurance premiums and other out-of-pocket medical expenses as part of your annual Ordinary Expenses estimate at the top of the yellow-tabbed Expenses worksheet.

When you turn on VeriPlan's age 65+ Medicare and other health care cost automation features above, VeriPlan will automatically remove your annual healthcare expenses entry below from your annual Ordinary Expenses assumption for ages 66 forward to avoid double counting.

In the gray data entry box below, enter your total annual healthcare expenses (self-paid medical insurance premiums and out-of-pocket medical, dental, and vision expenses) included in Ordinary Expenses on the Expenses worksheet.

Again, this section asks for an **ANNUAL -- NOT MONTHLY** -- family healthcare expenses total from your Ordinary Expenses

\$8,450 <<<< Enter the total **ANNUAL** family Healthcare Expenses that are included in your Ordinary Expenses on the Expenses worksheet.

\$75,000 <<<< This is your Total Ordinary Expenses assumption from

If you enter any number above that is greater than zero, then VeriPlan will automatically do the following.:

- * VeriPlan will not change your annual Ordinary Expenses total up to age 65. However, on the blue-tabbed Expenses graphic, VeriPlan will graph these medical expenses separately from your other Ordinary Expenses up through age 65.
- * Beginning at age 66, VeriPlan will remove your entry above for annual family healthcare expenses within Ordinary Expenses. Thereafter, VeriPlan will project your Medicare and other age 65+ healthcare expenses according to your settings in this section. If there is an age difference between a couple, then half of the total annual family healthcare expenses will be switched after each person reaches age 66.
- * If you are planning exceptional and infrequent medical expenses that will not be covered by Medicare, such as a \$25,000 cosmetic procedure in three years, then enter that cost as a major planned expense in Section 3 of the Expenses worksheet.

12.2 (h): Late Medicare enrollment penalties for Part B and Part D

Note the summary of Medicare's Age 65 seven month "Initial Enrollment Period" in the major section above.

To discourage delays and gaming of the Medicare system through avoidance of premium payments, late enrollees are subject to permanent Part B and Part D penalties. If you are subject to late enrollment penalties, enter them below, and VeriPlan will automatically include these penalties in your projections.

Is Earner #1 subject to any Medicare Part B or Part D late enrollment penalties?

<<<< Enter Earner #1's total Part B (medical) late enrollment penalty (10% of each late year)
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<<<< Enter Earner #1's total Part D (drugs) late enrollment penalty (12% of each late year)
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

Is Earner #2 subject to any Medicare Part B or Part D late enrollment penalties?

0% <<<< Enter Earner #2's total Part B (medical) late enrollment penalty (10% of each late year)
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

0% <<<< Enter Earner #2's total Part D (drugs) late enrollment penalty (12% of each late year)
^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

This is Part B (medical) late enrollment penalties text from Medicare: "If you miss your 7-month Initial Enrollment Period, you may have to wait to sign up and pay a monthly late enrollment penalty for as long as you have Part B coverage. The penalty goes up the longer you wait. You'll pay an extra 10% for each year you could have signed up for Part B, but didn't. This penalty is added to your monthly Part B premium. It's not a one-time late fee — you'll pay the penalty for as long as you have Part B.

This is Part D (drugs) late enrollment penalties text from Medicare: "monthly premiums vary based on which plan you join. The amount can change each year. You might pay a penalty if you don't join a Medicare drug plan when you first get Medicare and go 63 days or more without creditable drug coverage. You'll pay an extra 1% for each month (that's 12% a year) you could have signed up for Part D, but didn't. The penalty is added to your monthly premium. It's not a one-time late fee — you'll pay the penalty each month for as long as you have Part D coverage (even if you change plans)."

12.3: Medicare Part B and Part D premiums, including Income-Related Monthly Adjustment Amounts (IRMAA)

VeriPlan's projections automatically take Medicare Part B and Part D premiums, including IRMAA premium surcharges into account. In any projection year when your modified adjusted gross income would be sufficiently high to pay individual IRMAA premium payments for Medicare Part B (medical) and Part D (drugs), VeriPlan will use the numbers in the chart below for those calculations.

IRMAA is based upon "Modified Adjusted Gross Income" (IRMAA MAGI). VeriPlan can project your Adjusted Gross Income, but needs one additional estimate from you to do this particular MAGI calculation. IRMAA MAGI adds back "tax-exempt interest income" (Line 2a IRS For 1040).

Do you expect to have "tax-exempt interest income" from municipal bonds in the future?

\$0

<<<< Enter your expected average annual tax-exempt
interest income (Line 2a IRS For 1040)

IRMAA levels information used by VeriPlan for Medicare Part B (medical) and Part D
(drugs)

Level Number	Single Filing Status	Single Filing Status	Married, Filing Jointly Status	Married, Filing Jointly Status
	Level Minimum Annual Modified Adjusted Gross Income	Level Maximum Annual Modified Adjusted Gross Income	Level Minimum Annual Modified Adjusted Gross Income	Level Maximum Annual Modified Adjusted Gross Income
0	\$0	\$97,000	\$0	\$194,000
1	\$97,000	\$123,000	\$194,000	\$246,000
2	\$123,000	\$153,000	\$246,000	\$306,000
3	\$153,000	\$183,000	\$306,000	\$366,000
4	\$183,000	\$500,000	\$366,000	\$750,000
5	\$500,000	N/A	\$750,000	N/A

Level Number	Premium as a Percentage of the True Cost of Part B	Part B Income-Related Monthly Adjustment Amount (IRMAA)	Part B Total Monthly Premium Amount per Person	Part D Income-Related Monthly Adjustment Amount (IRMAA)
0	25%	\$0.00	\$164.90	\$0.00
1	35%	\$65.90	\$230.80	\$12.20
2	50%	\$164.80	\$329.70	\$31.50
3	65%	\$263.70	\$428.60	\$50.70
4	80%	\$362.50	\$527.50	\$70.00
5	85%	\$395.60	\$560.50	\$76.40

IRMAA levels and Medicare monthly premium subsidies

Since 2007, Medicare beneficiary's Part B premiums have been related to his or her income. Annually, about 7% of Medicare enrollees have high enough income to be subject to IRMAA. Monthly Medicare premiums are subsidized by the Medicare program. Over 90% of Medicare recipients have income below the lowest IRMAA threshold. These lower income retirees pay 25% of the Part B premium cost, while the Medicare program pays the other 75%. Under IRMAA, as income rises from level one to level five, the premium subsidy is reduced. For example, at the highest IRMAA income level 5 for income above \$750,000 for married, joint tax filers, Medicare beneficiary would pay 85% of the premium cost and the Medicare program would pay the other 15%. For premium subsidy percentages by IRMAA level, see the middle column of the chart.

Appealing IRMAA assessments

VeriPlan calculates modified adjusted gross income based on the prior projection year forward into the future. This lag prevents a circular logic problem. In reality, IRMAA gets

assessed based upon income data supplied by the IRS to Medicare with a typical lag of two to three years. For long-term projections, this is not material. Nevertheless, in life, if you get an IRMAA assessment letter from Medicare based on substantially higher income that you had two years ago, you might not be pleased.

React quickly, because a 60-day clock begins when you receive your IRMAA notice letter. You can file SSA Form SSA_44 titled "Medicare Income-Related Monthly Adjustment Amount - Life-Changing Event," which begins by stating: "If you had a major life- changing event and your income has gone down, you may use this form to request a reduction in your income-related monthly adjustment amount." Examples given are spousal death, divorce, stopping work, reduced hours, natural disaster, terminations, pension reorganizations, etc. There is no guarantee, but if your current income is down for a good reason, file your appeal promptly.

IRMAA surcharges and Medicare late enrollment penalties

IRMAA surcharges are separate from late enrollment penalties. They are additive and not multiplicative. Late enrollment penalties are assessed against the base level premiums every year. Annual late enrollment penalties are not increase by IRMAA level.

Chapter 13: Tax-Advantaged Plans worksheet

13.1: Overview

13.2: Limit your potential contributions into both traditional IRA and Roth IRA personal accounts

13.3: What kind of employee defined contribution retirement plan does your employer provide?

13.4: Adjust EMPLOYEE contributions to your employer-sponsored defined contribution retirement plans

13.5: EMPLOYER dollar MATCHING contributions to most defined contribution retirement plans

13.6: Additional pre-tax and/or after-tax contributions to defined contribution retirement plans

13.7: EMPLOYER contributions to SEP-IRA and SIMPLE-IRA plans on your behalf

13.8: Use VeriPlan's retirement contribution limitation tools

13.9: Annual contribution limits for traditional and Roth IRAs

13.10: Income tax deduction limits for traditional IRA contributions

13.11: Limits for contributions to employer defined-contribution retirement plans

13.12: Age limits that affect tax-advantaged retirement plans

13.13: Retirement account early withdrawal penalties

13.14: Transactions timing and priorities for traditional & Roth tax-advantaged accounts

13.15: Graphical spikes related to tax-advantaged retirement investments

13.16: Commentary -- the labyrinth of tax-advantaged plan rules

13.1: Overview



VeriPlan's tax-advantaged retirement plan input and analysis functionality is found on this worksheet and on the adjacent "Roth Analysis" worksheet. This worksheet is not for pension, annuity, or deferred compensation payments. Enter your expected those payments on the Retirement worksheet.

You and your spouse have the right to make traditional and/or Roth contributions to IRA accounts each year depending upon the rules that are summarized below and to the right in the section titled; "Change annual contribution limits for traditional and Roth IRAs." Annual per person contribution limits for IRAs are for your combined individual traditional and Roth IRA contributions.

VeriPlan automatically implements these IRA contribution rules and limitations. As a default, whenever the rules and your projected earned income and finances permit, VeriPlan will automatically make contributions into traditional IRA accounts. You can adjust this default contribution behavior on this worksheet for total potential contributions. In addition, on the Roth Analysis worksheet you can adjust the percentage of total annual IRA contributions that are to be made as Roth contributions, when permitted.

In addition to your right to make IRA contributions, you also have a right within applicable rules to make annual contributions into the employer sponsored retirement plans that are available to you. VeriPlan will automatically make contributions into your employer plans according to the various setting and parameters you select on this worksheet and the Roth Analysis worksheet.

This Tax-Advantage Plans worksheet allows you to:

- * control future IRA contributions

- * indicate employer defined contribution retirement plans that are available to you
- * limit traditional and/or Roth annual contributions in proportion to positive cash flow years
- * understand and change traditional and Roth IRA contribution limits and rules

The adjacent Roth Analysis worksheet allows you to:

- * indicate whether you can make designated Roth contributions into a 401(k), 403(b), or 457 plan
- * control the portion of future total IRA contributions that would be contributed to Roth IRAs
- * plan year-by-year conversions into Roth retirement accounts informed by federal income tax rates, Social Security, and IRMAA
- * understand economic and investment tradeoffs between traditional and Roth retirement account assets

VeriPlan's tax-advantaged retirement plan functionality is fully automated and user controllable. When your earned income allows, VeriPlan will automatically contribute annually to both personal IRA plans and employer defined contribution plans up to the limits allowed by law, by your earnings and assets, or by any additional restrictions that you set within VeriPlan.

Traditional retirement asset contributions that reduce taxes up-front will grow tax-free over the years, until you either need to withdraw some of those assets to cover negative cash flow or you are required by law to withdraw some assets according to the Required Minimum Distribution (RMD) rules. Automated Roth retirement contributions will not provide an initial tax reduction, but will also grow tax-free over the years and not be subject to income taxation upon withdrawal.

In negative cash flow projection years, which usually occur in retirement, VeriPlan will cover those negative cash flows by making automated withdrawals from your cash, bond, and stock financial asset accounts. The withdrawal order by type of account to cover negative cash flow is to withdraw from taxable accounts first. After taxable assets are exhausted, next traditional tax-deferred retirement account assets are withdrawn to cover negative cash flows and to satisfy the RMD rules during retirement. If traditional retirement account assets are exhausted, then lastly Roth account assets are drawn upon to cover negative cash flow.

VeriPlan's projection withdrawal order tends to be tax-optimal across a lifetime for most people. This is especially true when one optimizes one's cash, bond, and stock investment portfolio according to the principles of "asset tax location" optimization. For more information on asset tax location optimization, see the discussion on the red-tabbed Optimizations worksheet. In addition, see the introduction to the Current Portfolio Rebalancing Tool on the bottom half of the yellow-tabbed "**Asset Allocation**" worksheet.

Even if VeriPlan's default asset withdrawal order tends to be tax-optimal for most people across a lifetime, there could be opportunities to increase lifetime tax optimization by converting traditional retirement assets into Roth assets during lower income tax years. Some VeriPlan users -- especially those who upon reaching retirement would have accumulated substantial assets in traditional retirement accounts -- could benefit from a series of low tax Roth conversions.

VeriPlan's year-by-year Roth conversion analysis tool on the "Roth Analysis" worksheet helps you to evaluate whether you might benefit from such Roth tax optimization opportunities. This tool provides interactive features allowing you to develop beforehand a Roth conversion plan for future years that takes into account:

- * expected income and income taxes
- * the taxability of Social Security retirement benefits, and
- * the impact of higher retirement income on Medicare IRMAA insurance subsidy reductions

If you think these topics are complex, they are. This is not due to VeriPlan. It is due to the ridiculous complexity of US retirement savings incentive laws, rules, and regulations. Programming that allows users to control their projections is challenging. But, enough whining.

The timing of new retirement contributions is worth noting. If you already own traditional and/or Roth retirement assets, and you enter them on the Financial Assets worksheet, your currently owned assets will be shown in the first model year as beginning balances. Asset balances shown for each projection year are always beginning balances. This is also true of other items associated with the family's balance sheet, such as debts owed and real estate and other property values.

At the end of each projection year, VeriPlan automatically calculates positive or negative cash flow, withdraws or adds assets, assesses related taxes, credits asset returns, and rebalances to the chosen asset allocation model to generate the beginning balance for the following year. In

contrast, the family's income statement will show in the same year certain items which may occur throughout the year. Examples are income, expenses, debt payments, and certain taxation, which is proportional to income and does not rely upon knowledge of end of year asset balances.

The calculation of new traditional and Roth contributions requires knowledge of end of year calculations. This is the same as in real life when tax filings are done after the end of the tax year and may depend upon end of year figures. Since contributions can depend upon net cash flow for the prior year, whether other assets can be used to fund contributions, etc. contributions calculation cannot be resolved until after the beginning of the following year. Otherwise the logic would be circular and might never resolve.

Because annual compensation is known, as well as, the retirement plan contribution rules, the dollar amount of the annual contribution can show as a transaction early in the following year. The dollar amount of the contribution can be seen on the blue-tabbed Transactions graphic and corresponding green-tabbed Graphics Data worksheet.

However, since other calculations cannot be done until after the end of the first year, the assets associated with those new contributions cannot be shown as assets until the beginning of the second year. To adjust for this inevitable extra year lag, when VeriPlan adds them as beginning balance assets at the start of the second year, it has already automatically credited these new assets with a year of appreciation according to your asset allocation model, since asset class returns are known and would not cause circular logic.

Where to find various traditional and Roth contributions controls and information

- * Limit planned annual IRA contributions into personal accounts (not employer plans)
(Section 2 of this worksheet) The default is 100%, meaning you would make 100% of potential contributions, if other constraints are satisfied.
- * Select the types of defined contribution employer plan available to Earner #1 and #2
(Section 3 of this worksheet) If you do not indicate the plans you can participate in, potential contributions cannot be projected
- * Limit employee contributions to your employer's retirement plans (Section 4 of this worksheet) The default is 100%, meaning you would make 100% of potential contributions, if other constraints are satisfied.

- * Enter employer dollar matching contributions, if available (Section 5 of this worksheet)
- * Enter additional employer-side contributions to retirement plans (Section 6 of this worksheet) The default is 0%, meaning the employer would make no additional contributions. Indicate whether additional contributions would be made with pre-tax dollars and/or with after-tax dollars
- * Adjust SEP-IRA and SIMPLE-IRA plans (Section 7 of this worksheet)
- * Limit annual contributions to years with positive net cash flow (Section 8 of this worksheet) Without this limitation, maximum annual contributions could be funded by other investment assets.
- * Apportion married couple's traditional retirement assets for RMDs (Section 12 of the Taxes worksheet)
- * Change various plan limits and understand rules (Section 9 to 13 of this worksheet)
- * Indicate whether you can direct Roth contributions to 401(k), 403(b), 457, Thrift Savings, SIMPLE-IRA, and SEP-IRA plans (Section 2 of Roth Analysis worksheet)
- * Set the Roth proportion of total individual IRA and employer plan contributions (Section 3 of the Roth Analysis worksheet) The default is 0%, meaning you would not make such contributions.
- * Plan year-by-year traditional asset conversions into Roth retirement accounts (Section 4 of the Roth Analysis worksheet)
- * Understand economic and investment tradeoffs between traditional and Roth retirement account assets (Section 5 of the Roth Analysis worksheet)
- * Understand the impact of Roth conversions on Medicare IRMAA (Section 6 of the Roth Analysis worksheet)

How can my after-tax employer plan contributions become Roth assets?

After-tax contributions are not necessarily Roth contributions and may need to be converted

VeriPlan will treat the various after-tax contributions that you indicate below as Roth assets, assuming that you would take steps to convert them into Roth assets, if your particular plan does not automate this conversion process for you.

Some plans allow employees to direct that additional contributions be made with either pre-tax (deferred tax) dollars and/or with after-tax dollars. Normally, employer contributions made as incentive compensation would be contributed with "traditional" pre-tax dollars that defer taxation. However, some plans allow for after-tax contributions that are made after the compensation has been subject to income taxation. The after-tax dollar amount contributed would be the same as the pre-tax dollar amount. However, since these contributions will be included in current taxable income, another source of funds will be needed to pay the added income taxes.

Contributions made with after-tax dollars would seem like Roth contributions, but they are really traditional contributions with an associated tax basis. The employer plan would need to offer additional conversion features for these after-tax contributions to become Roth assets. Otherwise, you may need to take additional steps to convert these assets.

The longer it takes and the more appreciation that has occurred with those particular assets in the interim, the higher the additional income taxes you may need to pay on that appreciation upon conversion. If the assets are not converted, they remain traditional assets, and the tax basis will be blended with the other assets you own in the plan that have no tax basis.

It is obviously better for the employee, if their employer plan offers relatively quick internal Roth conversion features. Otherwise, achieving the Roth conversion objective could involve delayed conversions by rolling out assets into a Roth IRA, if allowed while working ("in service") or after retirement. The rules are complicated, so do careful research beforehand and/or seek professional advice. If you own appreciated employer stock within the plan, make sure any conversion activities will not affect net unrealized appreciation eligibility.

An employer plan that already allows for "designated" Roth contributions probably would be more likely to offer the necessary additional features. Designated Roth contributions are a potential component of 401(k), 403(b), and 457 accounts, if the employer plan sponsor chooses to provide this option. If your employer's plan allows designated Roth contributions, that indicates that the plan is willing to deal with Roth assets.

If your employer plan has a designated Roth contributions option, you should indicate this on the yellow-tabbed Roth Analysis worksheet, where you can also choose the portions of your direct employee-side contributions that will be made as traditional pre-tax and/or Roth after-tax contributions.

Presuming that your employer plan is "Roth friendly," how would these contributed after-tax traditional assets with their associated tax basis get converted into Roth assets? Plans will allow for an in-plan conversion feature would be more appealing to employees. The best will simply automate the conversion process conversions into a Roth account on regular basis.

Here is how the tax basis affects Roth conversions. For example, if you direct the contribution of \$25,000 of after-tax compensation, your tax basis will be \$25,000. Let's assume that the \$25,000 is invested, and there is a conversion delay while the assets appreciate to \$26,000. When converting, you are required to convert both the amount contributed plus the asset earnings associated with the contribution amount. The conversion to the Roth account will be done and you will have \$26,000 in the Roth account. Since \$26,000 was converted and \$25,000 was the tax basis, additional income tax will be due on the \$1,000 of appreciation. Thereafter, the \$26,000 in the Roth account will not be taxed. This illustrates why quick conversions can be beneficial to avoid having to pay additional tax on appreciation.

13.2: Limit your potential contributions into both traditional IRA and Roth IRA personal accounts

By default, whenever the IRA tax rules and your projected earned income and other finances permit, VeriPlan's projections will automatically make future contributions for you into either traditional IRA accounts and/or Roth IRA accounts. In this section, you can adjust this default total IRA contributions behavior. The default is set at 100% of potentially allowed IRA contributions. By entering below any percentage between 0% and 100%, you can adjust your potential future IRA contributions.

The rules governing traditional and Roth personal IRA contributions are summarized in the table in Section 10 below. Study it a bit, and you will see that the rules are quite complex. This section allows you to enter your preference for the level of annual contributions as a percentage legal maximums. This section also allows you to indicate whether you prefer contributions to be made as traditional contributions using tax-deferred dollars or as Roth contributions using after-tax dollars. VeriPlan will automatically handle these projection calculations for you, while adhering to the rules in Section 10.

You should realize that income levels and variety of other factors will affect your potential IRA contributions. For example, you might state a preference to make all contributions as Roth

contributions, but your particular situation might be such that this choice is not available to you under the rules. In that case, contributions will still be made within your specified limits, but those contributions may be traditional contributions made with either pre-tax dollars or with after-tax dollars that would carry a tax basis.

**These are the PER PERSON annual contributions limits
for traditional IRAs and Roth IRAs, including spousal IRAs**

\$6,500	<< Maximum personal annual dollar contribution limit
\$1,000	<< Additional personal contribution allowed for over 50 years of age

Limiting planned annual IRA contributions into personal accounts (not employer plans)

<< What percentage of Earner#1's allowable annual IRA contributions do you want to project? (Default = 100%)

<< What percentage of Earner#2's allowable annual IRA contributions do you want to project? (Default = 100%)

Would personal IRA contributions be made with pre-tax (deferred) dollars or after-tax/Roth dollars?

This section allows Earner #1 and Earner #2 to:

- A) make all contributions with pre-tax (deferred) dollars, which will reduce current income taxes
- B) make all contributions with after-tax dollars, which will not reduce current income taxes
- C) choose some combination of A and B

The percentage boxes below ask what percent of planned contributions will be made with pre-tax (deferred) dollars, and the default is set at 100%. To increase the after-tax dollar contributions allocation, simply lower the percentage. If all dollars are to be after-tax dollars, enter 0%.

After-tax contributions would be Roth contributions when allowed by the rules. See the table in Section 10.

Earners #1's pre-tax and after-tax IRA contribution proportions

<input type="text" value="\$6,500"/>	<< Planned annual dollar contribution, including any % of legal maximum limit
<input type="text" value="100%"/>	<< What percentage of Earner #1's additional contributions should be pre-tax (deferred)
^^^^^ Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend.	
(The percentage you enter will also be applied to over age 50 catch-up contributions)	
If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Settings between 0% and 100%	
= <input type="text" value="\$6,500"/>	<< Pre-tax (deferred) traditional dollar contributions
= <input type="text" value="\$0"/>	<< After-tax dollar contributions, presumed to be Roth assets or traditional

Earners #2's pre-tax and after-tax IRA contribution proportions

<input type="text" value="\$6,500"/>	<< Planned annual dollar contribution, including any % of legal maximum limit
<input type="text" value="100%"/>	<< What percentage of Earner #1's additional contributions should be pre-tax (deferred)
^^^^^ Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend.	
(The percentage you enter will also be applied to over age 50 catch-up contributions)	
If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Settings between 0% and 100%	
= <input type="text" value="\$6,500"/>	<< Pre-tax (deferred) traditional dollar contributions
= <input type="text" value="\$0"/>	<< After-tax dollar contributions, presumed to be Roth assets or traditional

13.3: What kind of employee defined contribution retirement plan does your employer provide?

Regardless of your current participation level in employer-sponsored retirement plans, you should enter information here about any plans in which you and/or your spouse are eligible to participate. Then VeriPlan can automatically project the lifecycle financial effects of your participation up to allowable legal maximums unless you choose to use any of the contribution limiting tools provided.

If your projected compensation in any year is positive, VeriPlan will make contributions up to the maximum legal contribution limit, if your settings indicate you want to make maximum contributions. At the same time, VeriPlan will automatically reduce your taxable compensation and project your federal, state, and local income taxes at these lower compensation levels.

VeriPlan already includes maximum employee contribution limits for the most common employer plans, including 401(k), 403(b), 457, SEP, SARSEP, SIMPLE, and the Thrift Savings Plan for federal employees. All you need to do is to choose your plan at the top of this worksheet and indicate whether you plan to make any contributions. Some plans such as SEPs and self-employed 401(k) plans may allow you to more contributions than indicated in this section. The employer contribution section following this section will allow you to adjust your total contributions for these plans.

Use the pull down menus in these gray boxes to select the type of defined contribution plan available to Earner #1 and #2

The contribution amounts shown are the limits for what the employee can contribute annually to the plan, including over 50 catch up contributions. These annual limits are user changeable toward the bottom of this worksheet.

For some plan types, the employer can contribute additional amounts to the plan as matching funds or as additional incentive compensation. There are overall annual limits on the total of the employee's and the employer's combined contributions, but any over age 50 catch up contributions made by the employee do not count toward this combined maximum. You can adjust your potential employer-side contributions in a section below.

For Earner/User #1:

Use this pull down menu, if your employer offers a plan:

2) 401(k) -- cash deferred arrangements plan

Click above and a pull-down menu arrow will appear to the right >>>

Then, click the arrow and scroll down to select your plan type.

1

<< Do you want to make regular annual contributions to this plan? ("0" = No; "1" = Yes)

When you want to make regular annual contributions, these are the current maximum contribution limits for this 1

\$22,500

<< Maximum personal annual dollar contribution limit *

\$7,500

<< Additional personal contribution allowed for employees over 50 years of age *

For Earner/User #2:

Use this pull down menu, if your employer offers a plan:

3) 403(b) -- tax-sheltered annuity plan

Click above and a pull-down menu arrow will appear to the right >>>

Then, click the arrow and scroll down to select your plan type.

1

<< Do you want to make regular annual contributions to this plan? ("0" = No; "1" = Yes)

When you want to make regular annual contributions, these are the current maximum contribution limits for this 1

\$22,500

<< Maximum personal annual dollar contribution limit *

\$7,500

<< Additional personal contribution allowed for employees over 50 years of age *

Note: These entries for Earner/User #1 or #2 are NOT related to any pension plans. If you are one of the lucky people who also still has a pension, enter your pension information in Section 3 of the yellow-tabbed "Retirement" worksheet.

13.4: Adjust EMPLOYEE contributions to your employer-sponsored defined contribution retirement plans

Employees can make their own contributions to 401(k), 403(b), 457, SIMPLE-IRA, SARSEP & federal Thrift Savings plans.

Employees do not make their own contributions to SEP-IRA plans. (Go to Section 7)

These are the two parts of potential annual contributions into employer-sponsored defined contribution retirement plans.

- a) contributions that employees themselves can make on their own behalf from their compensation and
- b) additional discretionary matching and/or incentive contributions that employers might make into the same account on behalf of the employee.

Both employee and employer contributions combined are subject to annual dollar legal maximums and additional rules that may further restrict total potential annual contributions.

While it should be beneficial to make maximum annual contributions to your employer plans every year, which will reduce your taxable income, you may wish to limit your projected contributions. In this section, you can enter a reduced percentage for Earner #1 and/or Earner #2 to limit future annual contributions and over age 50 contributions below legal limits. The

defaults are set at making 100% of legal contributions, whenever you are projected have sufficient earned income to be entitled to do so.

Adjusting Earner #1's PERSONAL employer plan contributions

\$22,500	<< EARNER #1 -- Maximum dollar contribution limit to employer plans (Depends your selection in Section 401(k), 403(b), 457, SARSEP, and federal employee Thrift Savings Plan)
\$7,500	<< Additional dollar contributions allowed for employees over 50 years of age

What percentage of Earner #1's maximum annual contribution limit should be contributed each year?

100%	<< Enter the percentage of these legal maximum you want to contribute every year (Default = 100%)
------	---

^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

Adjusting Earner #2's PERSONAL employer plan contributions

\$22,500	<< EARNER #2 -- Maximum dollar contribution limit to employer plans (Depends your selection in Section 401(k), 403(b), 457, SARSEP, and federal employee Thrift Savings Plan)
\$7,500	<< Additional dollar contributions allowed for employees over 50 years of age

What percentage of Earner #2's maximum annual contribution limit should be contributed each year?

100%	<< Enter the percentage of these legal maximum you want to contribute every year (Default = 100%)
------	---

^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

This section provides information about contributions that employees might make on their own behalf. In the following sections, you will find more information about employer-side contributions, and you will be able to make adjustments.

This table lists contribution limits for many employer-sponsored plans. These numbers are not user updatable here. Instead, they can be adjusted near the bottom of this worksheet.

Check with your employer to confirm any limits that may apply to the plan in which you are eligible to participate.

* Elective deferrals for traditional 401(k), 403(b), 457, SARSEP, and federal employee Thrift Savings Plan:

\$22,500	<< Maximum PERSONAL employee tax-advantaged ANNUAL DOLLAR contribution
\$7,500	<< <u>Additional</u> personal contributions allowed for employees over 50 years of age

* Designated Roth 401(k), Roth 403(b), and Roth 457 plans: (Combined traditional and Roth contributions)

\$22,500	<< Maximum PERSONAL employee tax-advantaged ANNUAL DOLLAR contribution
\$7,500	<< <u>Additional</u> personal contributions allowed for employees over 50 years of age

* SIMPLE plans

\$15,500	<< Maximum PERSONAL employee tax-advantaged ANNUAL DOLLAR contribution
\$3,500	<< <u>Additional</u> personal contributions allowed for employees over 50 years of age

* Qualified defined-contribution percentage plans and SEP percentage plans -- the lower of:

25%	<< Maximum annual combined contributions as a percentage of the individual's compensation
\$66,000	<< Maximum employee and employer tax-advantaged ANNUAL DOLLAR contribution

or

Would EMPLOYEE contributions be made with pre-tax (deferred) dollars or after-tax/Roth dollars?

This section allows Earner #1 and Earner #2 to:

- A) make all contributions with pre-tax (deferred) dollars, which will reduce current income taxes
- B) make all contributions with after-tax dollars, which will not reduce current income taxes
- C) choose some combination of A and B

The percentage boxes below ask what percent of planned contributions will be made with pre-tax (deferred) dollars, and the default is set at 100%. To increase the after-tax dollar contributions allocation, simply lower the percentage. If all dollars are to be after-tax dollars, enter 0%.

Earner #1's pre-tax and after-tax EMPLOYEE contribution proportions

<< EARNER #1 -- Planned annual dollar contribution, including any % of legal maximum limitation

<< What percentage of Earner #1's additional contributions should be pre-tax (deferred) dollars?

^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

(The percentage you enter will also be applied to over age 50 catch up contributions)

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, if you set it to 0%, that would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a mix.

= << Pre-tax (deferred) traditional dollar contributions

= << After-tax dollar contributions, presumed to be Roth assets or traditional assets with no deduction

Earner #2's pre-tax and after-tax EMPLOYEE contribution proportions

<< EARNER #2 -- Planned annual dollar contribution, including any % of legal maximum limitation

<< What percentage of Earner #2's additional contributions should be pre-tax (deferred) dollars? (100%)

^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

(The percentage you enter will also be applied to over age 50 catch up contributions)

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, if you set it to 0%, that would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a mix.

= << Pre-tax (deferred) traditional dollar contributions

= << After-tax dollar contributions, presumed to be Roth assets or traditional assets with no deduction

13.5: EMPLOYER dollar MATCHING contributions to most defined contribution retirement plans

This section is for employer matching contributions into 401(k), 403(b), 457, SARSEP & federal Thrift Savings plans

Do NOT use this section for SEP-IRA plans or SIMPLE-ERA plans (Instead, go to Section 7 below.)

Employers who sponsor defined contribution retirement plans can make additional contributions into employee accounts in addition to the contributions that employees themselves make. These additional employer contributions usually are made as matching contributions and/or as larger contribution incentives to a much smaller set of employees. The laws that underlie these retirement plans, including the Employee Retirement Income Security Act of 1974 (ERISA), require annual fairness tests for a plan to remain qualified and still permit disproportionate contributions to select employees.

Many companies will offer some form of matching contribution to encourage broader participation. Matching contributions are, in effect, free additional compensation for employees who are willing to contribute to their retirement accounts. This increases the overall employee participation percentage.

Enter employer matching limits for your employer-sponsored retirement plans

Employer matching contributions can take a variety of forms by dollar amounts and percentages. To simplify your inputs, in the gray user input boxes simply enter the maximum dollar amount annually that your employer would match, if you made sufficient personal contributions to capture that full dollar match each year. Employer matching dollars are tax-deferred contributions.

Earnar #1's Maximum annual dollar MATCHING employer plan contributions

<< EARNER #1 -- Maximum contribution limit to employer plans (Depends upon your selection at the top of the page)
 << Additional contributions allowed for employees over 50 years of age

Enter Earnar #1's employer's annual matching dollar maximum here:

<< EARNER #1 -- Maximum potential EMPLOYER tax-advantaged ANNUAL DOLLAR MATCHING
* (The lesser of the personal dollar contribution or the employer matching maximum is used)

Earnar #2's Maximum annual dollar MATCHING employer plan contributions

<< EARNER #1 -- Maximum contribution limit to employer plans (Depends upon your selection at the top of the page)
 << Additional contributions allowed for employees over 50 years of age

Enter Earner #2's employer's annual matching dollar maximum here:

<< EARNER #2 -- Maximum potential EMPLOYER tax-advantaged ANNUAL DOLLAR MATCHING
* (The lesser of the personal dollar contribution or the employer matching maximum is used)

13.6: Additional pre-tax and/or after-tax contributions to defined contribution retirement plans

This section is for additional contributions into 401(k), 403(b), 457, SARSEP & federal Thrift Savings plans

Do NOT use this section for SEP-IRA plans or SIMPLE-ERA plans (Instead, go to Section 7 below.)

The lower part of this section allows you to set the pre-tax and after-tax proportions of these contributions

Use this section for additional employer contributions into most kinds of employer plans, including 401(k), 403(b), 457, SARSEP, and federal employee Thrift Savings Plans. Do NOT use this section for SEP-IRA plans or SIMPLE-ERA plans. SEP and SIMPLE plans have a separate section below.

While this section applies primarily to additional employer contributions into plans, some plans allow employees to direct that additional portions of their compensation be contributed, and they have the choice of contributing pre-tax (deferred) dollars or after-tax dollars that get transferred into Roth retirement accounts. The lower portion of this section allows you to control whether the proportions of pre-tax and after-tax additional contributions.

In addition to any matching contributions provided, employers may make additional incentive contributions into employee's accounts. In larger organizations, these additional contributions tend to be incentives for only a few, selected employees. Both employee and employer contributions (including matching dollars) combined are subject to annual dollar maximums and to a percent of annual compensation test. Additional rules that may further restrict total potential annual contributions.

There are other circumstances where individuals can make both employee-side personal contributions and employer-side company contributions up to legal maximums. Such an example is a self-employed individual with a profitable small business who sets up an individual 401(k) plan. If this person has no other employees and being both the employee and the employer, with high enough income this person can contribute up to the maximum of both the employer side and the employee side, while following any other legal requirements for the plan.

Another example is an employee working in a small firm with a SEP IRA plan. All SEP IRA plan participants will have the same percentage of compensation contributed to their SEP IRA. If their compensation is sufficiently high these contributions will be limited by the combined employee and employer maximums in this section.

The combined maximum limitation on annual contributions is set out in Section 415 of the Internal Revenue Code and is updated annually. The limitation for defined contribution plans is provided for in 415(c)(1)(A) and is listed below.

An employer's deduction for contributions to a defined contribution plan cannot be more than 25% of the compensation paid during the year to an employee participating in the plan. There is also maximum amount of the employee compensation that can be taken into account when determining total employer and employee contributions.

Maximum overall contribution limits for defined contribution plans under Section 415(c)(1)(A)

Total annual combined employee and employer contributions cannot exceed the lesser of:

\$66,000 << The maximum annual combined employee and employer contributions limit

100% << This percentage of annual employee compensation

Any employer's matching dollars are included in these annual contribution limits. However, if the employee is over 50 and elects to make additional and allowable catch-up contributions, these catch-up contributions are NOT included, when calculating the overall annual contribution limits. Therefore, over 50, the annual limit is higher to the extent of allowable catch-up contributions.

How you can project any additional EMPLOYER contributions to your plan

If you believe that your employer will consistently make additional future annual contributions beyond any matching dollars, you can adjust the percentage below to project your employer's added contributions. The default percentage is set at 0%, which means your employer would NOT add any contributions beyond any matching dollars that you have indicated.

VeriPlan will use the following method to project additional employer contributions:

- a) The maximum total employee and employer annual contribution is shown below.
- b) Based upon the type of plan you have chosen, your personal employee contribution is shown below and subtracted.
- c) Any employer matching dollars that you entered above are shown below and subtracted

The result is the maximum annual additional dollars that your employer could contribute to your retirement account, IF you would have sufficient compensation and IF your employer would be willing to contribute up to this annual total.

VeriPlan will automatically use your projected combined earned income and self-employment income to calculate the amount that your employer could contribute annually **using the lesser of:**

- a) The maximum total employee and employer annual contribution shown below.
- b) 100% of your annual earned income

VeriPlan combines both your wage and salary income and your self-employment income, since it cannot tell which income is related to the employer retirement plan. However, your compensation is likely to be concentrated in one of these two categories. In addition, VeriPlan will include any positive or negative year-by-year earned income entries that you make in Section 4 of the Income worksheet, which could be expected bonuses, adjustments for planned part-time work, etc. If your income sources are separate, then you should adjust your percentage entry below accordingly.

Earners #1's expected additional EMPLOYER contributions to the retirement plan

	\$66,000	<< Maximum annual combined contribution limit (subject to the sufficient compensation test)
MINUS	\$22,500	<< Maximum EMPLOYEE contribution to the plan (depends upon your plan selection near the top)
MINUS	\$0	<< Expected EMPLOYER annual dollar matching that you entered in the previous section

EQUALS	\$43,500	<<< The maximum ADDITIONAL dollars that your EMPLOYER could contribute up to the maximum
--------	----------	--

100%	<< What percentage of these potential additional EMPLOYER contributions above do you want to project?
^^^^	Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend.

\$43,500	<< Your percentage means your employer would contribute these additional dollars yearly, if your annual
	Of course, your employer plan must allow and make these contributions.

These are your current year wage and salary and self-employment income entries on the Income worksheet. In each year, VeriPlan will compare their total plus any future year-by-year income adjustments you make in Section 4 of the Income worksheet to the maximum combined legal contributions limit above and use the lesser of the two amounts to limit total contributions.

\$80,000	<< Earner #1's annual wage and salary income
\$0	<< Earner #1's annual self-employment business income

Earner #2's expected additional EMPLOYER contributions to the retirement plan

	\$66,000	<< Maximum annual combined contribution limit (subject to the sufficient compensation test)
MINUS	\$22,500	<< Maximum EMPLOYEE contribution to the plan (depends upon your plan selection near the top)
MINUS	\$0	<< Expected EMPLOYER annual dollar matching that you entered in the previous section

EQUALS	\$43,500	<<< The maximum ADDITIONAL dollars that your EMPLOYER could contribute up to the maximum
--------	----------	--

50%	<< What percentage of these potential additional EMPLOYER contributions above do you want to project?
^^^^	Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend.

\$21,750	<< Your percentage means your employer would contribute these additional dollars yearly, if your annual
	Of course, your employer plan must allow and make these contributions.

These are your current year wage and salary and self-employment income entries on the Income worksheet. In each year, VeriPlan will compare their total plus any future year-by-year income adjustments you make in Section 4 of the Income worksheet to the maximum combined legal contributions limit above and use the lesser of the two amounts to limit total contributions.

\$0	<< Earner #2's annual wage and salary income
\$65,000	<< Earner #2's annual self-employment business income

Would these additional contributions be made with pre-tax (deferred) dollars or after-tax dollars?

You can choose whether the additional contributions chosen above will be made with pre-tax dollars and/or with after-tax dollars

Regarding your additional planned contributions, this section allows Earner #1 and Earner #2 to:

- A) make all contributions with pre-tax (deferred) dollars, which will reduce current income taxes
- B) make all contributions with after-tax dollars, which will not reduce current income taxes
- C) choose some combination of A and B

The percentage boxes below ask what percent of planned contributions will be made with pre-tax (deferred) dollars, and the default is set at 100%. To increase the after-tax dollar contributions allocation, simply lower the percentage. If all dollars are to be after-tax dollars, enter 0%.

Earner #1's pre-tax and after-tax contribution proportions

<< Your planned annual contributions after any % limitation -- when your projected annual income is \$43,500

<< What percentage of Earner #1's additional contributions should be pre-tax (deferred) dollars? (Default = 100%)
Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of the two.

= << Pre-tax (deferred) traditional dollar contributions

= << After-tax dollar contributions, which are presumed to be quickly converted into Roth assets

Earner #2's pre-tax and after-tax contribution proportions

<< Your planned annual contributions after any % limitation -- when your projected annual income is \$21,750

<< What percentage of Earner #2's additional contributions should be pre-tax (deferred) dollars? (Default = 100%)
Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of the two.

= << Pre-tax (deferred) traditional dollar contributions

= << After-tax dollar contributions, which are presumed to be quickly converted into Roth assets

13.7: EMPLOYER contributions to SEP-IRA and SIMPLE-IRA plans on your behalf

SEP-IRA employer plans

SEP (Simplified Employee Pension) IRA plans operate differently than other employer-sponsored defined contribution plans. The employer makes the same percentage of compensation contributions for all employees. The employer can decide what that compensation percentage will be up to 25% of compensation, but the total contribution to an employee in any year is limited by an annual dollar maximum.

The most an employer can contribute is the LESSER OF either:

- A) the maximum contribution limit OR
- B) 25% times the employee's total annual compensation.

Contributions defer income, reduce current income taxes, and are made into traditional IRA accounts.

Employees cannot make direct compensation related contributions to a SEP-IRA, however, they may be able to add into their SEP-IRA account their own personal IRA contributions up to individual IRA limits. Note that total contributions each year into all IRAs (SEP, traditional, and/or Roth) cannot exceed this annual SEP dollar maximum.

When you select a SEP-IRA plan in VeriPlan in Section 3 above, it will indicate zero dollars for both personal contributions and over age 50 contributions. SEP-IRA plans do not offer over age 50 catch up contributions.

With a SEP IRA, simply enter the percentage of compensation from 0% up to 25% that you project your employer will contribute to your SEP_IRA account annually in the future. (The default is set to 0%, which means no employer contributions, but why have a plan then?)

Given the percentage the user enters below, VeriPlan will automatically project the maximum allowable contribution in each projection year as the lesser of the maximum SEP dollar limit or the percentage you enter from 0% up to 25% times you projected annual compensation.

VeriPlan combines both your wage and salary income and your self-employment income, since it cannot tell which income is related to the employer retirement plan. However, your compensation is likely to be concentrated in one of these two categories. In addition, VeriPlan will include any positive or negative year-by-year earned income entries that you make in Section 4 of the Income worksheet, which could be expected bonuses, adjustments for planned part-time work, etc. If your income sources are separate, then you should adjust your percentage entry below accordingly.

SEP-IRA employer contribution parameters (user changeable near the bottom of this worksheet)

SEP-IRA employer contribution parameters (user changeable near the bottom of thi

<< Maximum annual contribution limit

<< SEP-IRA maximum annual compensation that can be considered

<< Maximum contributions as a percentage of employee compensation

Earnar #1's expected additional EMPLOYER contributions to the SEP-IRA plan

When Earnar #1's employer offers a SEP-IRA retirement plan, what percent of compensation will the employer contribute?

25% of compensation is the maximum contribution % for a SEP-IRA plan, so enter from 0% up to 25% below

<< What percentage of Earnar #1's compensation do you expect you employer will contribute?
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<< Earnar #1's annual wage and salary income

<< Earnar #1's annual self-employment business income

Earnar #1's pre-tax and after-tax SEP-IRA contribution proportions

<< What percentage of Earnar #1's additional contributions should be pre-tax (deferred) dollars?
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% setting would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of both.

Note the discussion in the previous section titled: "How can my after-tax contributions become Roth assets?" VeriPlan will categorize after-tax contributions as Roth contributions presuming that these contributions will be converted to Roth dollars.

Earnar #2's expected additional EMPLOYER contributions to the SEP-IRA plan

When Earner #2's employer offers a SEP-IRA retirement plan, what percent of compensation will the employer contribute?

25% of compensation is the maximum contribution % for a SEP-IRA plan, so enter from 0% up to 25% below

<< What percentage of Earner #1's compensation do you expect your employer will contribute?
^^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<< Earner #2's annual wage and salary income

<< Earner #2's annual self-employment business income

<< What percentage of Earner #2's additional contributions should be pre-tax (deferred) dollars?
^^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% setting would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of both.

Note the discussion in the previous section titled: "How can my after-tax contributions become Roth assets?" VeriPlan will categorize after-tax contributions as Roth contributions presuming that these contributions will be converted to Roth dollars.

SIMPLE-IRA employer plans

Personal employee contributions to SIMPLE IRA plan include the annual legal maximum and over age 50 catch up contributions, when allowed by the plan. These personal contributions reduce current taxable income in the year they are made. The user can adjust their projected contributions in Section 4 above using a percentage. The annual legal limits are user changeable near the bottom of this worksheet. Contributions to personal individual IRA accounts must be made to a separate IRA account and cannot be added to a SIMPLE- IRA account.

Employers are supposed to make additional contributions to the employee's account either as matching contributions or as non-elective contributions:

- A) Employer matching contributions: The employer is generally required to match each employee's salary reduction contributions on a dollar-for-dollar basis up to 3% of the employee's compensation.

B) Non-elective contributions: An employer can choose to make non-elective contributions of 2% of each eligible employee's compensation, but must contribute 2% of compensation, whether or not the employee is contributing personally.

The employee's maximum compensation that can be considered for a SIMPLE-IRA plan is the same as that of a SEP-IRA plan.

VeriPlan combines both your wage and salary income and your self-employment income, since it cannot tell which income is related to the employer retirement plan. However, your compensation is likely to be concentrated in one of these two categories. In addition, VeriPlan will include any positive or negative year-by-year earned income entries that you make in Section 4 of the Income worksheet, which could be expected bonuses, adjustments for planned part-time work, etc. If your income sources are separate, then you should adjust your percentage entry below accordingly.

Earner #1's expected additional EMPLOYER contributions to the SIMPLE-IRA plan

When Earner #1's employer offers a SIMPLE-IRA retirement plan

Enter either 2% or 3% depending on the contribution policy your employer has chosen

<< What percentage will your employer contribute (Default = 2%; The only other choice is 3%)
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<< Earner #1's annual wage and salary income

<< Earner #1's annual self-employment business income

<< What percentage of Earner #1's additional contributions should be pre-tax (deferred) dollars?
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% setting would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of both.

Note the discussion in the previous section titled: "How can my after-tax contributions become Roth assets?" VeriPlan will categorize after-tax contributions as Roth contributions presuming that these contributions will be converted to Roth dollars.

Earner #2's expected additional EMPLOYER contributions to the SIMPLE-IRA plan

When Earner #2's employer offers a SIMPLE-IRA retirement plan

Enter either 2% or 3% depending on the contribution policy your employer has chosen

<< What percentage will your employer contribute (Default = 2%; The only other choice is 3%)
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<< Earner #2's annual wage and salary income

<< Earner #2's annual self-employment business income

<< What percentage of Earner #1's additional contributions should be pre-tax (deferred) dollars?
^^^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

If you set this box to 100%, then all contributions would be made with traditional, deferred tax dollars. Conversely, a 0% setting would mean all contributions would be made with after-tax dollars. Settings between 0% and 100% would be a combination of both.

Note the discussion in the previous section titled: "How can my after-tax contributions become Roth assets?" VeriPlan will categorize after-tax contributions as Roth contributions presuming that these contributions will be converted to Roth dollars.

13.8: Use VeriPlan's retirement contribution limitation tools

Overview of VeriPlan's retirement contribution limitation tools

In addition to VeriPlan's automatic limitation of contributions when projected income and/or assets are not available to make contributions, VeriPlan offers additional contribution controls for you to use. When you use these tax-advantaged annual contribution control tools explained below, you can perform what-if testing and compare the projected impact of recognizing taxes earlier versus later in your projected financial lifecycle. These tools can help you to calibrate the importance to you of tax-advantaged retirement investment accounts.

1) Limit your potential contributions into both traditional IRA and Roth IRA accounts (Section 2 above)

By default, whenever the IRA tax rules and your projected earned income and other finances permit, VeriPlan's projections will automatically make future contributions for you into either traditional IRA accounts and/or Roth IRA accounts. In Section 2 above, you can adjust this default total IRA contributions behavior. The default is set at 100% of potentially allowed IRA

contributions. By entering below any percentage between 0% and 100%, you can adjust your potential future IRA contributions.

2) Total contribution limitation tool (in this section below)

As long, as you have sufficient earned income in any year, you have a right to make annual IRA contributions, EVEN IF your projected annual total expenses, debt payments, and tax payments exceed your projected income. In such a negative cash flow year you could draw down your other taxable investment assets to fund your IRA contributions. When this occurs in a single projection year, it tends not to be problematic, but for a series of years, it can cause problems. The situation is the same for your employer plan contributions and these problems can be compounded, when you are also contributing larger amounts to employer plans in negative cash flow years.

When all of your investment assets end up in retirement accounts and negative cash flow continues, this will cause repeated annual withdrawals from retirement accounts. These withdrawals would entail unnecessary taxation, and when they occur prior to age 59 & 1/2, early withdrawal penalties would also kick in. To prevent this problem, this VeriPlan tool is activated by default to limit both IRA contributions and employer plan contributions to projections years with positive cash flow. You can turn it off and adjust it.

With this mechanism you can control your total projected contributions to both traditional and Roth accounts. When you use this tool, VeriPlan will make contributions to your traditional tax-deferred and Roth tax-initially-not-later accounts only in years in which you are projected to have positive net cash flow. This tool allows you to make up to the maximum legal contribution that could be funded from current positive cash flow, but it can prevent the conversion of your existing taxable assets into tax-advantaged assets.

You use this tool by setting your projected contributions to be a percent of your projected positive net cash flow -- potentially up to the legal maximums.

If you do not activate this tool, then VeriPlan will make contributions in any year that you have: a) positive net cash flow and/or b) taxable cash, fixed income, or equity financial assets that can be converted.

3) Roth contribution limitation tool, which is found in Section 2 of the yellow-tabbed "Roth Analysis" worksheet.

This third mechanism allows you to control the proportion of your projected contributions that would be contributed to Roth retirement accounts up to legal maximums. The Roth contribution limitation tool will control your overall contributions into Roth IRA accounts and into 401(k), 403(b), or 457 plans that offer a designated Roth contributions option. This Roth contribution limitation tool can be used in conjunction with or independently of VeriPlan's other contribution limitation tools.

VeriPlan's total contribution positive cash flow limitation tool

Limit all traditional and Roth tax-advantaged retirement plan contributions to years with positive net cash flow

The total contribution limitation tool allows you to set your personal limitation on tax-advantaged account deposits, as a percent of your annual POSITIVE net cash flows.

VeriPlan's ability to develop projection revisions instantly allows you to analyze and to tune your taxable versus tax- deferred financial asset investment strategy. While many VeriPlan users will want to make maximum use of tax advantaged investing opportunities, others may want to impose additional limitations. Some users will want to ensure that they will always have financial assets in both taxable and tax-advantaged accounts. This total contribution limitation tool allows such users to achieve this objective. You should to decide whether you wish to maintain any, some, or a lot of taxable assets in proportion to your tax advantaged financial assets. Where to set the balance is a matter of personal choice.

For example, you may acquire substantial tax-advantaged assets and very few taxable assets over time. If substantial planned or unplanned expenses occur, then you might have to liquidate tax-advantaged assets and pay taxes at ordinary income tax rates when you would prefer not to. Furthermore, if this happens under the age of 59 and 1/2, then you might incur federal and possibly even state early withdrawal penalties. Note, however, that scientific investment studies indicate that the financial advantages of tax-advantaged investing are sufficiently strong that they compensate relatively quickly for the taxes and penalties associated with withdrawals from tax-advantaged accounts, when unanticipated expenses must be paid.

When this tool is activated (the default), VeriPlan will only make contributions from positive annual cash flow. If this tool is deactivated, VeriPlan will: A) make contributions from positive annual cash flow (like the default) and B) draw down existing taxable account assets to

make allowable contributions in years when cash flow is negative. When this tool is turned off, VeriPlan would be more aggressive with retirement contributions, but it might convert all of your taxable assets into retirement assets over time. Thereafter, if cash flow continued to be negative, undesired early retirement plan and IRA distribution taxes and penalties might ensue.

1 << Enter 1 (one) to use this tool (THE DEFAULT); Enter 0 (zero) to turn it off.

1 (one) means that you must have positive projected net cash flow to make any contributions in any particular year.

0 (zero) means that you could have either positive projected net cash flow and/or positive projected TAXABLE ACCOUNT cash, fixed income, or equity financial assets to make contributions in a particular year. (Consider turning this tool off, if you already have substantial assets in taxable accounts.)

Setting your Percentage Limitation for this total contribution limitation tool

To calibrate this tool, simply enter a positive percentage into the bold border user data entry box below. Whenever you change this percentage, VeriPlan will instantly develop a new projection for you to evaluate.

Set your personal limitation on tax-advantaged account deposits as a percent of your annual positive net cash flow

100% << What maximum percentage of projected annual positive net cash flow for Earners #1 and #2 would you like to deposit into tax-advantaged and/or Roth 'tax-initially-not-later' accounts?

Note that this tool's percentage limitation refers to your projected available annual net cash flow after expense, tax, and debt payments. It is NOT a percentage of your maximum legally allowable contributions across all tax-advantaged plans in which you may be eligible to participate. Your legally allowable maximum contributions could be lower or higher. Maximum contributions depend upon compensation and other factors.

13.9: Annual contribution limits for traditional and Roth IRAs

This section provides a table that summarizes IRA tax rules. It also allows you to update VeriPlan, if IRA contribution limits change.

**YOU DO NOT NEED TO CHANGE ANY NUMBERS IN THE SECTIONS BELOW,
UNLESS THE TAX LAWS CHANGE**

This section provides user updatable information about your potential maximum contributions into Independent Retirement Arrangement (IRA) accounts, including both traditional IRA and Roth IRA accounts. Whether or not you or your spouse may participate in employer-sponsored tax-advantaged programs, you can also make annual contributions to an IRA, if you and/or your spouse has sufficient compensation in that year. (Whether or not these contributions are deductible on your income taxes is managed automatically and is discussed below.)

VeriPlan uses current tax rules to develop projections that take into account automatically :

- * the maximum potential contributions for you, if single, or for you and your spouse, if married.
- * your compensation
- * any additional catch-up contributions that you can make over age 50

VeriPlan automatically projects your future contributions into traditional IRA accounts and Roth IRA accounts, while it automatically takes into account contribution limitations, tax deductibility, and applicable taxes on withdrawals net of any tax basis. Most of the information in this section is educational. In addition, below you can change the parameters that VeriPlan uses to develop its IRA projections, if the tax laws change in the future.

View these informational YouTube videos:

[Traditional Individual Retirement Account \(IRA\) Contribution Limits and Deduction Rules](https://www.youtube.com/watch/F5bFcRmTnkc)

<https://www.youtube.com/watch/F5bFcRmTnkc>

[Roth IRA Contribution Limits and Rules](https://www.youtube.com/watch/GGUu99uIWt0)

<https://www.youtube.com/watch/GGUu99uIWt0>

The tax rules about traditional IRAs and Roth IRAs are complex. The tax rules for traditional and Roth IRAs are very complex, and anyone could easily become confused by the rules. A careful reading of the 100+ page IRS Publication 590, "Individual Retirement Arrangements (IRAs)" would make anyone's head hurt.

THE IRA RULES AND NUMBERS IN THE CHART TO THE RIGHT ARE FOR YOUR REFERENCE.

This chart is broken into three parts below, but the first two columns are included in all three parts. Note that the numbers may not be for the most recent year, but the numbers in the latest VeriPlan release are the most recent available.

WHAT IS YOUR FILING STATUS?	WHAT TYPE OF IRA?	ARE YOU (Earner #1) COVERED BY A RETIREMENT PLAN AT WORK? (1)	IS YOUR SPOUSE (Earner #2) COVERED BY A RETIREMENT PLAN AT WORK? (1)	WHAT IS THE ANNUAL UPPER LIMIT ON YOUR CONTRIBUTIONS?	WHAT IS THE UPPER LIMIT ON ADDITIONAL CATCH-UP CONTRIBUTIONS?	WHAT IS THE MINIMUM AGE FOR CATCH-UP CONTRIBUTIONS?	WHAT IS THE MAXIMUM AGE TO MAKE CONTRIBUTIONS?
SINGLE	traditional	No	NA	\$6,500	\$1,000	50	None
SINGLE	traditional	Yes	NA	\$6,500	\$1,000	50	None
SINGLE	Roth	No	NA	\$6,500	\$1,000	50	None
SINGLE	Roth	Yes	NA	\$6,500	\$1,000	50	None
MARRIED-JOINT	traditional	No	No	\$6,500	\$1,000	50	None
MARRIED-JOINT	traditional	No	Yes	\$6,500	\$1,000	50	None
MARRIED-JOINT	traditional	Yes	No	\$6,500	\$1,000	50	None
MARRIED-JOINT	traditional	Yes	Yes	\$6,500	\$1,000	50	None
MARRIED-JOINT	Roth	No	No	\$6,500	\$1,000	50	None
MARRIED-JOINT	Roth	No	Yes	\$6,500	\$1,000	50	None
MARRIED-JOINT	Roth	Yes	No	\$6,500	\$1,000	50	None
MARRIED-JOINT	Roth	Yes	Yes	\$6,500	\$1,000	50	None

WHAT IS YOUR FILING STATUS?	WHAT TYPE OF IRA?	YOUR (YOUR FAMILY) COMPENSATION BE EQUAL TO OR GREATER THAN YOUR CONTRIBUTION? (2)	DOES A JOINT COMPENSATION TEST APPLY TO MARRIED TAXPAYERS?	COULD HIGHER COMPENSATION LIMIT YOUR CONTRIBUTION?	COULD HIGHER ADJUSTED GROSS (A.G.I.) INCOME LIMIT YOUR CONTRIBUTION? (3)	WHAT IS THE LOWER A.G.I. BOUND TO BEGIN CONTRIBUTION PHASE-OUT?	WHAT IS THE UPPER A.G.I. BOUND FOR FULL CONTRIBUTION PHASE-OUT?	IS YOUR CONTRIBUTION POTENTIALLY DEDUCTIBLE?
SINGLE	traditional	Yes	NA	No	No	NA	NA	Yes
SINGLE	traditional	Yes	NA	No	No	NA	NA	Yes
SINGLE	Roth	Yes	NA	No	Yes	\$138,000	\$153,000	No
SINGLE	Roth	Yes	NA	No	Yes	\$138,000	\$153,000	No
MARRIED-JOINT	traditional	Yes	Yes	No	No	NA	NA	Yes
MARRIED-JOINT	traditional	Yes	Yes	No	No	NA	NA	Yes
MARRIED-JOINT	traditional	Yes	Yes	No	No	NA	NA	Yes
MARRIED-JOINT	traditional	Yes	Yes	No	No	NA	NA	Yes
MARRIED-JOINT	Roth	Yes	No	No	Yes	\$218,000	\$228,000	No
MARRIED-JOINT	Roth	Yes	No	No	Yes	\$218,000	\$228,000	No
MARRIED-JOINT	Roth	Yes	No	No	Yes	\$218,000	\$228,000	No
MARRIED-JOINT	Roth	Yes	No	No	Yes	\$218,000	\$228,000	No

WHAT IS YOUR FILING STATUS?	WHAT TYPE OF IRA?	MIGHT YOUR DEDUCTION BE LIMITED?	WHAT IS THE LOWER A.G.I. BOUND TO BEGIN DEDUCTION PHASE-OUT?	WHAT IS THE UPPER A.G.I. BOUND FOR FULL DEDUCTION PHASE-OUT?	AT WHAT AGE MUST YOUR DISTRIBUTIONS BEGIN? *	WHAT TAX RATES WOULD APPLY TO DISTRIBUTIONS?
SINGLE	traditional	No	None	None	73 or 75	Ordinary
SINGLE	traditional	Yes	\$73,000	\$83,000	73 or 75	Ordinary
SINGLE	Roth	NA	NA	NA	None	No taxes
SINGLE	Roth	NA	NA	NA	None	No taxes
MARRIED-JOINT	traditional	No	None	None	73 or 75	Ordinary
MARRIED-JOINT	traditional	Yes	\$218,000	\$228,000	73 or 75	Ordinary
MARRIED-JOINT	traditional	Yes	\$116,000	\$136,000	73 or 75	Ordinary
MARRIED-JOINT	traditional	Yes	\$116,000	\$136,000	73 or 75	Ordinary
MARRIED-JOINT	Roth	NA	NA	NA	None	No taxes
MARRIED-JOINT	Roth	NA	NA	NA	None	No taxes
MARRIED-JOINT	Roth	NA	NA	NA	None	No taxes
MARRIED-JOINT	Roth	NA	NA	NA	None	No taxes

Footnotes:

- 1) A retirement plan at work would be a defined contribution plan or a defined benefit (pension) plan. Whether or not you participate does not matter. It only matters, if you are covered. The deductibility of your traditional IRA contribution may be affected, if you or your spouse are covered by an employer-sponsored retirement plan at work. Roth IRA contributions are not deductible, so coverage by a plan at work is irrelevant.
- 2) To make any IRA contribution, you or your spouse must have compensation that is equal to or greater than the contribution. Compensation includes wages, salary, commissions, active self-employment or partnership income (no losses), alimony and separate maintenance payments.

- 3) If your annual modified Adjusted Gross Income (AGI) exceeds certain levels, IRS rules may limit or eliminate your income tax deductions for your contribution to a traditional IRA account or your contributions to a Roth IRA account. VeriPlan projects your Adjusted Gross Income without modifications, because the IRS factors that go into the AGI modifications either would be immaterial for the great majority of taxpayers and/or would apply for only a few years, during the projections of most taxpayers.

The numbers cannot be changed directly in the chart to the right, instead, key numbers can be changed and updated in the bold border user data entry boxes below on this worksheet.

If you change any of the figures in the bold border data entry boxes below, then VeriPlan will use your revisions to develop projections for you. This allows you to maintain current tax information, and avoid VeriPlan application obsolescence.

Limitations on traditional and Roth IRA contributions

VeriPlan uses the following user updatable contribution limits to develop your projections. Update this information, if these figures change. You can find current year figures on the IRS website using the website search facility. Be careful to distinguish between IRS limits on contributions versus limits on income tax deductions.

Annual per person contribution limits for traditional IRA accounts

CHANGE ONLY, IF TAX LAWS CHAN

Note the tax year for these IRA limits, if you

\$6,500	<< Maximum annual individual contribution limit for IRA accounts
\$1,000	<< Additional annual IRA account contributions for age 50 or older

* Currently, you may contribute to a traditional IRA account and there is no age limit, but you and/or your spouse must have joint earned compensation that is equal to or greater than your IRA contribution. Your taxable compensation income related to IRA maximum limits consists of your wage, salary, commission, and self-employment income, which VeriPlan also collects on the income worksheet.

* In the relatively unlikely event that either a contribution cutoff age is re-imposed or the 50 year age for catch-up contributions were to change in the future, you can set the new age(s) further down on this worksheet.

Age limitations on IRA contributions

Enacted in December 2109, the SECURE Act eliminated the maximum age for traditional IRAs contributions, which had been age 70.5. In contrast, Roth IRA contributions had not had and do not have an age cap, but there are taxable income limits that restrict your contributions. For both types of IRAs you must have sufficient annual compensation.

Annual per person contribution limits for Roth IRA accounts

CHANGE ONLY, IF TAX LAWS CHAN

Note the tax year for these IRA limits, if you

\$6,500	<< Maximum annual individual contribution limit for Roth IRA accounts
\$1,000	<< Additional annual Roth IRA account contribution for age 50 or older *

* There is no upper age limit for contributing to a Roth IRA account, but you must have earned compensation that is equal to or greater than your Roth IRA contribution.

Roth IRA contribution phase-out limits related to your modified Adjusted Gross Income

If your annual modified Adjusted Gross Income (AGI) exceeds certain levels, IRS rules may limit or eliminate your contributions to a Roth IRA by using a modified AGI phase-out range. The level of these phase-outs depends upon filing status. In its projections, VeriPlan uses a projection of your Adjusted Gross Income without modifications, because the IRS factors that go into the AGI modifications either would be immaterial and/or would apply for only a few years during the projections of most taxpayers.

\$138,000	<< Roth Modified AGI for a Single Individual -- beginning of CONTRIBUTION phase-out
\$153,000	<< Roth Modified AGI for a Single Individual -- full CONTRIBUTION phase-out

\$218,000	<< Roth Modified AGI for Married Filing Jointly -- start of CONTRIBUTION phase-out
\$228,000	<< Roth Modified AGI for Married Filing Jointly -- full CONTRIBUTION phase-out

13.10: Income tax deduction limits for traditional IRA contributions

This section allows you to update VeriPlan, if IRA tax deduction rules change.

YOU DO NOT NEED TO CHANGE ANY NUMBERS IN THIS SECTION, UNLESS TAX LAWS CHANGE

The most simple rule about the deductibility of IRA contributions is that Roth IRA contributions are never deductible. Therefore, this section will focus on the income tax deductibility of your contributions to traditional IRA accounts.

Traditional IRA deductibility limits can depend upon tax filing status, whether you or your spouse are covered by and eligible to participate in an employer-sponsored retirement plan (whether or not you do so), and the amount of your modified Adjusted Gross Income. VeriPlan's projections manages these limits automatically. For more detailed information on these deductibility limitations, see the chart on this worksheet.

Limitations on the deductibility of your IRA contributions

To develop your projections, VeriPlan uses the following user updatable income tax deductibility limits related to your IRA contributions. Update this information, if these figures change. You can find current year figures on the IRS website using the website search facility. Be careful to distinguish between IRS limits on contributions versus limits on income tax deductions. With traditional IRAs, some or all of your contributions may be deductible and may reduce your reportable income. However, if you do not qualify for deductions, you can still make contributions. You simply cannot deduct traditional IRA contributions that exceed the deductibility limits. Roth IRA contributions are always made with after-tax dollars and are never deductible. VeriPlan develops projections that automatically account for these rules using the current tax laws.

Deductibility limitations on IRA contributions

If your annual modified Adjusted Gross Income (AGI) exceeds certain levels, IRS rules may limit or eliminate the deductibility of your traditional IRA contributions by using a modified AGI phase-out range. The level of these phase-outs depends upon filing status and whether you or your spouse are covered by a retirement plan at work. In its projections, VeriPlan uses a projection of your Adjusted Gross Income without modifications, because the IRS factors that go into the AGI modifications either would be immaterial and/or would apply for only a few years during the projections of most taxpayers. (Do not confuse potentially limited deductions on contributions to traditional IRA accounts, with potentially limited contributions to Roth IRA

accounts, which are never deductible. Limits in both situations are based on various levels of modified AGI.)

IRA Deductibility, if you personally ARE NOT COVERED by a retirement plan at work

If you are single, head of a household, or a qualifying widow(er) you can take a full deduction.

If you are married filing jointly or separately, and your spouse IS NOT covered by a retirement plan at work, you can take a full deduction.

However, if your spouse IS covered by a retirement plan at work, then your deduction may be partially or fully eliminated depending upon your modified AGI. Here is the modified AGI phase-out range for the deductibility of your IRA contributions:

\$218,000	<< Modified AGI for you, when your spouse has a retirement plan at work -- start of DEDUCTION phase-out
\$228,000	<< Modified AGI for you, when your spouse has a retirement plan at work -- full DEDUCTION phase-out

IRA Deductibility, if you personally ARE COVERED by a retirement plan at work

If you are single or head of a household, then your deduction may be partially or fully eliminated depending upon your modified AGI. Here is the modified AGI phase-out range for the deductibility of your IRA contributions:

\$73,000	<< Modified AGI for Single filing status -- start of DEDUCTION phase-out
\$83,000	<< Modified AGI for Single filing status -- full DEDUCTION phase-out

If you are married, filing jointly, then your deduction may be partially or fully eliminated depending upon your modified AGI, IF EITHER YOU OR YOUR SPOUSE ARE COVERED BY A RETIREMENT PLAN AT WORK. Here is the modified AGI phase-out range for the deductibility of your and your spouse's IRA contributions:

\$116,000	<< Modified AGI for Married filing jointly status WITH a work plan -- start of DEDUCTION phase-out
\$136,000	<< Modified AGI for Married filing jointly status WITH a work plan -- full DEDUCTION phase-out

13.11: Limits for contributions to employer defined-contribution retirement plans

VeriPlan uses the following user updatable contribution limits to develop your projections. Update this information, if these figures change. You can find current year figures on the IRS website using the website search facility.

Maximum elective employee deferrals for traditional 401(k), 403(b), 457, SARSEP, and federal employee Thrift Savings Plans

\$22,500	<< Maximum annual contribution limit
\$7,500	<< Additional annual contribution for age 50 or older

Maximum elective deferrals for SIMPLE plans

\$15,500	<< Maximum annual contribution limit
\$3,500	<< Additional annual contribution for age 50 or older

Maximum contribution limits for "designated Roth" 401(k), 403(b), and 457 plans

\$22,500	<< Maximum annual contribution limit
\$7,500	<< Additional annual contribution for age 50 or older

Maximum overall contribution limits for defined contribution plans under Section 415(c)(1)(A)

The lesser of:

\$66,000	<< Maximum annual combined employee and employer contribution limit (subject to the compensation test)
----------	--

OR

100%	<< Maximum annual combined contributions as a percentage of the individual employee's annual compensation
------	---

SEP-IRA contribution factors

The maximum contribution is the lesser of the maximum limit or the maximum percentage times annual compensation up to the maximum.

\$66,000 << **Maximum annual contribution limit**

\$330,000 << **Maximum annual compensation that can be considered
(for SEP-IRA and SIMPLE-IRA plans)**

25% << **Maximum contributions as a percentage of employee compensation**

13.12: Age limits that affect tax-advantaged retirement plans

This section allows you to update VeriPlan, if the age limits for tax-advantaged plans change.

YOU DO NOT NEED TO CHANGE ANY NUMBERS IN THIS SECTION, UNLESS
THE TAX LAWS CHANGE

Minimum 'catch-up' contribution age for traditional and Roth tax-advantaged accounts

Currently, 50 years is the minimum age at which tax regulations allow a plan participant to make additional annual 'CATCH-UP' CONTRIBUTIONS into traditional and Roth tax-advantaged accounts. In various user data entry boxes above, VeriPlan allows you to enter and change the amount of these catch-up contributions.

In the relatively unlikely event that this minimum age is changed in the future, you can reset it here. If your data and settings in VeriPlan would allow you to make these additional contributions and they indicate that you want to do so, then those additional projected contributions will be made for you automatically.

50.0 << **Minimum age to make additional annual 'catch-up' contributions
from earned income**

No maximum age for allowable contributions into traditional tax-advantaged accounts

Enacted in December 2019, the SECURE Act eliminated the previous 70 and 1/2 maximum age limit on contributions into traditional IRA accounts (as long as one has corresponding earned

income). The age limit below has been set to the very high age of 200 to anticipate the future need to lower it in the unlikely event that some age limit will be reintroduced.

200.0 << **Maximum age for allowable tax-advantaged contributions from earned income**

Regarding your deposits into Roth 'tax-initially-not-later' accounts, there currently is no maximum age for these account deposits. However, you must have sufficient current compensation to make after-tax deposits from that compensation, and you must meet other requirements.

13.13: Retirement account early withdrawal penalties

This section allows you to update VeriPlan, if federal early withdrawal penalties change. You can also enter a state early withdrawal penalty, if your state imposes one as well.

At the federal level, early withdrawals from defined contribution plans usually are subject to a 10% early withdrawal penalty, if assets are withdrawn prior to age 59 and 1/2. There are some limited exceptions to this penalty for which you might qualify. However, for purposes of your projections, VeriPlan will assume that any withdrawals at age 59 or before will cause you to be subject to these penalties, unless you change the 10% figure in the bold border data entry box below. If your projections indicate that you could be subject to these penalties and you need more information, see IRS Publication 575 "Pension and Annuity Income." (<http://www.irs.gov>)

Federal penalty for early withdrawals from defined contribution plans

10.00% << **Enter the federal early withdrawal tax penalty that applies to you**

* Most users will leave this number at 10%. If you are exempt from early withdrawal penalties, enter 0%.

* If federal tax laws change, then enter the revised penalty percentage.

If the federal age limit on early withdrawal penalties changes, enter it here. Otherwise, leave this as 59.5 years.

59.50 << **Federal age limit on penalties for early withdrawals from qualified retirement plan accounts**

Additional State penalty for early withdrawals from defined contribution plans (user supplied)

Certain states jump on the penalty bandwagon and assess an additional penalty for these early withdrawals. For example, California has assessed a 2.5% penalty. If your state assesses such a penalty, enter that penalty in the bold border data entry box below. If your projections indicate that you may be subject to the federal penalty, VeriPlan will also deduct automatically any state penalty that you enter below.

We have not yet found a consolidated public information source that collects information for all the states regarding state level early withdrawal penalties related to defined contribution plans. If you know your state's penalty percentage, if any, enter it in the bold border user data entry box below. Note that any additional, state level early withdrawal penalty would be important, if your projections indicate that you would need to take early withdrawals before the age limit above (currently 59.5). If this is the case, then you should find out whether your state imposes such a penalty. As a starting point, you could locate your state tax administrator through the Federation of Tax Administrators at <http://www.taxadmin.org> To find your state's tax website, click on "Links" in the left-hand column and then click on your state on the map. The direct link to the map is <http://www.taxadmin.org/fta/link/>

0.00%	<< Enter the state early withdrawal tax penalty, if any would apply to you in your state
* If you are exempt from early withdrawal penalties, then this figure should be 0%.	
* If you state assesses a penalty, then enter it here.	

If your projections indicate that you would need to make early withdrawals from qualified retirement account assets to cover any income to expense shortfall, VeriPlan will automatically apply these penalties. However, you also should note that VeriPlan first will automatically exhaust your taxable assets before making such early withdrawals from your tax- deferred asset accounts.

Certain annuity contracts are subject to early withdrawal penalties, but the rules are more complex than those for qualified retirement plans. On the retirement worksheet, you can determine when to accept payments from your annuities. Therefore, VeriPlan will not arbitrarily assess early withdrawal penalties on your annuity payments based upon age.

13.14: Transactions timing and priorities for traditional & Roth tax-advantaged accounts

This section discusses VeriPlan's tax-advantaged contribution and withdrawal priorities and their timing. You should understand two design priorities about how VeriPlan adds contributions to and withdraws funds from your traditional and Roth tax-advantaged accounts.

Contribution Priorities

Regarding priorities for depositing a portion of your projected annual net cash flow, VeriPlan is designed automatically to deposit all funds into traditional tax-advantaged accounts using pre-tax compensation dollars. With Roth contribution limitation tool above, you are given the ability to override this automatic process. With this Roth percentage control you can override VeriPlan's automatic deposits into traditional tax-deferred accounts, and instead make some future deposits into Roth 'tax-initially-not-later' accounts up to the current deposit limits that are applicable to you.

(Note that this logic does not affect your current holdings of traditional tax-advantaged versus Roth accounts, which will be projected automatically according the types of accounts in which you indicate these assets are already held on the financial assets worksheet.)

While many VeriPlan users will want to reduce current taxation by depositing pre-tax compensation dollars into a traditional tax-advantaged account, those accounts face mandatory withdrawals starting in their 70s (see Section 12 of the Taxes worksheet) that are designed to liquidate most of the balances in these accounts prior to death and to trigger the payment of ordinary income taxes on those distributions. VeriPlan automatically projects these processes for you.

However, other VeriPlan users may want instead to make deposits into Roth accounts using after-tax compensation dollars. While they may incur higher current taxes, these users consider that the value of future tax avoidance via a Roth account to be sufficiently appealing to justify the payment of higher income taxes currently.

Because mandatory withdrawals from Roth accounts are not required, they can create certain advantages. For those who do not need to make withdrawals to cover expenses, it could be advantageous to keep their assets in a Roth account growing tax-free. For these people, a traditional tax-advantaged account would require future mandatory distributions and taxes. Because they do not need the funds for expenses, then these people would have to reinvest distributions from a traditional tax- deferred account in a taxable account and pay applicable

taxes thereafter. For those who are projected not to need the funds for living expenses, another potentially significant advantage of a Roth account is that Roth accounts can be inherited and can continue to grow tax-free for the heir and to be gradually withdrawn in relationship to the heir's expected longevity.

Withdrawal Priorities

Regarding withdrawals from traditional 'tax-deferred' versus Roth 'tax-initially-not-later' accounts, VeriPlan automatically withdraws funds from your traditional tax-advantaged accounts according to the schedule required by federal tax regulations. If you need to withdraw additional funds for expenses, then VeriPlan will withdraw those funds from your traditional tax-advantaged accounts before making withdrawals from your Roth accounts.

When there is a projected shortfall between your income in a particular year versus your projected expenses, taxes, and debt payments, then automatically VeriPlan will first withdraw funds from your taxable financial asset accounts (cash, bonds, and stocks), as required to fund the shortfall. Once your taxable financial assets have been exhausted, then automatically VeriPlan will begin to withdraw needed funds from your traditional tax-advantaged accounts to cover such living expenses and taxes. Once your traditional tax-advantaged accounts have been exhausted, then VeriPlan will begin making withdrawals from your Roth accounts automatically.

Because VeriPlan does not have sufficient information about the potential liquidity of your property assets, these assets are not involved in VeriPlan's automated reallocation processes. Therefore, they are not automatically liquidated once your taxable, traditional tax-advantaged and Roth accounts have been exhausted. Nevertheless, the VeriPlan graphics that include your total assets, will visually project how long your property assets might last, if liquidated to meet expenses and taxes. These graphics first show the gradual disposal of your other assets and then your property assets, in response to negative net cash flow situation that most people experience in retirement.

Federal, state, and local income taxes on tax-advantaged account withdrawals will be calculated automatically according to your particular tax situation using current variable or fixed tax rates. If withdrawals from tax-advantaged or Roth accounts occur prior to age 60, then the 10% federal penalty on withdrawals before age 59.5 will be assessed plus any additional penalty that your state may impose. Furthermore, VeriPlan will also automatically project and adjust for

any tax basis that you may have in your traditional tax-advantaged and Roth tax-initially-not-later' accounts.

(Note that VeriPlan will collect your inputs regarding your current tax basis on the yellow-tabbed Financial Assets worksheet, when you enter information about your holdings in traditional tax-advantaged and Roth retirement accounts. The effects on your tax basis of your projected future contributions, reinvested distributions, and withdrawals will be calculated automatically.)

Regarding the trade-offs between first withdrawing funds from your traditional tax-advantaged accounts before your Roth accounts, this aspect of VeriPlan's design would accelerate tax recognition, if your expenses and taxes exceed IRS mandated withdrawals in retirement. Thus, by potentially accelerating future tax recognition, this is a conservative design tradeoff choice. In the future, of course, if you wished, you would have the alternative of first withdrawing funds from your Roth accounts to fund expense shortfalls that exceed mandatory withdrawals, before you took funds from your traditional tax-advantaged accounts. However, to have designed VeriPlan with a priority to withdraw Roth funds first would mean that some or all of your Roth assets would be removed, while tax regulations would simultaneously force most of your traditional tax-advantaged account assets to be withdrawn and taxed, as well. Particularly for those who wish to project that they would leave some positive level of estate value at whatever age of demise they might choose to plan for, then much of the advantage of passing on Roth account assets to heirs could be lost. While this summarizes the primary reasons for this design choice within VeriPlan, if you wish to understand more deeply the implications of this priority to your estate, you should consult with an estate planning attorney.

Transactions Timing

For the current year, VeriPlan automatically calculates the tax shield or tax reduction provided by projected contributions into traditional retirement accounts.

Similarly, it also calculates the current year tax obligation associated with any withdrawals from any traditional tax-deferred accounts.

Note that Roth contributions in the current year do not provide a tax shield, nor are withdrawals taxed, when done properly.

VeriPlan makes deposits into and withdrawals from traditional and Roth tax-advantaged accounts after the start of the following year. These "cash-flow" transactions are reflected in the tax-advantaged financial asset transactions information on the transactions graphic and corresponding data worksheet.

13.15: Graphical spikes related to tax-advantaged retirement investments

Sometimes, you may see positive or negative "projection spikes" in the first year or two of your projection, and at retirement, when your earned income is projected to decline or cease. These projection spikes are related to VeriPlan's tax-advantaged employer-sponsored retirement plan logic and tools. Particularly when your recent contributions to these plans differs from your projected contributions, there can be differences in the amount of taxes assessed. Also, there may be a delay until VeriPlan's automated features can begin to project future retirement plan contributions at the alternative rates that you prefer.

These effects are related to different taxes on earned income that are caused by your choices about projected contributions to employer-sponsored tax-advantaged retirement plans (e.g. 401k, 403b, 457, Thrift Plan, SEP-IRA, SIMPLE-IRA, and IRAs. Unfortunately, it is an understatement that the ridiculous complexity of US tax incentives related to retirement investment incentives makes lifetime projection modeling a challenge.

These projection spikes may be seen on some of VeriPlan's graphics and corresponding data tables and can first be traced to the Taxes graphic, when looking at the various graphics. These tax effects will automatically ripple through many other VeriPlan graphics (and data tables), such as Cash Flow, Savings, Asset Flows, Withdrawals, Asset Taxability, and Transactions graphics. These spikes may also be detectable in investment asset projection graphics and data tables, when there are few cash, bond, and stock assets initially. Higher amounts of current financial assets can mask these effects, because legally permissible annual retirement plan contributions can be small relative to already owned financial investment assets.

(Note that these early year projection spikes are not related to any initial positive or negative asset class percentage changes on the Allocation graphic. Initial asset allocation percentage changes occur when you choose an asset allocation strategy that differs from the makeup of your current financial asset portfolio. See the asset allocation worksheet to understand how VeriPlan

develops lifetime projections of your assets using its various automated and user-adjustable asset allocation models.)

Tax-advantaged retirement plan investments can have a very significant impact on your lifetime finances. Therefore, VeriPlan supplies a variety of automated tools that allow you to analyze these impacts and to decide what you want to do. Your decisions about:

- * whether or not to contribute to these employer-sponsored retirement plans,
- * how much to contribute to these employer retirement plans,
- * whether to contribute to traditional tax-advantaged plans versus Roth plans (when Roth plans are available to you), and
- * how much of your assets you want to hold in these retirement plans versus in taxable accounts

have long-term impacts that simply cannot be understated. Deferred taxation with compounded investment returns and/or the avoidance of future taxation on retirement investments altogether can have very powerful effects on lifetime finances.

In summary and as a default, VeriPlan is set up to maximize lifetime contributions into traditional tax-advantaged employer retirement plans that avoid current taxes on earned income and defer taxation on asset appreciation, until mandatory withdrawals in retirement. To make these maximum allowable contributions, VeriPlan will draw from projected positive cash flow and/or taxable financial assets. Of course, you can change any of VeriPlan's default assumptions to analyze alternative strategies, but "out of the gate," VeriPlan maximizes traditional tax-advantaged retirement plans and their tax-deferral characteristics.

More specifically concerning these projection spikes, the first reason you might see an initial projection spike may be related to your most recent annual employer-sponsored retirement plan contributions. Your actual prior year contributions to these plans, which you enter on the income worksheet may not have been the maximum contributions permitted with respect to your earned income. In this situation, VeriPlan's subsequent projection years would plan for higher contributions, which would lower your projected taxes when you choose to make "traditional" contributions. Therefore, the initial year of your projections would differ from the years that followed.

The second reason you may see projection spikes in the first year or two of a projection relates to your retirement plan inputs on VeriPlan's Tax-Advantaged Plans worksheet. To

implement some of its automated retirement plan features and tools, VeriPlan must analyze all factors affecting any single projection year, calculate maximum allowable contributions for that year, and then reflect cash flows at the beginning of the following year or sometime assess taxes in the subsequent year. While these computations work smoothly over a series of years, this can cause initial projection cash flow data spikes.

The third reason for projection spikes is that not only do you need sufficient earned income to make whatever retirement plan contributions would be allowed by law, you also need a source of cash to make these contributions. The tools explained on Tax-Advantaged Plans worksheet handle all of this for you automatically. For example, unless you tell VeriPlan to restrict your annual contributions only to projection years with sufficient positive cash flow from earned income, then VeriPlan will also look to your taxable financial assets as an additional source of cash to fund these retirement plan contributions. Doing this requires VeriPlan to determine whether there are sufficient assets at the end of the year, which also causes retirement plan contribution cash flows to be made at the beginning of the second year, and this can cause potential data spikes. (This also demonstrates that everything under the covers in VeriPlan is fully integrated with everything else.)

Finally, note that there are other situations in which you could see one or a series of spikes in any year or a series of years of a projection. This is usually caused by situations in which taxable account cash, bond, and stock assets have been exhausted and additional asset withdrawals are needed to meet negative cash flows. When this happens, VeriPlan will automatically withdraw tax-advantaged account assets, which can increase taxes, because traditional retirement plan assets are taxed upon withdrawal. (This is not the case with Roth assets, which are not taxed upon withdrawal. VeriPlan automatically tracks traditional versus Roth account assets and taxes them or does not tax them accordingly.)

13.16: Commentary -- the labyrinth of tax-advantaged plan rules

This section concludes with this commentary. US federal laws about tax-advantaged retirement plans are ridiculously and unnecessarily complex. If the rules seem confusing to you, you have plenty of company. With the retirement security of millions of people in such jeopardy, your government should and could simplify these tax incentives.

VeriPlan has endeavored to model the important aspects of current tax laws related to Tax-Advantaged employer plan and personal IRA account contributions and deductions. Building tax-advantaged plan functionality into VeriPlan's automated lifecycle projection model in a manner that could be useful to most U.S. citizens is an extraordinarily challenge. Convolutd U.S. tax-advantaged plan laws are the root cause of this difficulty. If our government expects its citizens to act responsibly, to plan rationally, and to provide for an increasing portion of their own future financial welfare in retirement, then it ought to provide its citizens with a straightforward and understandable set of tax incentives for retirement savings and investing.

For example, anyone would pity citizen: a) whose spouse is covered by a retirement plan at work, b) who personally has earned income and has elected to receive Social Security payments, and c) who wants to decide whether to contribute to an IRA. To calculate how much, if any, of his contribution would be deductible, he would have to understand and navigate a complicated seven page worksheet including examples in Appendix B of Publication 590. With further reading he would find that he would certainly not be able to deduct his contribution. He also might figure out that he might not be able to make any contribution at all, if he and his wife's 'modified adjusted gross income' was too high.

If you review VeriPlan's IRA rules chart on the Tax-Advantaged Plans worksheet, it should be clear that any person of any age could easily be befuddled by these complex rules. As they must, IRS publications clarify in great detail the many nuances of the tax laws. Unfortunately, they fail to provide sufficient overview information to summarize the big picture. Nowhere in Publication 590 will you find a chart of general tax rules about traditional IRAs and Roth IRAs like the one provided on VeriPlan's tax-advantaged plans worksheet.

The unnecessary complexity of rules regarding tax-deferral and retirement planning that taxpayers have to navigate are not confined to this IRS publication. Publication 590 makes reference to IRS Publication 560, "Retirement Plans for Small Business" and to three others, and Publication 590 points to a long list of other forms and forms instructions. Furthermore, there is a very large amount of additional material on the IRS website. Our excessively complex tax structure is simply a counterproductive national embarrassment, and our citizens deserve better.

Is this the fault of the IRS? Not at all. The IRS just implements the ridiculous and tasteless retirement incentives stew that the US Congress has slopped into our collective bowls over the years. Unfortunately, this is not likely to change.

Chapter 14: Roth Analysis worksheet

- 14.1: How to evaluate Roth contributions and conversions
- 14.2: Can you make Roth contributions to an employer-sponsored retirement plan?
- 14.3: Set the Roth retirement contributions tool
- 14.4: Plan year-by-year traditional asset conversions into Roth retirement accounts
- 14.5: Economic and investment tradeoffs between traditional and Roth retirement account assets
- 14.6: Roth conversions and Medicare IRMAA
- 14.7: Understanding and planning for the backdoor Roth IRA conversion strategy

14.1: How to evaluate Roth contributions and conversions

Overview

Please read and understand Section #5 below, which discusses the economic and tradeoffs between tax deductible traditional retirement accounts and Roth retirement assets.

Roth contribution and conversion analysis is the LAST thing you should do with VeriPlan. Other significant decisions you make while building your financial plan will affect the financial rationale for or against Roth contributions and/or conversions. Develop as complete a VeriPlan financial plan, as you can. Make as many other decisions and incorporate them into your model. In essence, the Roth contribution and conversion decision is a tax-optimization of your final plan.

The projected age at which you would breakeven financially on Roth contributions and/or conversions is the key decision variable. However, individuals may vary on how they would judge this breakeven age. A single person with no heirs in poor health might desire a lower breakeven age. A married couple with good health and longevity in their family might be willing to accept a later breakeven age. This is especially true, if they want to pass assets to children and prefer to leave Roth assets that would not increase the taxes of adult children who could be in their peak earnings years, when inheritance occurs.

The payback on Roth conversions and contributions begins with lower RMD taxes at age 73. For those younger now, the SECURE Act 2.0 of 2022 also has a provision for RMDs

to begin at age 75 in 2033. VeriPlan calculates that anyone who reaches 73 before 2033 would be subject to RMDs at 73 rather than 75.

The longer you live, the higher the cumulative value of the payback. Nevertheless, the value of the foregone initial tax reduction from deductible traditional retirement contributions and the growth on those tax savings can be substantial. In many circumstances, the breakeven point in the payback period would significantly exceed normal life expectancies. You might be more likely to die, before you have recouped your losses.

You should note that there is another circumstance to consider when judging payback periods versus longevity. If your financial plan indicates substantial remaining financial assets in old age, which is the only circumstance that would make Roth contributions and/or conversions attractive anyway, and you have a legacy objective to leave assets to non-spousal heirs, then it would be preferable from a taxation standpoint to leave Roth account assets to non-spousal heirs rather than traditional retirement account assets.

Under the SECURE Act of 2019, the inheritance period for retirement account assets was shortened to 10 years for non-spousal heirs. Whether the non-spousal heir receives traditional or Roth retirement assets, the assets inherited plus any subsequent asset appreciation must be removed from inherited account within 10 years. Heirs would not pay any taxes for these assets, if they are Roth assets. However, if these inherited assets are traditional retirement assets, they would be subject to federal, state, and local income taxes upon removal from the inherited traditional account during this ten year period. If the heir is still working, during this ten-year period these withdrawals would be added on top of the heir's earned income, perhaps substantially increasing income tax rates and taxes paid.

In addition, for married couples, should one partner pre-decease the other, the surviving spouse will normally inherit the traditional retirement IRA accounts and other traditional employer defined contribution plan (401k, 403b, 457, etc.) accounts. Surviving spouses are not subject the 10 year distribution period discussed above. Instead, for inherited traditional retirement account assets, the spousal heir is subject to Required Minimum Distributions and associated income taxation for the remainder of their natural lives. If the surviving spouse remains single, especially for many years, he or she will pay income taxes as a single person, and the graduated income tax brackets for single persons move up more quickly when compared to the married filing jointly federal tax filing status of married couples. Therefore, income taxes on

RMDs can increase significantly compared to VeriPlan's financial projections based upon married filing jointly taxation. Obviously, this situation would reduce the breakeven age for Roth conversions. While a substantial difference in ages of mortality cannot be predicted, this single tax rate filing status factor favors Roth conversions in a manner that is similar to a legacy objective for non-spousal heirs subject to the 10 year distribution requirement.

View these informational videos on YouTube:

How to Optimize Lifetime Roth Contributions and Roth IRA Conversion Taxes:

[Video #1 -- Overviews the best lifetime Roth contribution and conversion strategies for most people](#)

https://www.youtube.com/watch/PaYC7MnX_9U

[Video #2 -- Demonstrates the lifetime tax and wealth impacts of these optimal Roth contribution and conversion strategies](#)

<https://www.youtube.com/watch/Ij890zUr1OA>

How to evaluate the breakeven age for Roth contributions and conversions:

- A) Develop a final plan before evaluating whether Roth tax optimizations might be beneficial.
- B) Before making any Roth contribution or conversion settings in Sections 2, 3, and 4 below, set up VeriPlan's orange-tabbed Plan Comparison Tool. Read the orange-tabbed "How to Compare" worksheet to understand how VeriPlan's Plan Comparison Tool works. Copy all of your final plan's output data on the "Copy From" worksheet into VeriPlan's "Paste Values To" worksheet. At this point, all rows and columns on the orange-tabbed "Plans Compared" worksheet will be zeros.
- C) On the orange-tabbed "Plans Compared" worksheet, scroll to the Total Assets columns and down to display Age 100 at the very bottom. If it open, close the display consuming Excel "ribbon" at the top so that more years will be visible. On a desktop display, you should be able to see ages 70 to 100 without scrolling.
- D) Now start to make adjustments to VeriPlan's Roth contribution percentage (Section 3) and/or enter year-by-year Roth dollar conversion amounts (Section 4).

- E) Keep referring to the "Plans Compared" worksheet to see the age at which the Total Assets column turns from negative red numbers in parentheses to black positive numbers. This will indicate the projected breakeven age where the initial foregone tax deduction and subsequent appreciation would have been recovered in real dollar, constant purchasing power terms.
- F) This comparative breakeven age method will help you to determine, iteratively, what the optimum Roth strategy might be for your financial plan.
- G) This breakeven age is instructive, but your personal preferences will determine your decision. Other materials on this worksheet may be helpful, as well.

14.2: Can you make Roth contributions to an employer-sponsored retirement plan?

Indicate whether you can make Roth contributions to 401(k), 403(b), 457, Thrift Savings, SIMPLE-IRA, and SEP-IRA accounts

Then, use the next section to choose the overall portion of your employee contributions that will be traditional and/or Roth contributions.

Some and increasingly more 401(k), 403(b), and 457 employer-sponsored plans permit "designated" Roth contributions with after-tax (currently taxable) compensation dollars. These designated Roth contributions can be made in combination with traditional pre-tax (deferred) dollar contributions up to the legal limits. The federal Thrift Savings Plan has a Roth TSP option. The SECURE Act 2.0 enacted in December 2022 added the option for Roth contributions to SEP-IRA and SIMPLE-IRA plans effective in 2023.

These Roth contributions into certain types of employer plans are in addition to any personal Roth IRA contributions that you might be permitted to make. Annual contribution limits are separate for personal Roth IRAs and designated Roth contributions into these plans. For personal Roth IRA contributions, designated Roth 401(k), 403(b), and 457 contributions, TSP Roth contributions, and SEP-IRA & SIMPLE-IRA contributions, earnings and appreciation are never taxed, when the rules are followed.

A VeriPlan user can control pre-tax employee contributions on the yellow-tabbed Tax-Advantaged Plans worksheet. Roth contributions are elective contributions that employees can choose to make from their own wage and salary compensation, when their employer plan offers

this option. These contributions are made with count toward the same limits for traditional pre-tax (deferred dollar) contributions.

These annual limits for traditional contributions and for Roth contributions are NOT additive. You can make up to 100% of one or the other type of contribution or some combination of both that totals up to 100% of the maximums. VeriPlan will automatically project the contribution combination that you have chosen with the controls provided.

Note that any additional "employer-side" after-tax contributions above these designated Roth contributions limits are explained in and controlled by the user on the Tax-Advantaged Plans worksheet.

The default settings below assume that employer plans of various types will offer a Roth option.

If your plan does not offer Roth contributions and will not change that policy, then change the setting below to a zero.

Roth 401(k), Roth 403(b), Roth 457 & federal Thrift Savings plans

Do you want VeriPlan to develop projections for you that assume you can contribute to an employer plan with a Roth 401(k), 403(b), 457, or Thrift Savings contributions option?

FOR EARNER #1, would a Roth 401(k), 403(b), 457, or federal Thrift Savings plan option be available?

<< Enter 1 (one) for YES; Enter 0 (zero), for NO (Default =1)

FOR EARNER #2, would a Roth 401(k), 403(b), 457, or federal Thrift Savings plan option be available?

<< Enter 1 (one) for YES; Enter 0 (zero), for NO (Default = 1)

SIMPLE-IRA and SEP-IRA plans

FOR EARNER #1, can the employee direct some or all contributions to be Roth contributions in the SIMPLE-IRA or SEP-IRA plan?

<< Enter 1 (one) for YES; Enter 0 (zero), for NO (Default =1)

FOR EARNER #2, can the employee direct some or all contributions to be Roth contributions in the SIMPLE-IRA or SEP-IRA plan?

<< Enter 1 (one) for YES; Enter 0 (zero), for NO (Default = 1)

14.3: Set the Roth retirement contributions tool

Use this section to choose the portions of your future contributions that will be traditional and/or Roth contributions

For projection years when you are working, this Roth contribution limitation tool allows you to set the percentage that future Roth retirement plan contributions would be of your total annual contributions into both traditional and Roth tax-advantaged retirement accounts, including personal IRA contributions and contributions into employer sponsored defined contribution plans.

This tool can be used either as a "what-if" planning tool or as a convenience to set the overall proportions of all future individual IRA and employer plan contributions that VeriPlan will make either as pre-tax traditional contributions or as after-tax Roth contributions. If it is turned on, it will override any pre-tax and after-tax settings that you may have made on the Tax-Advantaged Plans worksheet. Federal, state, and local income taxes will be automatically assessed or deferred depending on the percentage you have chosen and whether the tool is activated.

You might wish to turn this on as a "what if" planning tool to make a general decision about whether you would ever make Roth contributions while working. Then, you might turn it off again and then make more specific contributions planning and contributions taxability settings on the Tax-Advantaged Plans worksheet. The reason is that you indeed may not have a choice on the taxability of all contributions.

After using this tool you might decide not to make discretionary Roth contributions while working and instead always capture the up- front tax reductions provided by traditional contributions. Nevertheless, you might also have other opportunities to take additional contributions that can only done with after-tax dollars. The various settings available on the Tax-Advantaged Plans worksheet are much more flexible in their ability to reflect your particular planning situation.

You must first TURN ON this tool for your Roth percentage entry below to be effective

**<<<< Change to a "1" (one) to turn on this Roth
contribution control (Default = 0 (off))**

- * Your settings in this section will NOT affect any Roth conversions that you might decide to make in the future. The following section below allows you to make future year-by-year conversions of projected traditional retirement plan assets.
- * Also, this section will NOT affect any entries that you make in the Pensions, Annuities, and Deferred Compensation Payouts section of the Retirement worksheet. Those retirement payouts are not retirement plan contributions and are treated separately. In the Retirement worksheet payouts table you can indicate the taxation of payouts and the type of account (taxable, traditional retirement, or Roth retirement) into which payments will be made. Nevertheless, they are separate and unaffected by this contributions limitation tool.

Set the percentage that Roth contributions would be of your total annual contributions into both personal IRAs and into employer plans that permit Roth contributions

0%

 << What percent of your POTENTIAL PERSONAL MAXIMUM ANNUAL Roth IRA and Roth employer plan contributions should VeriPlan automatically contribute to Roth accounts for you? (Default = 0%)
(The remaining portion of 100% would be contributed to your traditional tax-deferred retirement accounts.)

VeriPlan will automatically project your future contributions into tax-advantaged accounts according to your preferred split between traditional tax-deferred contributions versus Roth contributions. This Roth contribution limitation tool determines that percentage division. (This tool does not affect the assets that you already hold in your existing traditional and Roth retirement accounts and have entered on the Financial Assets worksheet.)

Above in Section 2, you should also indicate your eligibility for making or directing Roth contributions into employer plans. If you do not indicate that you are eligible to make such contributions, then the percentage setting in this section will apply only to your future IRA contributions. However, note that VeriPlan's default settings assume that your plans will permit Roth contributions.

The Roth conversion section below provides additional background to help you understand the tax and investment return tradeoffs between Roth and traditional tax-advantaged retirement account assets.

When the projected investment economics of non-tax deductible Roth contributions during working years are compared with tax deductible contributions into traditional retirement accounts that reduce income subject to income taxation during working years, it is usually more

advantageous to make tax deductible contributions versus making non-deductible Roth contributions. Foregoing the up-front tax reduction tends to be financially less advantageous, unless you are projected to accumulate significant traditional retirement account assets, which would cause increasingly high Required Minimum Distributions and higher income taxes as one gets ages.

You should be aware that you can make traditional IRA or Roth IRA contributions in addition to your contributions to employer retirement plans. You are allowed to contribute to both. However, employer retirement plans can affect whether you can deduct your IRA contributions in a particular year depending upon the level of your taxable income. Section 10 of the adjacent Tax-Advantaged Plans worksheet provides a chart listing the rather complex rules for traditional and Roth IRA contributions and deductions.

There are higher income levels wherein you can make a traditional IRA contribution, but it would not be tax deductible. In such a circumstance, if your taxable income level also permits it, you would probably prefer to make a Roth IRA contribution instead. When neither a traditional nor Roth IRA contribution would provide any upfront reduction in taxes, Roth contributions would not be taxed in retirement, whereas the traditional IRA contribution would require taxable RMDs in retirement.

You should also note that with even higher income levels, you may not be permitted to make a direct Roth contribution. However the option of making a non-deductible traditional IRA contribution would still be available. If this non-deductible IRA contribution is your only IRA asset, then soon after the contribution, you can convert that traditional IRA contribution into a Roth account through the no-tax or very low-tax "backdoor Roth conversion mechanism."

Do your research on how this done, and note that the tax basis across all of your traditional IRAs, including SIMPLE-IRA and SEP-IRA account, is pooled for the equation that determines the proportion of any Roth conversion that would be subject to income taxes. This works against the economics of Roth conversions, when you have substantial traditional IRA assets with no tax basis. More information see the section below titled; "Understanding and planning for the backdoor Roth IRA conversion strategy."

14.4: Plan year-by-year traditional asset conversions into Roth retirement accounts

How to use the year-by-year Roth conversion planning tool

VeriPlan's Roth conversion tool helps you to understand which years in the future might be better to do Roth conversions, and it helps you to judge the federal tax rates on the amount of Roth conversions you plan to make in each year. Depending upon the year-by-year Roth conversions amounts that you manually enter into the table to the right, VeriPlan will automatically assess federal, state, and or local income taxes in you projections. Any state or local income taxes would be in addition to the federal tax information provided below.

While it is not feasible to present information here about your state income taxes and local income taxes (if applicable), understand that VeriPlan will automatically take them into account in its calculations. State income tax and local income tax rates and limits are not standard and vary widely. Nevertheless, when your projected federal income would be lower and federal tax rates would be lower, state and local income tax rates also tend to be correspondingly low. (You can look at your state income tax rates on the yellow-tabbed "Taxes" worksheet. The incremental state and local income taxes to be paid are indicated on the orange-tabbed "Plans Compared" worksheet, if you use the method discussed in Section 4.)

Step #1 -- Will you optimize your portfolio for "Tax Location"

1 << Do you intend to optimize your plan for "Tax Location"?
("0" = No; "1" = Yes) (Default is Yes)

If you do NOT plan to tax location optimize your portfolio (you enter a 0 above), then VeriPlan will automatically project the taxable cash and bond interest you would earn in future years on cash and bonds held in taxable accounts. Particularly if your taxable bond holdings are substantial and could otherwise be held in traditional retirement accounts, this decision will increase future taxable income and reduce future year-by-year opportunities to do low- or no-income tax Roth conversions.

With the current portfolio that you entered on the yellow-tabbed Financial Assets worksheet, this is the percentage of your total financial assets that are currently invested in cash and bonds in taxable accounts that could be shifted to traditional retirement accounts:

19.05% << Percent of all of your financial assets now held as bonds and cash in taxable (non-retirement) accounts that COULD be "tax optimized"

Column L in the table below will provide a projection of the year-by-year reduction in taxable income resulting from optimizing for tax location.

NOTE: Changing your portfolio would be done through offsetting buy and sell transactions within accounts -- NOT through taxable distributions. For example, you would sell "X dollars" of bonds in taxable accounts and use the cash proceeds to purchase equities in the same taxable accounts. Then, you would sell "X dollars" of equities in your traditional retirement accounts and use the cash proceeds to buy bonds within the same traditional retirement accounts. Taxation on these transactions should be zero or minimal given that bonds usually do not have capital gains in taxable accounts.

Overview of "Tax Location" Optimization:

Investment asset classes differ substantially in how they are taxed. When held for over one year in taxable accounts (i.e. not traditional retirement accounts), equities (stocks) are taxed at federal long-term capital gains tax rates that are currently substantially lower than federal ordinary income tax rates. Qualified dividends are taxed at long-term capital gains tax rates, and equity market appreciation is only taxed when there is a sales event. When equities are held in traditional retirement accounts, they lose these tax advantages.

In contrast, bonds and cash have recurring interest earning that are always taxed federally at higher ordinary income tax rates, when held in taxable (non-retirement) accounts. Bonds rarely generate long-term capital gains, and cash never does. When bonds and cash are held long-term in traditional retirement accounts, income taxes are avoided until Required Minimum Distributions (RMDs) begin at age 73. In 2033, that initial age will increase to 75, so if you are not already required to take RMDs, whether you would start at age 73 or 75 depends upon your current age. Furthermore, since historically bonds and cash have grown more slowly than equities, holding your investment bonds and cash in traditional retirement accounts will tend to reduce lifetime RMDs.

For optimal "asset tax location," the bottom line is that to the extent your asset allocation strategy and account holdings allow, you should hold your bonds and non-transactional cash in your traditional retirement accounts.

For more information about asset allocation and asset tax optimization, read the article titled "Lifelong tax savings from investment portfolio asset tax location," which can be found on the red-tabbed Optimizations worksheet.

Step #2 -- Plan your year by year Qualified Charitable Distributions -- before you plan your Roth conversions

Qualified Charitable Distributions (QCDs) are an appealing alternative to charitable tax deductions for older, charitably inclined people with traditional IRA assets. A QCD distribution reduces taxable ordinary income and transfers traditional IRA assets from one's portfolio directly to one or more qualified charities. When you are subject to Required Minimum Distributions (RMDs) from your traditional IRAs, QCDs can also satisfy some or all of those RMDs dollar for dollar.

Individual traditional IRA owners age 70 & ½ or over can transfer up to \$105,000 (as of 2024) to charities tax-free each year through the QCD mechanism. Because QCDs are on a per-person basis, annual limits are doubled for married spouses filing jointly.

QCDs apply only to traditional retirement assets that are in your traditional IRAs. Nevertheless, if you have other traditional retirement assets in 401k, 403b, or 457 employer plans that would also require RMDs, you can plan beforehand to rollover those employer plan assets into a rollover IRA, if you intend to make greater QCD transfers than the RMDs associated your current traditional IRA assets would require.

The QCD rules are complex and Section 13 of the Taxes worksheet provides many more of the details. Like anything with taxation, complexity seems highest the first time you do something and gets easier thereafter. If you are charitably inclined, the QCD mechanism can be used year after year.

Why you should plan your QCDs in Section 13 of the Taxes worksheet -- BEFORE your plan your Roth conversions

QCDs make the most sense for those who already want give to charity and realize that they are likely to have more traditional retirement assets than they will eventually need to pay the bills and/or to leave for family. QCDs are financially more attractive than Schedule A charitable deductions, and simultaneously, they satisfy some or all of annual RMDs. What's not to like?

The reason that those who are charitably inclined should first plan their QCDs, before planning their Roth conversions, relates to the financial justification for doing Roth conversions. QCDs alter the financial investment payback equation for Roth conversions. Rationally one should be willing to pay higher upfront tax taxes on a Roth conversion, if those taxes would be repaid over a reasonable time period and eventually would yield a profit. (See Section 5 below titled "Economic and investment tradeoffs between traditional and Roth retirement account assets")

QCDs work against the payback side of the Roth conversion equation. First, QCDs reduce your tax obligation related to your RMDs and potentially lower your marginal tax bracket in any given year. If you plan a multi-year series of QCDs, because you were planning to give to charities anyway, future lower taxes will undercut the payback on your Roth conversions. Second, since you are giving away some of your traditional IRA assets to charities, thereafter your traditional IRAs will contain fewer assets and your future RMDs will be lower. This stretches out the length of your Roth payback recovery period.

The other reason why you should first plan your QCDs in Section 13 of the Taxes worksheet is that VeriPlan will automatically take them into account when you plan your Roth conversions in the table below. You will get better tax benefits on the charitable donations that you want to do anyway. Since your planned QCDs will already be factored in, you will be able to judge whether Roth conversions still make sense to you.

You should note that there are situations where Roth conversions are a no-brainer, because they do not require any additional taxes up front. Look at Column E in the table below. If the numbers are negative or red with parentheses, these are years when no income tax is projected, because of low or no income plus deductions that reduce taxable income. Doing Roth conversions with these negative taxable amounts allows you to convert traditional retirement assets into Roth accounts without paying income taxes.

Furthermore, if your plan to do any QCDs in these "no tax" years, a QCD in that year will increase the amount you could convert tax free to Roth assets dollar for dollar. While this is only available when a person is over 70, if there is an age disparity between spouses the older spouse can do the family's QCDs some years earlier, until the younger spouse reaches 70.

Step #3 -- Plan for year-by-year Roth conversions -- depending upon your other projected taxable ordinary income

A financially advantageous alternative to making non-deductible Roth contributions while working is to convert traditional retirement account assets into Roth assets during years when taxable income and income tax rates are projected to be lower.

Your Roth conversion strategy should always be aware of incremental federal income tax rates and the dollars available within those brackets. The year-by-year projection table to the right in this section provides this information.

Columns A and B are the Projection Year number and the corresponding age of Earner #1

Column C is the annual beginning balance of your total traditional tax-deferred retirement assets subject to RMDs in retirement.

Some of your total traditional tax-deferred retirement assets in Column C may not yet be available for Roth conversion. 401k, 403b, 457, and other traditional employer plan assets are included in Column C along with your traditional IRA assets. Your employer plan assets cannot be converted to Roth assets, until they are transferred to an IRA via the rollover IRA mechanism. Some employer plans allow for "in service" distributions, but other plans require you to wait until you retire or leave the company to roll over your retirement assets into an IRA.

Note the other transactions may affect the balances in Column C from year to year, including:

- * automatic contributions to IRAs and work retirement plans during working years
- * automatic withdrawals for RMDs -- age 73 and after (or 75 and after beginning in 2033)
- * withdrawals to cover negative cash flow, when projected taxable asset accounts have been exhausted
- * annual cash, bond, and stock investment returns
- * time lags between different variables can affect transactions

Column D is the gray user entry column that allows you to choose positive dollar amounts to convert in one or more projection years. If you enter any dollar amount in Column D, the amounts in Columns E through K will immediately adjust, if they are affected.

IMPORTANT: For repeated entries, you may use the Microsoft Excel "copy and paste" process vertically within this column. NEVER use "cut and paste" of any other

procedure, which would disrupt the logic of your model and may force you to recover by going back to the most recent model backup you have. This is another good time to remind you to back up your VeriPlan models frequently using DIFFERENT file names, e.g. myplan_05-24-202x_A, then B, then C, etc.

The dollar amount to be converted cannot exceed the Beginning Balance (Column C)

- * Cells will turn **red** if you enter a number in Column D that exceeds the value in Column C
- * If a number larger than Column C is entered, the Roth conversion will be limited to available assets
- * Cells will turn **red** if you enter a number in Column D when Column C says "Over Age 100"

This sample graphic below does not include all rows through age 100 or all columns.

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Federal Income Tax Rate Up to \$ Breakpoint >>>>>>>>>	\$22,000	\$89,4
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A	B	C	D	E	F	G
Projection Year	...when the age of Earner #1 is:	Traditional Tax-Deferred Retirement Assets (Beginning Balance)	Enter year-by-year dollar amounts to be converted into Roth account assets	Projected Federal Taxable Income (\$ Ordinary income "AGI" less deductions, dependent exemptions, and "tax location" optimization)	Dollars That Could Convert at the 10% Federal Income Tax Rate	Dollars Could Co the 12% Income T
1	35	\$35,000.00	\$0.00	\$116,744	\$0	\$0
2	36	\$36,883.23	\$0.00	\$90,479	\$0	\$0
3	37	\$67,025.29	\$0.00	\$82,021	\$0	\$7,4
4	38	\$107,763.75	\$0.00	\$90,440	\$0	\$0
5	39	\$142,040.71	\$0.00	\$76,748	\$0	\$12,7
6	40	\$192,230.21	\$0.00	\$78,820	\$0	\$10,6
7	41	\$243,095.27	\$0.00	\$79,280	\$0	\$10,1
8	42	\$296,212.36	\$0.00	\$79,387	\$0	\$10,0
9	43	\$352,079.07	\$0.00	\$79,416	\$0	\$10,0
10	44	\$410,925.96	\$0.00	\$79,429	\$0	\$10,0
11	45	\$472,931.42	\$0.00	\$79,438	\$0	\$10,0
12	46	\$538,269.27	\$0.00	\$79,446	\$0	\$10,0
13	47	\$607,119.62	\$0.00	\$79,455	\$0	\$9,9
14	48	\$679,671.59	\$0.00	\$79,463	\$0	\$9,9
15	49	\$756,124.33	\$0.00	\$79,472	\$0	\$9,9
16	50	\$836,687.66	\$0.00	\$79,481	\$0	\$9,9
17	51	\$921,582.69	\$0.00	\$79,490	\$0	\$9,9
18	52	\$1,011,042.41	\$0.00	\$79,500	\$0	\$9,9
19	53	\$1,105,312.37	\$0.00	\$79,509	\$0	\$9,9
20	54	\$1,204,651.31	\$0.00	\$79,519	\$0	\$9,9
21	55	\$1,309,331.00	\$0.00	\$79,520	\$0	\$9,9

Column E is your annual projected federal taxable income (\$ AGI less any standard or itemized deductions and dependent exemptions.)

It is possible to have negative taxable income, which displays as red negative dollar amounts in parentheses. Negative numbers would occur when taxable income is below your standard deduction or itemized deductions plus any dependent exemptions. These negative amounts are the lowest hanging fruit for Roth conversions, because these amounts can be converted without paying any federal income taxes -- a lost opportunity, if you do not do a Roth conversion in those years.

Column F is the projected remaining income that you could convert at the 10% federal income tax rate

The amount listed above the column letter in Columns F through K is the dollar amount of the federal taxable income breakpoint, which varies depending upon whether your VeriPlan model is for filing federal income taxes as a single person or as a married couple filing jointly.

Column G is the projected remaining income that you could convert at the 12% federal income tax rate.

Pay attention in particular to columns F and G. Combined this is the projected annual dollar amount that could be converted at 10% or 12% federal income tax rates (+ any state and local income taxes)

When you do not have projected assets in taxable accounts to pay the incremental federal, state, and local Roth conversion income taxes, VeriPlan will automatically take out funds from your traditional tax-advantaged accounts to cover these tax payments.

Column H is the projected remaining income that you could convert at the 22% federal income tax rate.

Column I is the projected remaining income that you could convert at the 24% federal income tax rate.

Column J is the projected remaining income that you could convert at the 32% federal income tax rate.

Column K is the projected remaining income that you could convert at the 35% federal income tax rate.

Any dollars converted in a given year above the amounts in column K would convert at the highest 37% federal income tax rate.

This sample graphic below does not include all rows through age 100 or all columns.

[turn to the Top](#)

Federal Income Tax Rate Up to \$ Breakpoint >>>>>>>>	\$22,000	\$89,450	\$190,750	\$364,200	\$462,000
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D	E	F	G	H	I	J
Year-by-year conversion amounts to be converted into Roth account assets	Projected Federal Taxable Income (\$ Ordinary income "AGI" less deductions, dependent exemptions, and "tax location" optimization)	Dollars That Could Convert at the 10% Federal Income Tax Rate	Dollars That Could Convert at the 12% Federal Income Tax Rate	Dollars That Could Convert at the 22% Federal Income Tax Rate	Dollars That Could Convert at the 24% Federal Income Tax Rate	Dollars That Could Convert at the 32% Federal Income Tax Rate
\$0.00	\$116,744	\$0	\$0	\$74,006	\$173,450	\$98,000
\$0.00	\$90,479	\$0	\$0	\$100,271	\$173,450	\$98,000
\$0.00	\$82,021	\$0	\$7,429	\$101,300	\$173,450	\$98,000
\$0.00	\$90,440	\$0	\$0	\$100,310	\$173,450	\$98,000
\$0.00	\$76,748	\$0	\$12,702	\$101,300	\$173,450	\$98,000
\$5,000.00	\$83,824	\$0	\$5,626	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,422	\$0	\$4,028	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,778	\$0	\$3,672	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,862	\$0	\$3,588	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,887	\$0	\$3,563	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,900	\$0	\$3,550	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,909	\$0	\$3,541	\$101,300	\$173,450	\$98,000
\$5,000.00	\$85,918	\$0	\$3,532	\$101,300	\$173,450	\$98,000
\$0.00	\$80,924	\$0	\$8,526	\$101,300	\$173,450	\$98,000
\$0.00	\$79,796	\$0	\$9,654	\$101,300	\$173,450	\$98,000
\$0.00	\$79,556	\$0	\$9,894	\$101,300	\$173,450	\$98,000
\$0.00	\$79,510	\$0	\$9,940	\$101,300	\$173,450	\$98,000
\$0.00	\$79,508	\$0	\$9,942	\$101,300	\$173,450	\$98,000

Your federal income taxes may not increase smoothly

While the federal income tax system is a graduated income tax system wherein tax rates increase with higher income, there is some "non-linearity" caused by certain other tax rules.

When you are receiving Social Security retirement benefits, other taxable family income can increase the proportion of your Social Security that is subject to income taxation. The Social Security section of the yellow-tabbed Taxes worksheet summarizes these tax rules. Taxable Roth conversion amounts can simultaneously increase the amount of your Social Security retirement income that is subject to income taxation.

VeriPlan calculates this automatically in your projections. However, you may not be aware that your planned Roth conversion amount in any given year would also increase taxes on your Social Security retirement income, as well. So that you can understand when this is happening note the amount of Social Security subject to income taxes in column N in the table above, before you make a Roth conversion entry into column D. Then, after you have made an entry into column D, recheck column N to see if the amount Social Security retirement benefits subject to taxation has increased.

VeriPlan also automatically projects any "Income-Related Monthly Adjustment Amounts" (IRMAA) related to Medicare Part B and Part D monthly premiums. **For VeriPlan to project IRMAA premiums for you, FIRST YOU MUST TURN ON VeriPlan's Medicare and retirement healthcare cost features on the Retirement worksheet and choose your assumptions and/or accept the defaults provided.**

IRMAA is a reduction in Medicare's subsidy of insurance premiums related to family income. For more information see the IRMAA section of the yellow-tabbed Retirement worksheet. While not a direct income tax, IRMAA functions like an increased income tax for higher income senior citizens.

In the table above column N shows whether your projected income after age 65 would be high enough for you to be subject to IRMAA surcharges and at what level. Using a method similar to Social Security retirement benefits in the previous paragraphs, check the IRMAA amounts before and after making a Roth conversion entry in Column D above. Note that there is a one year lag, so check the adjacent rows.

This sample graphic below does not include all rows through age 100 or all columns.

L	M	N
Value of Tax Location Optimization (\$ Returns on Cash and Fixed Income Assets Removed from Column E)	Social Security Benefits Subject to Federal Income Tax	Total Medicare IRMAA for Part B & Part D
\$0	\$8,906	\$0
\$0	\$7,388	\$0
\$0	\$7,216	\$0
\$0	\$7,257	\$0
\$0	\$7,311	\$0
\$910	\$7,951	\$1,876
\$1,845	\$18,580	\$1,876
\$2,830	\$18,580	\$1,876
\$3,871	\$18,580	\$1,876
\$4,979	\$18,580	\$4,714
\$6,154	\$18,580	\$4,714
\$7,400	\$18,580	\$4,714
\$8,719	\$18,580	\$4,714
\$10,116	\$18,580	\$7,549
\$11,594	\$18,580	\$7,549
\$13,150	\$18,580	\$7,549
\$14,789	\$18,580	\$7,549
\$16,505	\$18,580	\$10,387
\$18,302	\$18,580	\$10,387
\$20,181	\$18,580	\$10,387
\$22,131	\$18,580	\$10,387
\$24,152	\$18,580	\$10,387
\$26,242	\$18,580	\$10,387
\$28,387	\$18,580	\$10,387
\$30,576	\$18,580	\$10,387
\$32,794	\$18,580	\$10,387
\$35,045	\$18,580	\$10,387

You should also be aware that future RMDs are considered income for IRMAA, and Roth conversions done in low income years can reduce future IRMAA surcharges. You can demonstrate this by entering Roth conversions in low income years, which would reduce future

assets in traditional tax-advantaged retirement accounts. This would reduce RMDs and could lower future IRMAA costs.

Prior to Medicare, those with low income who purchase health insurance through the Affordable Care Act (ACA) system may receive substantial tax credits to lower their insurance premiums. Since Roth conversions are taxable, this increases taxable income and reduces ACA subsidies. For persons in this situation, it might be appropriate to avoid Roth conversions in years prior to age 65. ACA premium subsidies are a tax credit and can be quite substantial. The calculations are complex and can vary by family size, income level, and state. For more on this topic, see the red-tabbed Optimizations worksheet.

Low income tax rate years

You are more likely to benefit from Roth conversions in years when your taxable income is expected to be low and thus your income tax rates are expected to be correspondingly low. Such low income years usually occur as follows:

- * Between retirement and age 70 you may have multiple years with low taxable income. In these years you might even have negative taxable income, if your taxable income is less than your standard or itemized deductions including perhaps deductible mortgage interest and real estate taxes.
- * For Roth conversions to be feasible in any year you need to have accumulated enough financial assets in taxable accounts with enough tax basis for you to pay your ongoing living expenses, debts, and taxes. Otherwise, you would need to withdraw funds from traditional retirement accounts to pay the bills, which would drive up your taxable income and narrow your Roth conversion opportunity.
- * Other years that present Roth conversion opportunities are un-paid sabbatical years or unemployment years, when you have other assets to pay the bills. Unexpected career disruptions can happen to anyone. (Can you say "pandemic?" Mr. Rogers knew you could.) While these situations can be miserable emotionally, Roth conversions are a silver lining. You expect that you will get back on your career track, but sometimes it takes many months. While you live on your savings, you might have a year or two of partial earnings that put you into much lower income tax brackets. You might also have substantial tax deductions that increase the amount that you could convert at a

0% tax rate. Later, you will be pleased that you did not miss the opportunity to do some very low tax or no tax Roth conversions, while other things were unavoidably awful.

For those who expect to have the good fortune to accumulate sufficient assets to retire early, you may have additional years where Roth conversions might be feasible.

- * For those who retire prior to age 65 and Medicare, the substantial cost of medical insurance can be a consideration. For those with low income, the medical insurance premium tax credit subsidies available under the Affordable Care Act (ACA) can be substantial. Because Roth conversions are counted as income under the ACA's modified adjusted gross income calculations, this needs to be taken into account.
- * Because of ACA tax credits can exceed \$20,000, their value tends to dominate the trade-off between ACA tax credits and the value of doing additional Roth conversions prior to age 65 and Medicare. After age 65 and Medicare tends to be the sweet spot for doing Roth conversions for most people. Furthermore, you should note that if you retired early and you did not plan adequately for covering living expenses from cash or other taxable stock assets with a high tax basis, then using Roth assets can be a way of preserving ACA tax credits. Roth distributions are not taxable and do not count under ACA MAGI. This all depends upon individual circumstances, but an early retiree can spend Roth assets without driving up Obamacare MAGI and losing tax credits. Then after 65, that person might be able to restore some Roth assets through subsequent conversions.

Prepare a "pro forma" tax return to determine the optimal Roth conversion amount for any particular year

VeriPlan is designed to evaluate the financial utility and breakeven age of Roth contributions and conversions across a lifetime planning model. In addition, if Roth conversions might be financially attractive across your lifetime plan, the year-by-year Roth conversion tool in this section also helps you to plan ahead to identify the years when it is more likely for you to be able to do Roth conversions. If you determine with VeriPlan that Roth conversions in certain years could be a desirable strategy for you, the preparation of a "pro forma" tax return near the end of those conversion years will help you to further optimize your tax planning.

When you decide actually to implement a Roth conversion in a particular year, I suggest that you prepare a pro forma tax return for the federal tax return you will file in the spring time. **Since one can no longer re-characterize Roth conversions,** Roth conversions will typically be done in the last month or two of the year so that you understand financial market performance during that year. To determine the specific conversion dollar amount in any particular year, I suggest preparing an anticipatory pro forma income tax return near the end of the calendar year, because certain tax code complexities can affect tax rates on Roth conversions.

For example, as other ordinary income increases, 50% up to 85% of Social Security becomes subject to taxes. This creates non-linearity in tax rates, as taxable ordinary income rises. Also, if you have long-term capital gains to report, increasing income can increase LTCG taxes. For those who retire early before Medicare, another factor that can affect the tax calculation is Affordable Care Act premium tax subsidies. As modified adjusted gross income increases, ACA subsidies decline, and Roth conversions are counted as part of ACA modified adjusted gross income calculations.

Personally, for many years, I have used TurboTax for filing my taxes in the spring. (Other tax preparation software could work, as well.) Then, later in the year -- usually in November I use TurboTax to develop a pro forma income tax return estimate for the coming year by inputting estimates for the tax return that I would file in the spring of the next year. With this pro forma estimated tax return, I then add in various Roth conversion amounts and calculate the average tax rates on these Roth conversion amounts. I decide on the specific Roth conversion amount by noting when tax rates on Roth conversion amounts jump up noticeably. I get this done by Thanksgiving to leave time to implement the actual conversion of traditional retirement account assets to Roth assets in early December. This leaves time to confirm that the financial custodian actually did the conversion for me and to correct any problems.

14.5: Economic and investment tradeoffs between traditional and Roth retirement account assets

This section discusses economic tradeoffs between traditional tax-deductible retirement account contributions and non-deductible Roth retirement contributions and conversions. It is helpful to understand the lifetime investment model underlying the comparison between tax-deductible traditional retirement account assets and non-deductible Roth account assets.

For many people, their overall instinct is that Roth contributions should be financially superior to tax-deductible traditional account contributions, but this is not true for most people. Like a "bird in the hand," for most people, the income tax savings provided by traditional retirement contributions at the outset and the appreciation on those tax savings over the years would be more valuable. Only in certain circumstances, will Roth contributions and/or contributions reduce traditional RMDs and associated taxes enough to have a greater financial benefit within a normal life expectancy.

Tax-deductible contributions into traditional IRAs and employer defined contribution plans allow you to reduce federal, state, and local income taxes at the beginning, in the year when a contributions is made. From an investment modeling standpoint you retain more cash at the outset. Furthermore, these cash tax savings could appreciate and compound over the years in line with your asset allocation model.

Deductible traditional retirement contributions win (until RMD breakeven after age 72/75)

- **Tax-deductible traditional contributions reduce up-front U.S. federal, state & local income taxes**
- **The higher the income tax rates, the higher the tax saving from the up-front deduction**
- **Lower taxes = more savings or spending**
- **Saved taxes can compound in taxable accounts for decades**
- **Before the tax breakeven point, deductible traditional contributions are preferred over non-deductible Roth contributions**

The up-front tax reduction for traditional retirement account contributions is the government's incentive to encourage you to save for retirement. In exchange for these initial tax

breaks on traditional retirement account contributions, you must begin to take out income taxable RMDs at some point in retirement. RMDs are the flip side of that tax incentive coin.

Your RMDs are projected to begin either at age 73 or 75 depending upon your current age, and VeriPlan's projections handle this difference automatically. The SECURE Act "1.0" of 2019 pushed the initial RMD age from 70.5 out to age 72. In December of 2022 the second SECURE Act 2.0, was signed into law. This second act raised the initial RMD age to 73 beginning in 2023. An additional provision provided for a subsequent increase in the initial age of RMDs to 75 starting in 2033. See the RMD section of the yellow-tabbed Taxes worksheet for more information.

Pushing the start of RMDs out to higher ages, also pushes out the breakeven point on the comparison between the financial value of traditional contributions that reduce initial taxes and Roth contributions or conversions. Later RMDs means a delay in the recovery of taxes in this taxation tradeoff. On the other hand, when the age at which RMDs begin is pushed forward, this tends to add additional lower income years for doing a series of lower tax Roth conversions.

Will you break even on Roth contributions, before you die?

- **If some Roth contributions are made while working, then Required Minimum Distributions (RMDs) on traditional retirement accounts will be lower after age 73/75**
- **Lower RMD income taxes after age 73/75 are the investment payback mechanism to recover lost deductible income tax savings and lost subsequent asset appreciation**
- **It can take many years to overcome the financial head-start that traditional deductible contributions have**
- **The vast majority of people will NOT accumulate enough traditional retirement assets and thus will NOT pay high enough RMD income taxes at high enough tax rates to payback the lost tax savings and lost appreciation**
- **The typical Roth versus traditional contribution breakeven age is greater than average life expectancy**
- **With inheritance / legacy objectives, evaluation of an acceptable breakeven point may move beyond personal life expectancy**

Your overall annual RMDs are calculated by totaling all assets held in traditional retirement accounts and dividing this sum by your actuarial expected remaining lifespan. As you age, the

numerator declines and the annual RMD percentage increases. If you accumulate substantial traditional retirement account assets, RMDs can push you into higher income tax rate brackets, especially as you age.

Specifically, RMDs are calculated using a standard formula that divides:

- A) the end-of-prior-year total asset value across traditional retirement accounts by
- B) the remaining number of years in your life expectancy.

Remaining years of life expectancy are based upon the IRS's updated Uniform Lifetime Life Expectancy and Distribution Period Table used for purposes of determining RMDs. This Uniform Lifetime Life Expectancy table is based on "posterior" life expectancies, which means that given that you have lived this long, this is your remaining life expectancy. For example, if you actually lived to 100, then 6.4 years would be the remaining life expectancy for this table and would be the equation's denominator. This means that the divisor never goes down to one, so annual RMDs never are 100% of the account balances.

To give you some idea of how RMDs change over time, the divisor is 26.5 at age 73 and 24.6 at age 75, which corresponds to 3.77% and 4.07%, respectively, of end of year traditional asset balances. At age 80 the equation's denominator declines to 20.2, and RMDs rise to 4.95% of account balances. At age 85 the denominator is 16.0 and RMDs are 6.25% of assets. At age 90 the denominator is 12.2, and RMDs are 8.20% of balances. By age 95 the denominator is 8.9, and RMDs have increased to 11.24% of the then current end of year asset total.

Traditional to Roth conversions in low income years have a quicker payback

- **While working, income tax rates are higher for most people compared to their expected retirement income tax rates. Initial tax savings on deductible traditional retirement plan contributions are a higher percentage of income, and thus more valuable.**
- **Waiting for lower income tax years after retirement to do a series of Roth conversions can be more optimal. Taxes paid at lower rates mean a quicker payback.**
- **Waiting to convert allows greater asset appreciation on the initial deductible tax savings.**
- **Convert some /not all traditional retirement assets**
 - **There are diminishing returns on Roth conversions. The first dollar converted is the most valuable.**
 - **Eliminating all RMDs is unnecessary, just cut them back.**
 - **Partial conversions can cut Medicare's IRMAA subsidy reductions**

Diminishing Returns to Roth Conversions

If your analysis demonstrates that Roth conversions in low tax years would result in attractive positive outcomes in terms of projected total assets, you should also note the phenomenon of diminishing returns on Roth conversions and contributions. The goal should be to determine the optimum Roth contribution and conversion strategy. Converting all traditional assets to Roth assets is unnecessary and financially suboptimal.

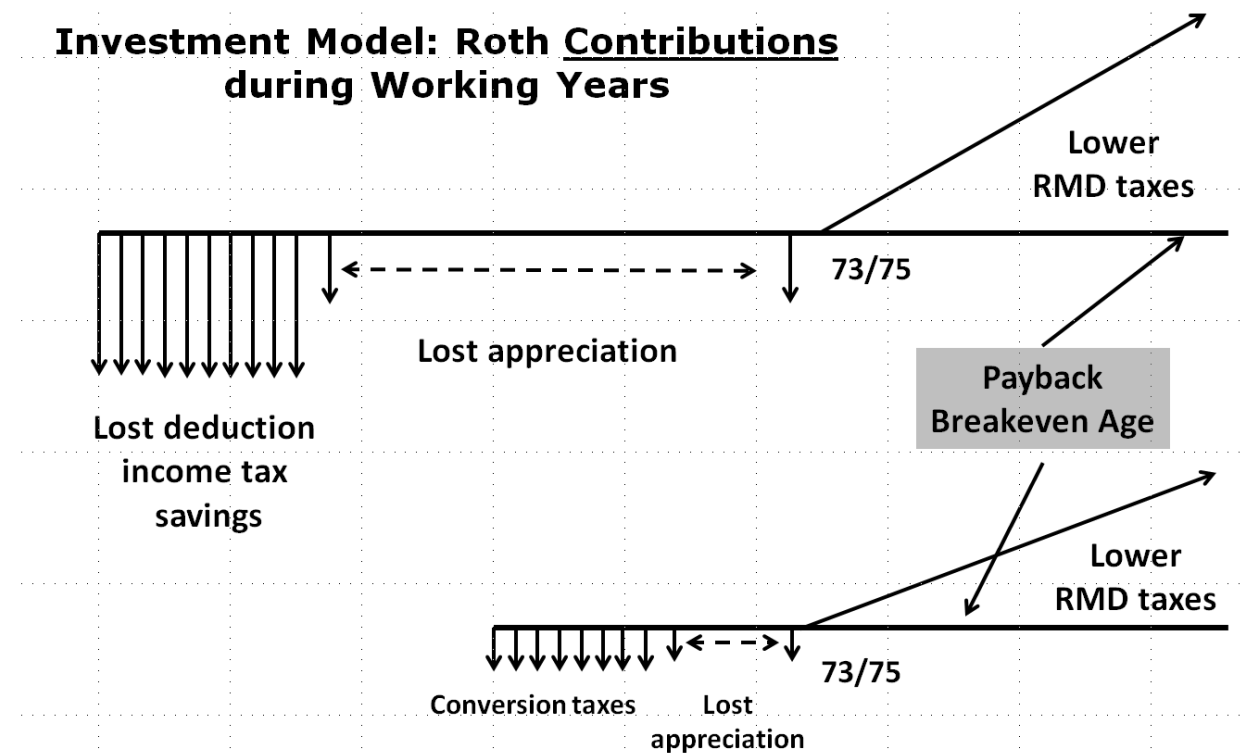
For example, once you plan to convert some Roth assets and you find that to be attractive in terms of the projected breakeven age, the conversion of additional traditional retirement assets will tend to push out the breakeven age -- even if these additional conversions could be done at the same tax rate as before.

As more traditional retirement assets are converted, the projected total amount of remaining traditional retirement assets declines in relative terms and thus RMDs would also decline, lowering the value of each additional dollar converted and pushing out the breakeven age. In

summary, the optimal amount to be converted is normally some fraction of total traditional retirement accounts assets and not the total.

In addition, you do not have to eliminate RMDs to eliminate Medicare's IRMAA Part B and B subsidy reductions for those retirees with higher income. RMDs are part of the modified adjusted gross income calculation that affects IRMAA and VeriPlan automatically takes IRMAA into consideration in your projections. You can turn on the Medicare cost functionality on the yellow-tabbed Medicare worksheet and then look at the blue-tabbed Expenses graphic to understand whether your future RMDs might push your modified AGI into IRMAA territory. Also, you can check the IRMAA column to the right in the year-by-year Roth conversions table to gauge when Roth conversions might have reduced or eliminated future IRMAA adjustments. For more information see the IRMAA section below on this worksheet.

Investment Model: Roth Contributions during Working Years



Investment Model: Roth Conversions in Low Tax Years

Because VeriPlan is a fully integrated lifetime cash flow projection model, it can automatically project and contrast the relative benefit of the front-end tax benefits of deductible traditional retirement contributions with the back-end Roth tax savings due to lower RMDs in retirement. Roth contributions while working and Roth conversions in lower tax rate years

combine to reduce traditional retirement asset balances. Thus, greater Roth assets reduce the amount of income taxes that must be paid due to lower RMDs in retirement.

The question becomes whether lower income taxes due to reduced RMDs in retirement outweigh the upfront tax savings. In most cases, the breakeven point does not occur in within a reasonable expectation for a lifespan.

Optimizing Roth Conversions

- **Plan for a series of Roth conversions in low income tax years (after retirement or during unemployment)**
- **Build up some high tax basis assets in taxable accounts to pay living expenses during Roth conversion years**
- **Convert up to selected federal income tax breakpoints (e.g. 12% to 22%) taking into account other ordinary income and deductions**
- **Ages 65 to 69 often better for conversions (You are on Medicare & deferring largest Social Security check to 70)**
- **Before age 73/75 RMDs, but one could also convert in earlier RMD years when the divisor is higher**
- **Maybe not before age 65/early retirement (Valuable Affordable Care Act medical insurance tax subsidies need to be taken into account, because Roth conversions count as part of modified AGI calculation on ACA subsidies)**

14.6: Roth conversions and Medicare IRMAA

When Medicare beneficiaries have relatively high income in certain years, they will pay a higher percentage of the true cost of Medicare Part B and Part D insurance premiums. These increased premium payments are known as "Income-Related Monthly Adjustment Amounts" (IRMAA). IRMAA has five levels of increased premium payments related to higher income. For more information, see the IRMAA section and chart on the Retirement worksheet,

VeriPlan's projections can automatically calculate Medicare Part B and Part D IRMAA premiums for you. HOWEVER, FIRST YOU MUST TURN ON VeriPlan's Medicare and retirement healthcare cost features on the Retirement worksheet. Once these features are turned

on, VeriPlan will automatically project your various Medicare and retirement healthcare costs, including IRMAA.

Medicare IRMAA is not an income tax, but rather a reduced Medicare insurance premium subsidy. Nevertheless, since your Medicare insurance premium subsidies may be reduced at higher income levels, IRMAA functions like an increased federal income tax. The good news to the 92% of those with lesser income is that only about 8% of all Medicare recipients will have high enough income to pay IRMAA in any given year.

For single federal tax filers and for married persons filing federal income taxes jointly who use the standard deduction, the first and lowest IRMAA level is not crossed until when a family's retirement income is close to the 24% federal income tax breakpoint. Nevertheless, the way IRMAA "modified adjusted gross income" "IRMAA MAGI" and federal graduated income taxes are calculated is different. These are income-related apples and oranges systems. In contrast to the federal graduated income tax system, IRMAA MAGI is an adjusted gross income calculation that adds back tax-exempt interest earnings but ignores deductions and exemptions. See the notes in VeriPlan's IRMAA section of the yellow-tabbed Retirement worksheet for more information about IRMAA MAGI and about appeals to Medicare when you have reduced income.

Because Medicare IRMAA and the federal income tax system are different, VeriPlan has developed a compromise for the analysis of year-by-year Roth conversions. Roth conversion amounts will increase taxable income and at about the 24% federal income tax breakpoint Roth conversion amounts may also increase IRMAA premium payments.

Above on VeriPlan's year-by-year Roth conversion analysis tool, scroll to the right and notice column "N" at the far right titled Total Annual Family Part B & Part D IRMAA. If you want to determine whether a Roth conversion dollar amount will also affect IRMAA, first note the \$0 or higher dollar amount in the IRMAA column. (Note that the effect will be offset by one year.) Then, put a trial Roth conversion amount into Column D.

As usual, check columns F through K to understand federal taxes. In addition, check the IRMAA column and note whether the IRMAA amount has changed. If there is a dollar difference, that is the projected incremental Medicare IRMAA premium. Divide the incremental IRMAA by the conversion amount to judge the incremental IRMAA "income tax" percentage for that particular conversion amount.

14.7: Understanding and planning for the backdoor Roth IRA conversion strategy

Backdoor "no tax" Roth IRA conversions require pooling of the tax basis across a person's traditional IRAs

In certain circumstances, higher income taxpayers can still make non-deductible traditional IRA contributions, while they are prohibited from making Roth contributions. These traditional IRA contributions are non-deductible and have a tax basis at the outset. A person might think, "Great, all I have to do is: A) to make this non-deductible traditional IRA contribution, and then B) immediately convert those assets into a Roth IRA, before there is any investment appreciation. When I file my taxes, I will report the conversion amount and subtract the tax basis, which will be about the same. There will be no income added to my tax return, so my conversion will be tax-free. I can have my cake and eat it too, through this no tax "backdoor" Roth IRA conversion."

Is this possible? Yes. Is it legal? Yes. Is there a catch? Yes, of course there is. The catch to this potential "no tax" Roth IRA conversion strategy is that the taxable amount is not determined on a single IRA account by IRA account basis. Instead, the taxable portion of a traditional IRA withdrawal is determined across all of the individual's traditional IRA accounts, including any employer plan SIMPLE-IRA or SEP-IRA accounts, which also use IRA accounts. This is the same method when taxes are determined for any conversion of traditional IRA assets into Roth IRA assets, since Roth conversions are treated as taxable withdrawals.

You must add up all your traditional IRA account balances, but this applies only to your traditional IRA account balances. This does not include your Roth IRA account balances or the IRA assets owned by a spouse or any assets held within any previous or current employer's retirement plan, such as a 401k, 403b, 457 plan, etc., unless that employer plan is a SIMPLE-IRA or a SEP-IRA plan.

Adding up the tax basis amounts across all traditional IRA accounts an individual owns will usually create tax problem for Roth IRA conversions. Most traditional IRAs have little to no tax basis. This collective IRA tax basis number is then divided by the aggregate end-of-year asset values of all these traditional IRA accounts. The resulting fraction determines the percentage of the total amount converted that can be excluded from taxation. Subtract this typically small tax

basis percentage from 100% and this remaining usually large percentage of the conversion amount will then be added to your taxable income and be taxed at your marginal ordinary income tax rates.

Examples of tax basis pooling that facilitate and undermine backdoor Roth conversions

Let us say a taxpayer has only one very recently opened traditional IRA account. He makes an initial contribution to that new traditional IRA account of \$6,000, which is non-deductible, because of this individual's modified adjustable gross income (AGI) is relatively high. Then, he could do a conversion to a Roth IRA and pay no taxes, if there was no appreciation following the contribution. If there is some appreciation, income taxes would be due only on the amount of appreciation. If the amount converted is \$6,600, then \$6,000 divided by \$6,600 or 90% is excluded from taxation and the remaining 10% or \$600 is taxed -- the appreciation amount.

However, if this individual had other IRA accounts already, this "backdoor" Roth IRA conversion could be anything but free of taxes. Let us modify the example above and assume that that this individual had one or more previously established traditional IRA accounts with a total year end asset value of \$94,000. Previously, this person had always been able to make deductible contributions, because his lower AGI in prior years had allowed all previous contributions to be deductible. Therefore, there would be no tax basis associated with these \$94,000 of traditional IRA assets.

Then, he makes a current \$6,000 non-deductible contribution into a new or existing traditional IRA account. Very soon he converts the \$6,000 into a Roth IRA, before there was any asset appreciation. Thinking this is a tax free conversion, he is happy -- until income tax filing time. Then, he is sad.

When filing, he finds out that the tax rules require him to add the total tax basis across all traditional IRA accounts, which is \$6,000. Then, he must divide this total tax basis by the total value of his traditional IRA accounts at the end of the year, which is \$6,000 plus \$94,000 or \$100,000. The tax basis percentage result is 6%.

When filing his taxes he is allowed to avoid taxation on 6% of his conversion amount or \$360, which is the proportional tax basis. He is allowed to subtract only \$360 from \$6,000. The remaining \$5,640 of the conversion is fully taxable. This \$5,640 is added to his taxable income,

and he must pay whatever his total marginal ordinary income tax rates might be at the US federal, state, and local levels.

Capitalizing on no-tax or low-tax backdoor Roth IRA conversions

The moral of this often sad taxpayer story is that you can only do a tax free Roth IRA conversion, if you do not have other IRA accounts that house previously deductible asset contributions and subsequent asset appreciation. So, what does one do to make sure that they can capitalize on no-tax or low-tax backdoor Roth IRA conversion strategy?

Here are some thoughts:

- * Understand the IRA tax rules beforehand, so that you are prepared to take advantage of conversion opportunities. IRS publication 590 is one place to start. (This article is just information that could get out of date or wrong. It is not financial advice. Confirm the facts through a detailed reading of IRS information and publications and/or consultation with your trusted financial professionals.)
- * Look at the table in Section 10 of the Tax-Advantaged Plans worksheet, to determine if you are now and/or in the future likely to be in a situation where your income is high enough to prevent you from making direct Roth IRA contributions. Remember that modified AGI includes other income sources beyond compensation from work, so your work income could be lower than these amounts.
- * For spouses, keep in mind that this pooled traditional IRA tax basis calculation is done on a per person basis. For example, consider the situation where all traditional IRA accounts have accumulated over time in one spouse's name. Perhaps, the other spouse has not worked outside the home, and no spousal IRA contributions have been made to date in that person's name. If the family's ongoing annual taxable income is high enough and only non-deductible traditional IRA contributions can be made, the backdoor Roth conversion strategy on future spousal IRA contributions could be available year after year. Yet, it might not be feasible for the other spouse who already has multiple traditional IRAs without a substantial tax basis.
- * If you find that you are in a situation where you might be able to take advantage of this no-tax backdoor Roth IRA conversion maneuver year after year, get prepared. For some this could mean doing some taxable conversions to get traditional IRA assets

out of the way. If you only have a relatively small amount of other traditional IRA assets with no tax basis, you might convert them and pay the taxes. Otherwise, the no tax basis assets in your traditional IRA accounts are more likely to keep appreciating over time. The appreciation would increasingly dilute the tax basis of your future non-deductible traditional IRA contributions targeted for quick Roth conversions.

Employer plan rollovers into traditional IRA accounts would affect backdoor Roth conversions

Avoid rollovers of your traditional employer retirement plan assets into rollover IRA accounts. These rollover assets usually have no tax basis. They would just add to the total value of your traditional IRA accounts, further diluting any tax basis.

While rollovers most commonly occur after a person has stopped working for an employer, rollovers may be possible for some who remain employed. Called "in-service" distributions, some employer plans allow a current employee to rollover some or all of their employer plan assets into a rollover IRA.

Certain segments of the financial industry have routinely recommended that individuals roll over their employer plan assets into traditional rollover IRA accounts. These rollovers may benefit the securities industry, because they get control of your assets and can charge their myriad of fees. However, this might not be the best thing for you as the owner of a retirement account held in an employer plan.

Employees who leave employment should understand that they have other options in addition to rolling over their employer retirement plan assets into a traditional IRA. First, they can simply do nothing and stay in their former employer's retirement plan in most cases. Second, if allowed, they may be able to transfer their employer plan retirement assets into the retirement plan sponsored by their new employer. If the person has any self-employment income, this second option might include transferring assets from a former employer's plan into a self-employed 401k retirement plan set up for themselves with a low cost fund custodian.

Another alternative, if you did not like the investment choices in your former employer's plan or you are not permitted to remain in that plan, would be to roll over your retirement assets into a traditional IRA with a low cost firm that offers better choices. When you do this, you will disrupt your short-term ability to take advantage of the no-tax backdoor Roth IRA conversion

strategy. However, this disruption could be temporary, if you manage this particular rollover IRA account properly. You might already have done such a rollover from an employer plan into a traditional rollover IRA.

If you treat this rollover IRA as a conduit IRA and follow the rules, you may be able to subsequently rolled those asset over into another employer retirement plan that is not an IRA. Such a subsequent plan might include a self-employment 401k plan that you set up for yourself with as low cost custodian. If you must rollover assets from an employer plan into a rollover IRA account, be sure to understand the rollover rules. IRS Publication 590 explains these rollover rules, which of course are extensive.

Avoid commingling assets in a traditional rollover IRA that is just passing through

One of the most important things is to make certain that you keep the assets in this rollover IRA account entirely separate from all of your other traditional IRAs. If you do so, you should be able to make a subsequent transfer of those IRA account assets into another non-IRA employer plan that becomes available or that you set up. However, if you "commingle" any of these rollover assets in this account with ANY other IRA assets, you would forfeit the right to make that subsequent rollover into another employer plan. If this subsequent transfer out of the IRA were blocked, it would undermine your future backdoor Roth conversion strategy.

An example of commingling assets would be to make an annual IRA contribution to that account. A no-no. Remember that you do NOT need to do make any annual contributions into your rollover account. You can set up a separate traditional IRA account instead. Financial companies routinely hold multiple IRA account for individuals. Keeping your rollover IRA separate should not be difficult. If your custodian will not cooperate, find another custodian. If they do not follow your instructions, and they mix in other IRA assets, raise a stink in writing. Custodians can fix their employee's mistakes and reverse things that were done wrong. Your letters give you the paper trail you may need in your files to demonstrate that your intent was never to commingle assets

For a detailed explanation of the mechanics of the backdoor Roth IRA conversion strategy and explanations of other IRA strategies, see the guest article I wrote, which Robert Farrington has posted on his The College Investor website. It is titled: "The Ultimate Guide on When to Make Traditional IRA vs. Roth IRA Contributions"

<https://thecollegeinvestor.com/11951/ultimate-guide-traditional-ira-roth-ira-contributions/>

Chapter 15: Asset Allocation worksheet

- 15.1: Choose one of VeriPlan's five asset allocation projection methods
- 15.2: Method 1) A constant allocation based on your current portfolio asset class percentages (default)
- 15.3: Method 2) A constant allocation for an investor with average risk tolerance
- 15.4: Method 3) A constant allocation for investors with risk tolerance higher or lower than average
- 15.5: Introduction to Methods #4 and #5: Age related, sliding scale equity asset allocation methods
- 15.6: Method 4) A declining lifetime % allocation to equity assets, with a constant % of cash assets
- 15.7: Method 5) A declining lifetime % allocation to equity assets, with a constant cash-to-bond ratio
- 15.8: Current portfolio rebalancing tool
- 15.9: Using Asset Allocation Method #3 with borrowing or negative financial asset positions

Introduction



Your asset allocation strategy allows you to align the risk of your investment portfolio with your relative risk tolerance. VeriPlan provides five user selectable and adjustable lifetime asset allocation strategies that can align your risk tolerance with the investment risk of your projected financial asset portfolio.

The cash, fixed income, and equities financial asset classes have different expected risk and return characteristics. Asset allocation is the apportionment of your investment portfolio into one or more of these three classes of market- traded financial assets. Through asset allocation, you choose the overall level of exposure to expected investment risk and return in your portfolio.

VeriPlan provides five selectable asset allocation methods. These allocation methods provide unprecedented planning flexibility in analyzing and choosing a financial asset allocation strategy that matches your preferences about investment risk and return over your lifetime. When used in combination with other facilities provided by VeriPlan, such as the "what-if" asset class adjustments on the risk and returns worksheet, you can get a much better understanding of the interplay of risk and return across financial asset classes within the context of your particular circumstances, as projected across your lifetime.

At the end of the first year of any projection, VeriPlan will perform its first annual reallocation process using the asset allocation method and settings that you have chosen. Your initial financial asset holdings are not be reallocated at the outset of the first year. This initial reallocation at the end of the first year and all subsequent annual reallocations will also incorporate growth in the value of your assets, net earned income, withdrawals, taxes, investment costs, and many other factors.

VeriPlan uses this approach, because reallocation can be unnecessarily costly in terms of investment costs and taxes. Investment reallocation should be an on-going process that anticipates the need to reallocate and takes advantage of opportunities to reduce reallocation costs and taxes during the year. For example, if you know your year-end targets, you can purchase and/or sell assets for other reasons during the year with an eye toward getting closer to your end-of-year asset allocation targets.

After you have chosen your asset allocation setting below, you can check to see graphically the lifetime asset allocation percentages that you are using. For any asset allocation method, just look at the allocation graphic and corresponding data output. to understand how VeriPlan has allocated your assets across the years. VeriPlan automatically develops these graphics directly from the annual beginning balances of your projected cash, fixed income, and equity assets, after VeriPlan's automatic annual reallocations have been performed. This allocation graphic is not simply derived from your percentage inputs, but rather reflects the percentages calculated from your projected asset balances. Note that because of the one year deferral of the initial annual

asset allocation, the allocation graphic may show a downward or upward spike for cash and/or fixed income assets in the first year.

VeriPlan's asset allocation methods enforce some necessary constraints on the settings that you may choose. These constraints are necessary to maintain VeriPlan's data integrity. In particular, when you make certain offsetting percentage adjustments, they must offset so that the resulting overall asset allocation percentages will always total 100%.

15.1: Choose one of VeriPlan's five asset allocation projection methods

You can select and activate one of VeriPlan's five asset allocation methods, by entering its number in this section. To make any personalized adjustments to the method you select, go to the section for that method below.

For each of these asset allocation methods, VeriPlan provides a section below, which describes it and allows you to make any user settings that are allowed by that asset allocation method.

Select one of VeriPlan's five asset allocation methods with this bold border user data entry box.

3	<< Enter a "1" for Method #1: A constant allocation based on your current portfolio asset class
^^^	Enter a "2" for Method #2: A constant allocation for an investor with average risk tolerance
^^^	Enter a "3" for Method #3: A constant allocation for investors with risk tolerance higher or lo
^^^	Enter a "4" for Method #4: A declining lifetime % allocation to equity assets, with a constant
^^^	Enter a "5" for Method #5: A declining lifetime % allocation to equity assets, with a constant

The method selected will be applied to all subsequent projections, until changed. Given your selection above, these are the initial asset allocation rebalancing percentages that VeriPlan will use to develop your projections.

5.00%	<< Cash and Equivalents Asset Class percentage
35.00%	<< Bond and Fixed Income Asset Class percentage
60.00%	<< Stock and Equity Asset Class percentage
100.00%	<< Total of percentages

These percentages cannot be changed here. Instead, select a method number above and then click one of these links to customize your settings below.

15.2: Method 1) A constant allocation based on your current portfolio asset class percentages (default)

Method #1 automatically uses your portfolio's current asset allocation across your lifecycle. You might prefer your current asset allocation, or you might want to use it for comparisons. Method #1 is VeriPlan's default method, which assumes that you already are invested with the allocation that you prefer. Since this may not be the case, at any time you can select another asset allocation method and analyze the differences in your lifetime projections.

Method #1 will calculate and maintain the cash, fixed income, and equity asset allocation percentages of your current portfolio throughout your lifecycle projections. If you are satisfied with your current allocation strategy and never intend to change it, then this method will allow you to continue your current strategy across your lifecycle. Alternatively, you may wish to switch back and forth to compare your current asset allocation strategy to VeriPlan's other methods.

To use Method #1, enter a 1 in the bold border data entry box in the "2) Select one of VeriPlan's five Asset Allocation Methods" section above. VeriPlan will automatically perform all other calculations.

These are the asset allocation percentages of your current portfolio.

27.59%	<< Cash and Equivalents Asset Class percentage
20.69%	<< Bond and Fixed Income Asset Class percentage
51.72%	<< Stock and Equity Asset Class percentage
100.00%	<< Total of percentages

15.3: Method 2) A constant allocation for an investor with average risk tolerance (optional)

Method #2 uses the asset allocation of the average investor, which is explained below. This method provides a constant asset allocation over your lifecycle, and no user adjustments are required beyond simply choosing it above.

Method #2 uses these asset allocation percentages *

* These percentages are not user adjustable in Method #2. To modify these average investor allocation percentages, you should instead use Method #3.

	Cash and Equivalents	Bonds / Fixed Income	Stocks / Equities	Total
Asset Allocation %	23.1%	22.9%	54.0%	100.0%

Background information

If you believe you are an average investor with an average risk tolerance and average risk-return expectations, then you may wish to use this Method #2 population average asset class percentage allocations for your lifetime projections.

Aggregating cash, bond, and stock assets across the US population using the methods described below results in percentage cash holdings that significantly exceed what the vast majority of financial advisors would suggest for cash in an investment portfolio. If you wish to alter these relative asset class percentages, then Method #3 below allows you to do this.

For this asset allocation Method #2, VeriPlan begins with the premise that the average investor holds the average asset allocation across all US investors. VeriPlan uses the average asset allocation for the average U.S. investor for the twenty-two year period from 2000 to 2021 based upon total US mutual fund asset ownership percentages of the cash, fixed income, and equity asset classes. Because relative asset class proportions will vary across market cycles, a 22-year trailing average tends to smooth out some of the effects of market cycle fluctuations over these years. This approach is be more appropriate than using cyclical market crest or market trough percentages.

The chart below shows US mutual fund financial asset percentages from 2000 to 2021. The Investment Company Institute (ICI) Factbook provides annual data on the relative proportions of mutual funds held in various asset classes. ICI mutual fund data represent about one-quarter to one-third of total US personal financial assets. (Note that hybrid mutual fund assets reported by the ICI were divided evenly and added to the bond and stock fund categories.)

Year	Cash and Equivalents (%)	Bonds / Fixed Income (%)	Stocks / Equities (%)	Totals (\$ Trillion)
2000	26.5%	14.3%	59.1%	\$7.0
2001	32.8%	16.0%	51.2%	\$7.0
2002	35.5%	20.5%	44.0%	\$6.4
2003	27.6%	20.0%	52.4%	\$7.4
2004	23.5%	19.4%	57.1%	\$8.1
2005	22.8%	18.7%	58.5%	\$8.9
2006	22.5%	17.9%	59.6%	\$10.4
2007	25.7%	17.4%	56.9%	\$12.0
2008	39.8%	19.2%	40.9%	\$9.6
2009	29.8%	23.1%	47.1%	\$11.1
2010	23.7%	25.4%	50.9%	\$11.8
2011	23.1%	28.2%	48.6%	\$11.6
2012	20.6%	29.9%	49.4%	\$13.1
2013	18.1%	26.1%	55.9%	\$15.0
2014	17.2%	26.1%	56.7%	\$15.9
2015	17.6%	26.1%	56.3%	\$15.7
2016	16.7%	26.6%	56.7%	\$16.4
2017	15.2%	25.8%	59.0%	\$18.8
2018	17.1%	26.8%	56.0%	\$17.7
2019	17.1%	25.8%	57.1%	\$21.3
2020	18.1%	25.2%	56.6%	\$23.9
2021	17.6%	24.3%	58.0%	\$27.0
22 Year Average	23.12%	22.87%	54.01%	100.00%

Source: Investment Company Institute Annual Factbooks

Another data point: Mid-market-cycle asset allocation study measuring all financial assets held for the benefit of US residents

The approximate market cycle midpoint after the turn-of-the-century dot com market crash and before the 2008 credit crisis and recession of 2008 onward occurred in 2004. The U.S. Federal Reserve tracks the total amount of personal assets held directly or indirectly for the benefit of individuals. In mid-2004, the Federal reported total personal asset ownership of \$26.9 trillion. This total is roughly three times the total of US mutual fund assets in 2004 from the table above. The Federal Reserve data measures all US personal financial assets -- either held directly or indirectly through retirement plans, trusts, etc. The Federal Reserve data show asset allocation percentages that are similar to those of 2004 mutual fund holdings and are similar to the twenty+ year averages for mutual fund holdings alone.

(\$ Trillions)	Cash and Equivalents	Bonds / Fixed Income	Stocks / Equities	Totals
U.S. Personal Assets	\$7.22	\$5.08	\$14.57	\$26.87
FEDERAL RESERVE %	26.9%	18.9%	54.2%	100.0%

Data source: Federal Reserve Bank 2004

During the extended recovery following the 2008 credit crisis and Great Recession, the Federal Reserve Bank and other central banks around the world supported the recovery by holding interest rates low in historical terms. In percentage terms, these interest rate actions encouraged higher percentage bond holdings at the expense of cash holdings, and also supported increased stock asset percentages, as market prices recovered.

15.4: Method 3) A constant allocation for investors with risk tolerance higher or lower than average (optional)

Use Method #3, if you want to adjust the average asset allocation of Method #2 to reflect your lesser or greater risk tolerance compared to the average investor. This method provides a constant asset allocation over your lifetime.

Make your financial asset class adjustments in the boxes provided. Before and after percentages are provided for you to check your adjustments easily.

Negative financial asset class percentages are allowed. This is explained below in a section that discusses both using a leveraged investment strategy and that doing so is probably inappropriate for most investors.

People vary in their preferences related to the risk and return tradeoffs inherent in investing. Asset allocation Method #3 allows you to make fixed percentage lifetime adjustments to the average investor's asset allocation percentages in Method #2. Adjustments that you make with this method will be held constant throughout your lifetime projections.

This method will be used by many investors, because investors vary in their personal tolerance for risk. Some people are more satisfied with lower expected portfolio returns, because lower returns tend to be associated with lower volatility in portfolio values over time. Others are willing to accept higher volatility or risk with the hope that their portfolio returns will be higher.

This is a matter of personal risk tolerance and is influenced by a wider variety of personal and family financial characteristics.

For example, if you believe that your tolerance for investment risk is higher than that of the average investor, you might want to increase your equities allocation in the hope of earning a higher return. While also understanding that the higher returns of equities historically have generally have been associated with higher volatility or risk, you might decide to increase your equities allocation by 20 percentage points, for example. However, if you increase your allocation to equities, you also must reduce your overall allocation to cash and/or to fixed income assets by 20% in total, as well.

If you feel you are less risk tolerant than the average investor, you might do the opposite and reduce your exposure to equities and increase your percentage holdings of cash and/or fixed income assets. You would expect lower risk and lower returns.

The magnitude of adjustments below or above the averages are a matter of your degree of risk intolerance or risk tolerance relative to the average investor.

Using Method #3: STEP ONE

To use Method #3, you must enter a "3" in the bold border data entry box above in the method selection section

Using Method #3: STEP TWO

Next, into the bold border user data entry boxes below, enter your offsetting negative and positive percentage adjustments to the asset allocation percentages that are used for the average investor in Method #2 above.

Your positive and negative percentage asset allocation adjustments to these primary financial asset classes **MUST BE OFF-SETTING AND TOTAL 0%, WHEN ADDED TOGETHER**. If your adjustments do not total 0%, VeriPlan will issue an error notice below. If you do not correct this situation, VeriPlan will not generate an invalid projection. Instead, it will revert automatically to Asset Allocation Method Number 2 for an average investor.

PRIOR TO YOUR ADJUSTMENTS BELOW, these were the average investor's asset allocation percentages from Method #2.

Note: These are the AVERAGE INVESTOR'S asset allocation percentages from Method #2 above.

23.1%	<< Cash and Equivalents Asset Allocation % of the average investor
22.9%	<< Bonds & Fixed Income Asset Allocation % of the average investor
54.0%	<< Stocks & Equities Asset Allocation % of the average investor
100.0%	<< Totals 100% of Your Cash, Bond, and Stock Financial Assets

My preferred asset allocation percentages:

Example:

5.0%	<< Cash and Cash Equivalents Assets
35.0%	<< Bonds & Fixed Income Assets
60.0%	<< Stocks & Equities Assets
100.0%	<< Total (MUST TOTAL 100%)

Method #3 can be used with borrowing or negative financial asset positions, sometimes known as 'short' versus 'long' asset positions. For more on this topic, below see the section below entitled: "Using Asset Allocation Method #3 with borrowing or negative financial asset positions."

14.5: Introduction to Methods #4 and #5: Age related, sliding scale equity asset allocation methods

VeriPlan provides two sliding scale equity asset allocation methods. Method #4 maintains a constant percentage of cash, while your bond allocation increases and your equity allocation declines. In Method #5, your equity allocation declines, while your total allocation to cash and fixed income assets increases. A constant proportion is always maintained between your cash and fixed income assets.

VeriPlan provides two asset allocation methods that use a full lifetime sliding scale to reduce exposure to equity asset risk as a person ages:

Method #4: A declining lifetime % allocation to equity assets, with a constant % of cash assets

Method #5: A declining lifetime % allocation to equity assets, with a constant cash-to-bond ratio

These sliding scale methods are provided for your experimentation and adoption, if you feel comfortable with them. Despite a presumption by many people that risk intolerance and age must be positively correlated, you should note that it is not a given for everyone, that they should

adopt a sliding scale asset allocation method that decreases exposure to equity returns and risk, as one ages.

The asset allocation that one might choose depends, of course, on one's risk preference, and personal risk preferences may change over one's lifecycle. However, risk preference may also depend upon one's level of wealth, upon how likely it is that one's income and assets will cover expected expenses, and on other factors. For some, increasing wealth and declining expenses can counteract a presumption that their investment strategy must necessarily become more conservative with age. Also regarding taxes, for example, married individuals want to leave a substantial estate to their surviving spouse, whenever possible. Tax laws allow the tax basis of appreciated equity assets will be reset to current market values upon death. Compared to ongoing taxes that must be paid on interest from cash and fixed income assets held in taxable accounts and taxed at ordinary income tax rates, such tax laws create an incentive to hold more equity assets for capital appreciation and tax avoidance reasons later in life.

From another perspective, increasing longevity also raises questions about declining age-related allocations to equities. Greater life spans increase risks that families will fail to build adequate retirement assets and be able to sustain what they have throughout retirement. While possibly counterintuitive and despite the heightened investment risks, holding equity assets across a lifecycle increasingly might become more of an uncomfortable necessity for those who wish to have sufficient assets across their full lifecycles. (Of course, saving substantially more is a lower risk solution for those with the discipline to do so.)

Because of these and other reasons, VeriPlan also provides information on one's projected portfolio safety factor through its Portfolio Safety Tool. VeriPlan defines a portfolio safety factor as the number of years that your cash and shorter-term fixed income financial assets would cover necessary expenses -- without any earned income, Social Security, pensions, annuities, or other earned income sources. This provides a measure of how long one's relatively "safer" projected financial assets would cover expenses, if one suffered a total loss of earned income when the equities market also declined dramatically, and you did not wish to liquidate your equity holdings to meet expected expenses during this period.

15.6: Method 4) A declining lifetime % allocation to equity assets, with a constant % of cash assets (optional)

With Method #4, you can increase your fixed income asset allocation and decrease your equity asset allocation across your lifecycle, while you maintain a constant percentage of your total assets in cash.

With this method, after you have set a fixed allocation to the cash asset class, you select an initial "base number" to determine the proportion of the stock - equities asset class to bond - fixed income asset class. VeriPlan will then subtract your age from this base number each year to determine your percentage allocation to the equity asset class. The higher the base number, the higher your initial percentage allocation to equities will be. As your allocation to equity assets falls, your allocation to fixed income assets will rise over the years.

For example, if you fix Cash at 10%, and select an initial base number of 120 and you are 40 years old, VeriPlan initially will set Cash at 10%, Equities at 72% ($90\% \times (120-40)$), and Fixed Income at 18%. At the age of 60, your allocations would be 10% Cash, Equities at 54% ($.9 \times (120-60)$), and Fixed Income at 36%.

Using Method #4: STEP ONE

To use Method #4, first enter a 4 in the bold border user data entry box in Section 1 above which is entitled: "Choose one of VeriPlan's five asset allocation projection methods"

Using Method #4: STEP TWO

Set the portion of your financial assets that you wish to HOLD AS CASH throughout the lifetime projections

10.00% << Percentage of your portfolio to be HELD IN CASH

Using Method #4: STEP THREE

Set the Base Number -- Set the Stock - Equity Asset Class allocation by entering a Base Number here.

Each year Earner #1's age will be subtracted from this Base Number, and the equities percentage allocation will drop.

118 << Base Index Number from which Earner #1's age will be subtracted each year to set the equities allocation

118	<< Base number you entered above
-35	<< Minus the current age of Earner #1
83	<< This index number sets the equities percentage in first year PRIOR to your reduction f If greater than 100, the amount above 100 equals the number of years until bonds e

83.00%	<< Equities allocation BEFORE reduction for the cash allocation from above
-10.00%	<< Minus your constant percentage allocation to cash from above
73.00%	<< Initial allocation to equities AFTER a reduction for your cash allocation
17.00%	<< Initial allocation to bonds

Given your selections above, these are the initial asset allocation rebalancing percentages that VeriPlan will use to develop your projections.

10.00%	<< Cash and Equivalents Asset Class percentage
17.00%	<< Bond and Fixed Income Asset Class percentage
73.00%	<< Stock and Equity Asset Class percentage
100.00%	<< Total of percentages

This initial number will depend upon a) your current age, b) how large or small you wish your initial allocation to equity assets to be, and c) the portion of assets you have designated to be held in cash. You should experiment with various settings and review the allocation graphic.

For example, enter a base number that is 100 higher than Earner #1's age, if you want to start with all of your non-cash financial assets to be held in equities and to decline thereafter. Enter a base number that is 50 higher than Earner #1's age, if you want to start with half of your non-cash assets in equities and the other half in fixed income, etc.

You may enter higher or lower base numbers. VeriPlan will ensure that the equity asset allocation will never be greater than 100% or lower than 0% of your non-cash financial assets. For example, if you enter a base number that is 110 higher than Earner #1's age, then VeriPlan will hold your non-cash allocation all in equities for 10 years and then drop the equity allocation and increase the fixed income allocation each year thereafter.

15.7: Method 5) A declining lifetime % allocation to equity assets, with a constant cash-to-bond ratio (optional)

With Method #5, you can hold the ratio of your cash and fixed income assets constant, while you reduce your percentage exposure to equity assets and increase your total exposure to cash and fixed income assets across your lifetime.

Therefore, cash and fixed income assets will both increase proportionally over the years as a share of total assets, while the complementary overall proportion of equities will decline.

To use this method, you will set the ratio between cash and fixed income assets that you want. Then, you will use an age-related mechanism that is similar to Method #4 to reduce your equities allocation over time. To determine the proportion of equity assets to cash + fixed income assets, you will select an initial base number, and VeriPlan will subtract your age from that base number to determine the declining allocation to equities over time. The increasing cash + fixed income asset allocation percentage will be the complement of the declining equities allocation percentage. As the allocation to equities falls over the years, the allocation to cash + fixed income assets will rise.

For example, if you fix cash as 30% of cash + fixed income assets, and select an initial number of 120 and you are 40 years old, the model will set equities at 80% (120-40) initially, cash at 6% (20% x 30%), and fixed income at 14% (20% x 70%).

At age 60, the allocations would be 60% equities (120-60), cash at 12% (40% x 30%), and fixed income at 28% (40% x 70%).

Using Method #5: STEP ONE

To use Method #5, first enter a 5 in the bold border user data entry box in Section 1 above which is entitled: "Choose one of VeriPlan's five asset allocation projection methods"

Using Method #5: STEP TWO

Set the constant portion of your CASH assets as a percent of your CASH + FIXED INCOME assets

<< Percentage of your TOTAL CASH AND FIXED INCOME ASSETS to be HELD IN CASH

Using Method #5: STEP THREE

Set the Base Number -- Set the equity asset allocation by entering a Base Number here.

Each year Earner #1's age will be subtracted from this Base Number, and the equities allocation will drop by 1 percentage point.

<< Base Index Number from which Earner #1's age will be allocation subtracted each year to set the equities allocation

118	<< Base number you entered above
-35	<< Minus the current age of Earner #1
83	<< This index number sets the equities percentage in first year PRIOR to a reduction for the c: If greater than 100, the amount above 100 equals the number of years until cash and bor

83.00%	<< Initial equities allocation
17.00%	<< Remaining allocation for cash and bonds
5.100%	<< Initial allocation to cash
11.90%	<< Initial allocation to bonds

This initial number will depend both upon a) your current age, b) how large or small you wish your initial allocation to equity assets to be, and c) the portion of assets you have designated to be held in cash. You should experiment with various settings and review the allocation graphic, after you make your selections above.

For example, enter a base number that is 100 higher than Earner #1's age, if you want to start with 100% equities and decline 1% annually. Enter a base number that is 50 higher than Earner #1's age, if you want to start at 50% equities, etc.

You may enter higher or lower base numbers. The model will ensure that the equity asset allocation will never be greater than 100% or lower than 0%. For example, if you enter a base number that is 110 higher than Earner #1's age, then VeriPlan will hold the allocation to equities at 100% for 10 years and then drop the equity allocation by 1% each year thereafter.

Given your selections above, these are the initial asset allocation rebalancing percentages that VeriPlan will use to develop your projections.

5.10%	<< Cash and Equivalents Asset Class percentage
11.90%	<< Bond and Fixed Income Asset Class percentage
83.00%	<< Stock and Equity Asset Class percentage
100.00%	<< Total of percentages

15.8: Current portfolio rebalancing tool

This tool can aid you in reallocating your currently held cash, bond, and stock financial assets, according to your chosen asset allocation model above on this worksheet. **The rebalancing tool draws information from other parts of VeriPlan, but it will not directly affect any other parts of VeriPlan. For the results of this rebalancing tool to affect your model, you must actually change your current portfolio and then revise your cash, bond, and stock holdings on the Financial Assets worksheet.** If you adjust your portfolio holdings according to this tool and then make those entries on the Financial Assets worksheet, then this

rebalancing tool would show that your portfolio is aligned with your preferred asset allocation model.

This tool is provided here as a convenience, should you decide that you want to reallocate your currently held financial assets after you have settled upon a long-term financial planning model. This section can help you to estimate the total amounts of cash, bonds, and stock that would need to be invested across your taxable investment accounts and across your traditional and Roth tax-advantaged accounts to implement the asset allocation model that you want to adopt.

Using the information from this current portfolio rebalancing tool, you can more easily decide the numerical transactions that you would need to make to rebalance your current assets into your target allocations. Once you have actually made these portfolio modifications, then you should enter those adjusted asset holdings on the financial assets worksheet. As you do make real portfolio changes, remove sold assets, and enter newly purchased assets, then the portfolio percentages of your current financial assets will converge on the initial percentages you have chosen in the VeriPlan asset allocation method that you have selected.

To help improve upon investment tax optimization, this current portfolio rebalancing tool also takes into account the distribution of your financial assets across taxable accounts, traditional tax-advantaged retirement accounts, and Roth tax-advantaged retirement accounts.

For more information about asset allocation and asset tax optimization, read the article titled "Lifelong tax savings from investment portfolio asset tax location," which can be found on the red-tabbed Optimizations worksheet.

Current cash, bond & equity financial asset holdings by account taxability

This table shows dollar values and percent of total financial assets for your current financial assets, which are split out by account taxability. (All percentages are % of total current financial assets.)

Taxable account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Sub Total
\$15,000	\$20,000	\$150,000	\$185,000
3.76%	5.01%	37.59%	46.37%
Traditional tax-advantaged retirement account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Sub Total
\$30,000	\$10,000	\$75,000	\$115,000
7.52%	2.51%	18.80%	28.82%
Roth tax-advantaged retirement account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Sub Total
\$40,000	\$25,000	\$34,000	\$99,000
10.03%	6.27%	8.52%	24.81%
All financial assets			
Cash	Bonds/Fixed	Stocks / Equity	Overall Total
\$85,000	\$55,000	\$259,000	\$399,000
21.30%	13.78%	64.91%	100.00%

PLANNED first year cash, bond & equity financial asset allocation

This table shows your planned financial asset allocation by the end of the first year following reallocations. In this table, you should enter your US Domestic versus International split percentages for both the bond/ fixed income and stock/equity asset classes. Your percentage splits must total 100% within asset classes.

Stocks / Equity	
60.00%	<<< Planned first year Stock/Equity allocation (%)
You Choose >>	50.00% <<< portion to be invested in US Domestic Stock/Equity
You Choose >>	50.00% <<< portion to be invested in International Stock/Equity
	100.00% <<< Must total 100% (Cell is red, when not equal to 100)
Result >>>	30.00% <<< US Domestic Stock/Equity securities as %
Result >>>	30.00% <<< International Stock/Equity securities as %
Bonds / Fixed Income	
35.00%	<<< Planned first year Bond/Fixed Income allocation (%)
You Choose >>	100.00% <<< portion to be invested in US Domestic Bond/Fixed Income
You Choose >>	0.00% <<< portion to be invested in International Bond/Fixed Income
	100.00% <<< Must total 100% (Cell is red, when not equal to 100)
Result >>>	35.00% <<< US Domestic Bond/Fixed Income securities as %
Result >>>	0.00% <<< International Bond/Fixed Income securities as %
Cash	
5.00%	<<< Planned first year Cash allocation (%)
Total Financial Assets	
100.00%	<<< Must total 100% (Cell is red, when not equal to 100% -- Make cell green)

Use the table below to decide how to distribute your financial assets by asset class and account taxability

To improve upon investment tax optimization, this spreadsheet helps you to distribute of your financial assets within the major financial asset classes AND across taxable accounts, traditional tax-advantaged retirement accounts, and Roth tax-advantaged retirement accounts.

Distributing assets between asset classes and across accounts with different tax characteristics is an iterative process. How your assets are distributed depends upon BOTH your planned overall asset allocation model and the amount of assets that you have in accounts with differing tax treatment.

In the table below, you will enter the percentage distribution of assets within 5 financial asset categories: 1) International Stocks/Equities, 2) Domestic Stocks/Equities, 3) International Bonds/Fixed Income, 4) Domestic Bonds/Fixed Income, and 5) Cash securities.

Within each of these five major financial asset classes, you will use percentages that total 100% to distribute your planned investments across available accounts with different tax characteristics.

At the bottom of the table is a guide that measures whether your allocations within asset classes reconcile to your overall allocation model. Use this information to converge on very low percentage deviations and dollar deviations. When your deviations are under 1% in each category, you are close enough, given that typical rebalancing policies are usually than that -- often in the 5% range.

Using the Results:

When you have completed your adjustments below, you would read down the columns entitled "Total \$ to invest for this asset class and account type." **These dollar figures would mean that "I would invest a total of (\$X) in (asset class name) investment funds within my (taxation-type) accounts."**

Within each combination of asset class type and account taxability type, you would select one or more investment funds of your choosing.

Simplification hints when using the table below:

First, read carefully and understand the article entitled " Lifelong tax savings from investment portfolio asset tax location," which explains the logic of asset tax location. This article is in Section 1 of the red-tabbed Optimizations worksheet.

Start with your bond allocation and assign 100% of bonds to traditional tax-advantaged accounts. If you have enough assets in traditional tax-advantaged accounts to consume your full bond allocation, then you are done with allocating your bonds. If you do not, then some of your bonds will need to be allocated to taxable or Roth accounts.

Decide how much transactional cash you need to have in taxable accounts and assign a percentage that gives you roughly that dollar amount in taxable accounts.

If you still have room in traditional tax-advantaged accounts, next allocate some or all of the your emergency and investment cash to your traditional tax-advantaged accounts. If all this cash can be accommodated in your traditional tax-advantaged accounts, then you are done with allocating your cash. Otherwise, the remaining cash would go into your taxable or Roth accounts.

Begin to allocate your international stock and US domestic stock allocations to your taxable accounts. If all of your allocation fits into your taxable accounts, then you are done with them. If not all of your equity allocations can be accommodated in your taxable accounts, then some of these equity allocations will need to be allocated to your traditional and/or Roth tax-advantaged accounts.

Whenever you have a choice of allocating equity assets, bonds, or cash to Roth tax-advantaged accounts, put equity assets into your Roth accounts. Given that equity assets are usually expected to grow faster in total value than bonds or cash, you would prefer to grow a larger balance in your Roth accounts and a smaller balance in your traditional tax-advantaged accounts to reduce future required minimum distributions from traditional accounts.

Be patient as you do your trial-and-error iterations to converge on your final model. Note that one of the reasons why this is not completely straightforward is that you are using percentages within an asset class and are distributing them across account taxability where the amount of assets will vary from one account taxability type to another, as well.

Refer to the bottom section of the table below (named: "% and \$ deviations by account taxability for your entries in this table"), as you converge on your overall asset distribution by account taxability.

Total dollar allocations within asset class and across accounts with different tax characteristics

Total dollar allocations within asset class and across accounts with differ

\$399,000

Total financial assets to be allocated to cash, bond/fixed income, an

STOCKS: International Stock/Equity securities

Target % of financial	\$ Portion of Total Financial Assets
30.00%	\$119,700

Portion to be invested in:

You Choose >> 17.00% <<< taxable accounts
You Choose >> 0.00% <<< traditional retirement accounts
You Choose >> 83.00% <<< Roth retirement accounts
100.00% <<< Must total 100%
(When not equal to 100%, cell is red. Make corrections above)

STOCKS: US Domestic Stock/Equity securities

Target % of financial	\$ Portion of Total Financial Assets
30.00%	\$119,700

Portion to be invested in:

You Choose >> 100.00% <<< taxable accounts
You Choose >> 0.00% <<< traditional retirement accounts
You Choose >> 0.00% <<< Roth retirement accounts
100.00% <<< Must total 100%
(When not equal to 100%, cell is red. Make corrections above)

BONDS: International Bond/Fixed Income securities

Target % of financial	\$ Portion of Total Financial Assets
0.00%	\$0

Portion to be invested in:

You Choose >> 0.00% <<< taxable accounts
You Choose >> 100.00% <<< traditional retirement accounts
You Choose >> 0.00% <<< Roth retirement accounts
100.00% <<< **Must total 100%**
(When not equal to 100%, cell is red. Make corrections above)

BONDS: US Domestic Bond/Fixed Income securities

Target % of financial	\$ Portion of Total Financial Assets
35.00%	\$139,650

Portion to be invested in:

You Choose >> 17.00% <<< taxable accounts
You Choose >> 83.00% <<< traditional retirement accounts
You Choose >> 0.00% <<< Roth retirement accounts
100.00% <<< **Must total 100%**
(When not equal to 100%, cell is red. Make corrections above)

CASH and Cash Equivalent securities

Target % of financial	\$ Portion of Total Financial Assets
5.00%	\$19,950

Portion to be invested in:

You Choose >> 100.00% <<< taxable accounts*
You Choose >> 0.00% <<< traditional retirement accounts
You Choose >> 0.00% <<< Roth retirement accounts
100.00% <<< **Must total 100%**
(When not equal to 100%, cell is red. Make corrections above)
* include your transactional cash needs here

% and \$ deviations by account taxability for your entries in the table above

This sub- table provides rebalancing convergence information. Make adjustments above and these numbers will change.

Type of Account	Current \$ holdings by this taxation type	Planned \$ holdings with the allocations above	\$ Deviation from current holdings	% Deviation
Taxable	\$185,000	\$183,740	(\$1,261)	0.68%
Traditional Retirement	\$115,000	\$115,910	\$910	-0.79%
Roth Retirement	\$99,000	\$99,351	\$351	-0.35%
Total	\$399,000	\$399,000	\$0	NA

Rebalancing Tool Output

Your planned cash, bond & equity financial asset holdings by account taxability

This table shows dollar values and percent of total financial assets for your planned financial assets split out by account taxability, given the allocation decisions you have made above in this section.

* These dollar figures would mean that "I would invest a total of (\$X) in (asset class name) investment funds within my (taxation-type) accounts."

(All percentages are % of total current financial assets.)

Taxable account holdings				
	Cash	Bonds/Fixed	Stocks /	Sub Total
US Domestic (\$)	\$19,950	\$23,741	\$119,700	\$163,391
International (\$)	\$0	\$0	\$20,349	\$20,349
Total (\$)	\$19,950	\$23,741	\$140,049	\$183,740
%	5.00%	5.95%	35.10%	46.05%
Traditional tax-advantaged retirement account holdings				
	Cash	Bonds/Fixed	Stocks /	Sub Total
US Domestic (\$)	\$0	\$115,910	\$0	\$115,910
International (\$)	\$0	\$0	\$0	\$0
Total (\$)	\$0	\$115,910	\$0	\$115,910
%	0.00%	29.05%	0.00%	29.05%
Roth tax-advantaged retirement account holdings				
	Cash	Bonds/Fixed	Stocks /	Sub Total
US Domestic (\$)	\$0	\$0	\$0	\$0
International (\$)	\$0	\$0	\$99,351	\$99,351
Total (\$)	\$0	\$0	\$99,351	\$99,351
%	0.00%	0.00%	24.90%	24.90%
All financial assets				
	Cash	Bonds/Fixed	Stocks /	Overall Total
US Domestic (\$)	\$19,950	\$139,650	\$119,700	\$279,300
International (\$)	\$0	\$0	\$119,700	\$119,700
Total (\$)	\$19,950	\$139,650	\$239,400	\$399,000
%	5.00%	35.00%	60.00%	100.00%

PLANNED VERSUS CURRENT DIFFERENCES for cash, bond & equity financial asset holdings by account taxability

This table shows asset class and account type differences for your planned financial assets minus your current holdings. Black positive numbers are additions to that asset class and taxation category. Red numbers in parentheses are removals from that asset class and taxation category. Columns dollar values will total to zero.

The dollar figures in the table below mean that "I would INCREASE or (DECREASE) the total amount of assets held in (asset class name) within my (taxation-type) accounts."

(Percentages are a % of total current financial assets.)

Taxable account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Deviation Sub
\$4,950	\$3,740	(\$9,951)	(\$1,261)
1.24%	0.94%	-2.49%	-0.32%
Traditional tax-advantaged retirement account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Deviation Sub
(\$30,000)	\$105,910	(\$75,000)	\$910
-7.52%	26.54%	-18.80%	0.23%
Roth tax-advantaged retirement account holdings			
Cash	Bonds/Fixed	Stocks / Equity	Deviation Sub
(\$40,000)	(\$25,000)	\$65,351	\$351
-10.03%	-6.27%	16.38%	0.09%

* Deviation Subtotal: Note that the subtotal numbers in the right-hand column are the same as the "% Deviation" table in the reallocation table above. The smaller the deviation the smaller these dollar numbers will be. You cannot freely move assets between accounts with different taxation characteristics without perhaps incurring taxes and penalties. You can change the asset class allocations within accounts with the same tax characteristics, but one should do so cost-effectively.

15.9: Using Asset Allocation Method #3 with borrowing or negative financial asset positions

Asset Allocation Method #3 permits negative asset positions or borrowing. This allows you to project a leveraged or margined equity investment strategy. This section explains how to implement this strategy in your VeriPlan projections, and it discusses some of the implications of using such a strategy. This section also provides strong cautions about engaging in such a strategy, because of the much higher risks that are involved.

Because of personal investment risk aversion, the great majority of VeriPlan users will probably wish to maintain only positive or 'long' positions throughout their lifecycle projections. For them, maintaining a zero or positive percentage allocation in each of their cash, fixed income, and equity financial asset classes will impose a long-only strategy in their projections. However, when using Asset Allocation Method #3 above, VeriPlan does not require that you choose only positive or 'long' positions for all of your financial asset classes. Some of your

financial asset classes can have negative or 'short' asset holdings. These negative and positive percentage adjustments still must offset and total zero percent.

If you are a very highly risk tolerant investor, Method #3 can calculate leveraged lifecycle projections with borrowing. This method can project the lifecycle results for aggressive or more risky investment strategies that use borrowing or leverage to create equity positions that exceed 100% of your net assets. Because the historical equity asset class total return has exceeded the total returns that have been paid on the cash and fixed income asset classes, leveraged strategies usually involve negative or borrowed cash and/or bond positions to fund leveraged or greater than 100% holdings in equities. Risk tolerant investors use leverage with the expectation that they will capitalize on differences in the relative risk premiums paid to different asset classes over time.

The remainder of this section will provide several cautions about adopting a leveraged investment strategy, and then it provides instructions on how to use VeriPlan to develop leveraged projections, if you are still interested.

These next three paragraphs provide a cautionary high-level discussion about using leveraged financial asset investment strategies. These cautions relate to 1) sustaining leveraged strategies during equity market downturns, 2) borrowing rates associated with leveraged strategies, and 3) risks to collateral used to borrow funds for leveraged investment strategies:

You probably should avoid leveraged investment strategies, if you do not have a thorough understanding of: A) your personal penchant for investment risk taking, B) your ability to sustain such strategies through stock market downturns (Managing upturns is easy.), and C) reasonable expectations about expected investment risk and return tradeoffs across the financial asset classes. When you analyze any VeriPlan projection that involves net negative cash plus bond-fixed income asset positions, you should note that there is zero safety margin across your lifetime projections. You will have no net cash or bond-fixed income assets to draw upon, your employment prospects need to be highly stable and/or your living expenses need to be relatively modest. Otherwise, if equity markets were to retreat substantially or borrowing costs were to rise unexpectedly in the future, funding your living expense short-fall will require you to liquidate equity assets at an unappealing discount. This is one of the primary reasons that most investors avoid leveraged equity positions.

Leveraged strategies are appealing, only if the expected difference between the total equity return and the net cost of borrowing is wide. The asset class risk premium information on the risk and returns worksheet indicates that only a few percentage points separates bond and equity risk returns. While a difference of a few percentage points compounded annually could lead to a huge asset return differential, individual investors cannot borrow at rates equal to expected total bond asset class returns. Therefore, borrowing costs can narrow or eliminate any expected equity to bond asset class return differential. In fact, if borrowing costs are high enough, then the expected return of a leveraged strategy could be both lower than a long-only strategy, while the concomitant risks are dramatically higher. The corporate yield spread chart on the risk and returns worksheet shows that yield margins increase dramatically on lower grade corporate debt. Even using personal equity or real estate as collateral, individual investors usually must borrow at rates that have a much larger spread than lower grade corporate bonds. For example, recently when cash returns were under 1%, investment banks were charging closer to 10% on their margin accounts -- even when equity securities were collateral and these accounts were subject potentially to margin calls and forced liquidation.

In addition to high interest rates associated with a leveraged investment strategy that individual investors may face, they also expose themselves to additional risks through debt collateral requirements. Based upon their signatures alone, few, if any, investors can obtain advantageous interest rates that would justify using a leveraged investment strategy. Instead, to obtain 'more reasonable' interest rates, they must put up valuable collateral, such as the value of the stocks held, real estate, or other assets that have substantial, unencumbered value. Despite high margin interest rate charges, the equity held in margin trading accounts also provides collateral to protect the interests of the investment bank. Investment banks are protected from all but the most severe market panics through their ability to make margin calls and liquidate assets that clients hold. While many, many thousands of individual investors lost everything in the 1929 stock market crash, margin calls and account liquidations protected the banks. Not a single investment bank went out of business due to losses on individual investor's margin accounts. Another major source of collateral is real estate. Individual investors sometimes use real estate lines of credit to borrow funds that are then invested in the equities markets with or without additional margin interest borrowing. Severe market downturns could decimate an equity trading account. When this happens, the individual has lost his investment assets, but still retains the

higher real estate debt. If the equity market downturn is directly associated with an economic shock that also affects an individual's employment, then his real estate assets also could be in much greater jeopardy.

These caveats aside, if a leveraged strategy is of interest to you, then VeriPlan can develop projections for you to analyze. If you wish to explore leveraged asset allocation strategies, do the following:

- * Step 1: Experiment with the settings above in Method #3, and enter a negative number that will reduce the cash asset allocation percentage to zero percent. (You should eliminate all cash holdings, because VeriPlan will model your leveraged position with a negative bond - fixed income asset class position. The negative return on this short bond position, in effect, will measure your borrowing cost for the overall leveraged strategy.)
- * Step 2: Increase the percentage for equities and lower the percentage for bonds in Method #3. Your percentage settings must offset, and they must total 0%. Your bond setting must be negative for you to have a leveraged portfolio. The net negative percentage for your bonds will indicate the portion of your total financial assets that will be borrowed. Note that your settings in Method #3 will be constant throughout your lifecycle projection. You can view the results on the allocation graphic. Above the 0% line, this allocation graphic will show 100% equities, and, in addition, below the 0% line, it will show the percent of equities that are borrowed.
- * Step 3: Set an "interest rate" for borrowed capital by adjusting the total return for the bond/fixed income asset class. You can do this in the portfolio risk tool on the risk and returns worksheet. Use the asset class total return adjuster in and not the projection variance tool to increase the total return of the bond/fixed income asset class. Your bond percentage adjustment there should be positive. (Because the bond asset allocation above is negative, VeriPlan will treat a positive bond total return rate as a negative return that is equivalent to your expected interest rate on the debt.) With the portfolio risk tool, you should increase the total expected bond asset class return by an amount that would convert it into an effective interest rate. Adding several percent might not be unreasonable, but keep in mind any remaining spread between total equity and total bond returns. Also, the total bond rate you set with your

adjustments should be a real dollar "interest rate," which would be approximately three percent lower than a nominal interest rate would be.

- * Step 4: Experiment with a variety of bond total return rates and compare the outcomes to other scenarios where you simply hold a 100% or lower equity allocation. Frankly, without also adjusting the equity total return higher -- perhaps unreasonably -- to maintain a positive return margin over your bond "interest rate," it will be difficult to set a realistic borrowing rate and still have enough return left to justify all the additional risk.

Keep in mind that the return rate adjustments that you make, when evaluating a leveraged investment strategy, will be applied across your lifecycle, where there inevitably will be numerous minor and major equity market setbacks. A reading of the scientific investment literature indicates that over very long periods an asset allocation that very heavily emphasizes equity returns can still benefit from a minority allocation to the bond/fixed income asset class. These findings contradict the supposed wisdom of holding greater than 100% equities in a leveraged strategy, when realistic measures of the cost of borrowing are taken into account. In reality, though, one might question the potential superiority of any leveraged strategy. Only large institutional investors might borrow at sufficiently attractive rates to make these higher risk leveraged strategies possibly feasible. The much higher interest rates at which individual investors must borrow would seem inevitably to doom leveraged strategies to inferior absolute performance. When risk-adjusted performance measures are employed, then inferior risk-adjusted performance seems to be an even greater likelihood.

Note that when you use negative settings for some asset classes in Method #3, these negative asset positions can distort how some of VeriPlan's graphics are displayed. On asset related graphics, in particular, negative asset positions will display in manner that is similar to asset graphics which include debts. Negative asset holdings, are equivalent to debts and will not display visibly on the graphics. Instead, these negative asset holdings will pull the lower edge of your positive asset positions down below the zero assets line. Whenever your assets are displayed below the zero dollar assets line, this indicates that negative asset positions are part of your portfolio and/or that your debt holdings are included with your assets on the graphic. However, no colored bar corresponding to any negative asset or debt will display, as long as your overall net asset holdings are positive. Your asset classes with positive values will instead

display with their lower colored bands beginning below zero to the extent that your portfolio holds negative assets in certain asset classes.

Error! Not a valid bookmark self-reference.16.1: Apportion your projected bond returns between US Treasury and AAA bonds

16.2: VeriPlan's compounded historical real dollar asset class average return assumptions

16.3: Set the financial asset class return adjuster tool

16.4: Risk-free rate of return assumptions used by VeriPlan

16.5: Total pre-tax return assumptions for the cash, bond, and stock financial asset classes

16.6: Total real growth assumptions for your property and other assets

16.7: Data sources for VeriPlan's return assumptions

16.1: Apportion your projected bond returns between US Treasury and AAA bonds

Use VeriPlan's yellow-tabbed Asset Allocation worksheet to set your overall strategic asset allocation model for cash, bonds, and stocks.

The purpose of this section is more narrowly focused on the composition of your high quality bond/fixed income portfolio holdings. Your choices in this section will set VeriPlan's baseline long-term bond asset class appreciation parameter.

VeriPlan's investment appreciation parameters assume that you will implement a diversified investment strategy -- the more diverse and low cost the better. For the high quality bond portion of your portfolio, you have a choice of high quality bonds to hold. Typically, high quality bonds would be U.S. Treasury bonds and/or AAA rated corporate bonds.

The primary purpose of bonds in a portfolio is to offset the historically much higher volatility or risk of stock assets. Therefore, the emphasis in this section is high bond credit safety.

In addition, you may intend to hold more risky bonds with lower credit ratings. If so, read the information and make adjustments to VeriPlan's bond returns in Section 3, titled "Set the financial asset class return adjuster tool."

Ten-year U.S. Treasury bonds are considered the safest and are equivalent to the "risk-free" rate of return. Investors also have the choice of investing some portion of their bond allocation in other types of bonds. Investment quality bonds are rated with a range from AAA at the top down to BAA for the Moody's credit rating system or BBB for the Standard and Poors credit rating system. There are lower quality rating categories below BAA and BBB that are considered more speculative and sometimes termed "junk" bonds, given their higher risk.

As a default, your VeriPlan projections will use the compounded historical 10-year U.S. Treasury bond return for your projections. However, you may plan to hold high quality AAA rated corporate bonds in your portfolio, as well. If so, VeriPlan allows you to apportion your bond allocation, which will affect VeriPlan's centerline bond return assumption.

Apportion your projected bond returns between US Treasury and AAA corporate bonds

100.0%	<<< % of bond allocation to be invested in 10-Year U.S. Treasury Bonds (default=100%)
0.0%	<<< % of bond allocation to be invested in AAA corporate bonds
100.0%	<< Total (Must Total 100%)

^^ Type numbers with the % sign, and verify that your percentage entries are what you intend.

For guidance in your choice above, these are the compounded historical real dollar returns for these bonds from 1928 to the most recent year.

1.52%	<<< Real dollar compounded return on 10-Year U.S. Treasury Bonds (%/year)	
2.49%	<<< Real dollar compounded return on AAA bonds (%/year)	0.96%
1.52%	<<< Weighted average compounded annual bond return assumption, given user weightings above	

To provide some perspective based upon the 96 years from 1928 through 2023, these are the number of years with a negative return by various asset types with and without inflation.

Number of Loss Years out of 96 (Nominal Dollars with Inflation)		Number of Loss Years out of 96 (Real Dollars without Inflation)	
19	-----	42	<<< 10-Year US Treasury Bonds
17	-----	30	<<< AAA Bonds
26	-----	31	<<< S & P Stock Index

For perspective, this analysis is a "frequency of loss years" analysis. And, yes, bonds historically have experienced loss years, as the numbers above indicate. Loss years are not a reason to exclude or reduce bonds in a portfolio. While bond to stock performance correlations have fluctuated over time, bond loss years have tended on average to be counterbalanced by growth years in stocks and vice versa. Very often, when stocks have turned negative, bonds have been positive. Using the analogy of ships in stormy weather, bonds in a portfolio are the balast that keeps the ship afloat in bad investment weather, so that the ship can sail forward in better investment weather driven mainly by stock winds.

As one might expect with the S & P index for stocks, they had the highest number of loss years out of the 96 total years from 1928 to 2023, when measured in inflationary or nominal dollars. And, obviously stocks experienced more significant percentage ups and downs in various years. In nominal or inflationary dollars, stocks had 26 loss years out of 96. When evaluated in real dollar terms with annual inflation removed from all years, there were an additional 5 years for a total of 31 loss years for stocks.

When 10-Year Treasury bonds are compared to AAA rated bonds in nominal, inflationary dollar terms, treasuries had 19 loss years and AAA bonds had 17 loss years or two fewer. However, the comparison changes significantly when annual returns in real, constant purchasing power dollars with inflation removed are considered. While AAA bonds move up to 30 loss years, which is similar to the number of loss years for bonds, 10-Year Treasury bonds jump up to 42 loss years from 19. Much of the reason is found in the cumulative return differential of almost 1% annually between AAA and 10-year treasury bonds. When this is coupled with the narrower range of bond returns compared to stocks, inflation can turn more nominal dollar gain years into real dollar loss years.

16.2: VeriPlan's compounded historical real dollar asset class average return assumptions

NOTE THAT NUMBERS BELOW MAY NOT BE CURRENT – VERIPLAN ITSELF HAS THE CURRENT NUMBERS.

Below on this Risk & Returns worksheet you will find much more information about these 90+ year (1928 to the present) compounded average growth rates. In the sections below, you can use various methods to change these rates of return.

These are VeriPlan's compounded real dollar average historical asset class returns (from 1928 to the present):

0.268%	<<<< Real dollar return the Cash asset class (%/year)
2.335%	<<<< Real dollar return the Bond/Fixed Income asset class (%/year)
6.599%	<<<< Real dollar return the Stock/Equity asset class (%/year)

Over the same period 1928 to the present, this has been the compounded annual inflation rate:

3.037%	<<<< Compounded annual Consumer Price Index (CPI) inflation (1928 to the present %/year)
--------	--

For your information, these would be the corresponding nominal dollar, compounded average historical asset class returns with inflation included. VeriPlan DOES NOT USE these numbers. (See the "Inflation and real, constant purchasing power dollars" section of the red-tabbed Optimizations worksheet.)

3.305%	<<<< Nominal dollar return with inflation included for the Cash asset class (%/year)
5.372%	<<<< Nominal dollar return with inflation included for the Bond/Fixed Income asset class (%/year)
9.636%	<<<< Nominal dollar return with inflation included for the Stock/Equity asset class (%/year)

Sections 7, 8, and 9 below provide significantly more information about VeriPlan's cash, bond, and stock return assumptions.

16.3: Set the financial asset class return adjuster tool

This asset class return adjuster tool enables you to make arbitrary adjustments to VeriPlan's real dollar centerline total return projection assumptions for the cash/cash equivalents, bond/fixed income, and stock/equity financial asset classes on a one-by-one basis. Your judgmental return adjustments can be combined with the systematic adjustments that you make with the projection variance tool above.

Introduction

Users should exercise caution when using this adjuster and also should have a reasonably deep understanding of the myriad of issues that surround historical asset class returns and of the various scientific methods for determining reasonable expectations about future returns.

No matter how much data is collected and analyzed by academics and amateur or professional investors, no one has a crystal ball that works. The best information that is available is the price and price volatility history drawn from the highly complex and ever- changing

securities markets. VeriPlan has tried to do a reasonably thorough job of developing and describing the growth assumptions that it uses, but it makes absolutely no warranty or promise of any kind that this historical data has any predictive abilities whatsoever. VeriPlan never was and never will be designed to help anyone "beat the markets," which is an impossible endeavor that usually leads to inferior results primarily due to excess costs and taxes.

Instead, VeriPlan is designed to be a personal financial planning and decision support tool that helps individuals to understand how their overall financial and investment situation might (versus will) look as their lifecycle unfolds. Its richness of features, personal customizability, and flexibility allows users to perform intelligent "what if" scenario testing and to think about how they might manage across variety of potential future outcomes that are constructed coherently.

The above caveats are stated, because when you make arbitrary adjustments to historical returns, you begin a voyage divorced from the history of asset pricing in efficient, auction-based securities markets. While the future is unpredictable, making arbitrary adjustments to past history is fraught with additional problems. How do you know that your adjustments are "right"? Just because you have a gut feeling that growth assumptions are too high or too low -- particularly compared to the returns of another asset class do you have a rational and scientific basis for making such an adjustment? Will securities market participants in the future move closer to your view of the way the investment world and asset pricing should be? If they do, then you may get a transfer of capital from them as relative asset values adjust. If not, you might very well be the one making the asset transfer to other market participants.

Also, since VeriPlan uses constant growth parameters across the years of a projection, relatively small percentage changes can have a compounded effect as the years accumulate. Keep this in mind when using any adjustments.

Changing VeriPlan's "cash and cash equivalents" asset class total return assumption

In this section, make your judgmental adjustment to the real dollar total return assumption for the cash asset class.

In the single bold border data entry box within the table below, make your negative or positive percentile adjustment to the cash asset class total return assumption. Note that your negative or positive percentile adjustment is either additive or subtractive. It is not a multiplier.

Whenever you have a non-zero entry in the bold border box below, VeriPlan automatically will use your adjustment for every projection, until you reenter 0% again.

This cash returns table, without the adjustment, comes from the historical asset returns section lower on this worksheet.

If you make any negative or positive adjustment, that adjustment should be very small -- a tenth of a percent or so. Even small percentage changes can have significant cumulative effects, when compounded over a lifetime.

Cash Asset Class -- Projected Total Annual Real Returns (%/year) [before any investment costs or taxes]

0.27%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + adjustment from the projection variance tool above (%/year)
0.00%	<< Your - or + judgmental adjustment to the total real return for the Cash asset class ^^ Type a number <u>with the % sign</u> , and verify that your percentage entry is what you intend.
0.27%	<< Projected total real return for this asset class with all adjustments (%/year)

Changing VeriPlan's "bond/fixed income" asset class total return assumption

In this section, make your judgmental adjustment to the real dollar total return assumption for the bond & fixed income asset class.

In the single bold border entry box within the table below, make your negative or positive percentile adjustment to the bond - fixed income asset class total return assumption. Note that your negative or positive percentile adjustment is either additive or subtractive. It is not a multiplier. Whenever you have a non-zero entry in the bold border box below, VeriPlan automatically will use your adjustment for every projection, until you reenter 0% again.

This bond/fixed income returns table, without the adjustment, comes from the historical asset returns section lower on this worksheet.

If you make any negative or positive adjustment, that adjustment should be small -- a fraction of a percent. Even small percentage changes can have significant cumulative effects, when compounded over a lifetime.

Bond/Fixed Income asset class -- Projected Total Real Returns (%/year) [before any investment costs or taxes]

2.33%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + adjustment from the projection variance tool above (%/year)
0.00%	<< Your - or + judgmental adjustment to the total real return for the Bond/Fixed <i>^^ Type a number <u>with the % sign</u>, and verify that your percentage entry is what you intend.</i>
2.33%	<< Projected total real return for this asset class with all adjustments (%/year)

If you increase the corporate bond spread significantly, this implies that you are willing to take on increasing amounts of bond risk. Bonds that pay higher spreads usually have 1) lower quality ratings, 2) higher expected default risks, and/or 3) reduced diversification. However, the scientific investment literature indicates that historically they have also paid a proportionately increasing risk premium.

Section 8 below provides information about the centerline real dollar bond return assumptions used by VeriPlan. VeriPlan's real dollar centerline bond returns assumption equals the long-term geometrically compounded ten-year US Treasury bond return from 1928 to date plus the incremental return provided by Moodys AAA rated prime quality taxable corporate bonds for the period from 1928 to 2021.

For example, note that the non-inflationary compounded AAA corporate bond real-dollar return from 1928 to 2020 was 2.81%, after long-term compounded inflation of 2.96% was removed. This long-term real dollar AAA bond return was .8% higher than the US Treasury bond return of the same 90+ year period.

Even though lower quality corporate bond return assumptions are not used in VeriPlan's centerline projection assumptions, note that Moody BAA rated bonds for the same period returned 4.03% annually with inflation removed. Their compounded real dollar return was 2.05% higher than US treasury bonds. BAA bonds as medium grade with moderate credit risk.

For additional background, this chart provides the US taxable corporate bond spreads for the January 1997 to August 2003 on bonds with maturities of 7 to 10 years. The information is drawn from the paper by Amato and Remolona referenced in a section on historical asset returns in this chapter. This paper is one thoughtful example among numerous other academic papers regarding the components of bond returns. This information may provide some insight into the relative spreads over T-bonds depending on ratings quality.

Standard and Poors Rating	Yield Spread Over T-bonds
AAA	0.74%
AA	0.89%
A	1.18%
BBB	1.80%
BB	3.22%
B	5.12%

From the table above you can see that you could select lower quality bonds with risk levels and yield spreads that could eclipse the average historical risk premium that has been paid on equity assets. However, most bond investors seek relative safety compared to the higher volatility of equity returns. Thus, they tend to prefer higher quality rated bonds with much lower yield spreads over the T-bond risk free rate of return. VeriPlan uses the narrower yield spread of AAA rated taxable corporate bonds for the 1928 to 2020 period, as its centerline fixed income asset class total return projection assumption. Higher risk bonds might yield somewhat more.

Changing VeriPlan's "stock/equity" asset class total return assumption

In this section, make your judgmental adjustment to the real dollar total return assumption for the stock & equity asset class.

In the single bold border entry box within the table below, make your negative or positive percentile adjustment to the stock - equity asset class total return assumption. Note that your negative or positive percentile adjustment is either additive or subtractive. It is not a multiplier. Whenever you have a non-zero entry in the bold border box below, VeriPlan automatically will use your adjustment for every projection, until you reenter 0% again.

This stock/equity returns table, without the adjustment, comes from the historical asset returns section lower on this worksheet.

If you make any negative or positive adjustment, that adjustment should be small -- usually a fraction of a percent. Even small percentage changes can have significant cumulative effects, when compounded over a lifetime.

Stock/Equity asset class -- Projected Total Annual Real Returns [before any investment costs or taxes]

6.60%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + adjustment from the projection variance tool above (%/year)
0.00%	<< Your - or + judgmental adjustment to the total real return for the Stock -Equity ^^ Type a number <i>with the % sign</i> , and verify that your percentage entry is what you intend.
6.60%	<< Projected total real return for this asset class with all adjustments (%/year)

There has been very considerable ambiguity and controversy about the factors that produced the equity risk premium which the US stock markets have paid historically. Particularly since the market bubble crash of 2001-2003, there has been a wide range of opinions about what the forward or expected equity risk premium should be. When speculating about the equity risk premium that might materialize in the future, many participants have advocated a downward adjustment to the historical number.

Many others have argued for a continuation of similar rates, but few have advocated for an upward adjustment to the measured historical risk premium or excess return. Since no one has a crystal ball, who may be right or wrong in this controversy can only be sorted out with the passage of time. While this adjustment allows you to test how adjustments to the expected equity risk premium assumption might impact your projections, but it cannot tell you what will happen. Again, remember that using relatively small negative or positive adjustments is recommended, because the impact of these adjustments will compound over your lifecycle projections.

For more information about the equity risk premium, please refer to these articles at The Skilled Investor website.

[Find RETURNS AND RISK PREMIUMS articles on The Skilled Investor website](https://www.theskilledinvestor.com/financial/investment-returns.html)

<https://www.theskilledinvestor.com/financial/investment-returns.html>

16.4: Risk-free rate of return assumptions used by VeriPlan

"Risk free" investments in short-term and long-term U.S. government obligations provide a baseline historical rate of return for a very conservative asset investment strategy. VeriPlan reduces nominal risk free returns by the compounded historical inflation rate to obtain 'real dollar' risk free rates of return. Real dollar returns provide a measure of constant purchasing power over time.

Instead of taking on additional investment risk in search of a higher return, you always have the alternative of placing your money in safer investments. The riskless asset is usually defined as the return on the U.S. government's short-term treasury bills or long-term treasury bonds, which are expected to have a zero risk of default. The return that these riskless assets pay are known as the short- or long-term "risk free rate of return," which is often abbreviated as the RFR.

To develop its projections, VeriPlan combines A) long-term historical averages for either the short-term or the long-term risk free rate of return with B) the average historical risk premiums that have been paid by securities markets on the Cash, Bond/Fixed Income, and Stock/Equity asset classes.

For the short-term and long-term RFR, VeriPlan uses the compounded or geometric average real interest rate on the annualized return on three month short-term U.S. Treasury T-bills and ten year long-term U.S. treasury T-bonds, respectively, since 1928, after inflation has been extracted. The tables below lists these nominal and real short-term and long-term RFRs. See section four below for more information on data sources.

The Short-term Real Dollar Risk Free Rate of Return assumption used by VeriPlan for projections:

3.28%	<< Nominal (inflationary dollar) short-term RFR (average annual geometric T-bond return
3.04%	<< LESS the average annual geometric or compounded inflation rate since 1928 (%/year)
0.24%	<< Short-term Real Dollar Risk Free Rate of Return assumption used by VeriPlan

The Long-term Real Dollar Risk Free Rate of Return assumption used by VeriPlan for projections:

4.57%	<< Nominal (inflationary dollar) short-term RFR (average annual geometric T-bill return
3.04%	<< LESS the average annual geometric or compounded inflation rate since 1928 (%/year)
1.54%	<< Long-term Real Dollar Risk Free Rate of Return assumption used by VeriPlan

With long-term bonds or fixed income securities, the average risk free rate of return on U.S. government bonds has been higher than short-term rates. Investors require a higher rate of return to commit their capital for a longer period. While the default risk on U.S. government treasury bonds is considered extremely small and thus "risk free," investors are still subject to changes in inflation rates, concerns about the future value of invested principal, and uncertainty about the future reinvestment interest rate.

16.5: Total pre-tax return assumptions for the cash, bond, and stock financial asset classes

This section defines VeriPlan's total real dollar return assumptions for the cash, bond, and stock asset classes. Historical asset class 'risk premiums' measure the long-term returns earned for bearing the investment risks of each of the financial asset classes. Together, asset class 'risk premiums' plus real dollar risk free rates of return measure the total real dollar returns that have been realized historically by the primary asset classes over long periods. VeriPlan uses these total, real dollar financial asset class returns in its centerline projections.

Historically, U.S. securities markets have paid “risk premiums” to attract investment capital. Virtually all investors are risk averse and otherwise would not commit their capital without expecting a return proportional to the perceived risk. Therefore, the expected risk premium tends to be proportional to the risk that the investor expects to assume while holding a security. When measured in retrospect, average securities returns for asset classes that have differed in risk have been shown to pay returns that are proportional to the investment risk. Investment risk measured by greater or smaller relative volatility or asset price fluctuations over time.

A risk premium is simply the average excess market return that is paid over time for risk bearing. A risk premium is measured as the historical excess return that has been paid above the risk free rate of return. Similar risk premiums have been paid to hold assets with similar risk and return characteristics, although there have been very significant variations over time.

Projected compounded total (pre-tax; pre-cost) real returns on cash equivalent assets

While a risk premium is most often discussed with respect to equities, cash assets also earn a slight premium for the risk incurred. For non-US. T-bill cash investment vehicles, the additional risk is actually quite small and is largely due to varying concerns about the credit worthiness of the issuer, if the issuer is not the U.S. government. Nevertheless, such concerns command a relatively small risk premium. Cash investment maturities are short, which reduces the duration of risk exposure and financial conditions imposed by the market on issuers are relatively stringent.

Note that while one should always be concerned about credit worthiness, with cash assets an investor also needs to be very vigilant about the fees that are charged. For cash

equivalent assets, there tends to be a much wider range of fees charged on individual investors' deposits, when compared to the much narrower range of gross risk premiums earned by these somewhat risky cash investments.

The table below lists the historical real dollar return to cash that VeriPlan uses as its growth rate assumption for projecting the gross value of cash assets in its centerline projections. This total real return combines the average real short-term RFR plus the average real incremental return to cash assets drawn from the long term historical record. Note that this is the real cash return that, on average, has been earned above the compounded long-term inflation rate. The compounded inflation rate has averaged very close to 3% annually over the past 85+ years -- sometimes, of course, with wide variations.

Cash Asset Class -- Projected Total Annual Real Returns (%/year) [before any investment costs or taxes]

0.24%	<< Historical short-term real risk free return on US T-bills since 1928 (%/year)
0.03%	<< Pre-tax average incremental real return for the cash asset class over the RFR (%/year)
0.27%	<< Historical real dollar cash asset total return assumption for VeriPlan's centerline

Projected compounded total (pre-tax; pre-cost) real returns on bond/fixed income assets

When investors seek higher interest rates than the expected yield on government bonds, they purchase non- governmental corporate taxable debt securities and take on additional risks, which require additional compensation. These additional risks primarily relate to the credit worthiness and default risk of non-governmental issuers.

The taxable bond markets have tended to pay an average risk premium that exceeds both the incremental taxes incurred and associated higher risks of default, when compared to investing strictly in US T-bonds. However, the average bond holding individual investor has a very limited tolerance for additional risk. Therefore, to develop its centerline projections, VeriPlan uses the rather modest average spread above the long-term risk free rate of return, which has been paid on ten-year taxable corporate bonds with AA quality ratings.

The table below lists the total real dollar return to high quality taxable corporate bonds that VeriPlan uses as its for projecting the gross value of your bonds and fixed income assets in your centerline projections. This total real return combines the average real long-term RFR plus the average real incremental return to high quality long-term bond and fixed income assets drawn

from the historical record. Similar to the cash asset class, this bond and fixed income asset class assumption uses real dollars with the long-term historical annual inflation rate of close to 3% removed.

Bond/Fixed Income Asset Class -- Projected Total Annual Real Returns (%/year) [before any investment costs or taxes]

VeriPlan's total real dollar return assumption for the bond/fixed income asset class reflects the historical rate of return achieved by high quality AAA taxable corporate bonds.

1.54%	<< Historical long-term real risk free return on US T-Bonds since 1928 (%/year)
0.80%	<< Pre-tax AAA taxable corporate bond spread over the long-term T-bond RFR since 1928
2.33%	<< Historical real dollar bond/fixed income total return assumption for centerline

The long-term risk free rate of return for US T-Bonds is for the period since 1928. The annual average compounded real dollar spread (incremental) assumption for AAA high-quality corporate bonds is for the 1929 to 2021 period. The non-inflationary AAA corporate bond real-dollar return from 1928 to 2020 was 2.81%, after long-term compounded inflation of 2.96% was removed. This long-term real dollar AAA bond return was .8% higher than the US Treasury bond return of the same 90+ year period.

Choosing a reasonable taxable bond spread is more arbitrary than defining short- or long-term risk free rates of return. There are numerous complicating factors affecting bond valuations, such as variations in tax rates, taxability at different levels of government debt quality ratings, time to maturity, default risks, diversification risks, callability, etc. Bond valuation is anything but straightforward. Instead of attempting to discuss this topic in greater detail here, for the more intrepid among you, please see the references to academic papers on bond spreads listed in Section 2 above. The references listed at the back of these papers can lead you to additional sources.

If you hold fixed income investments that are exempt from federal or state income taxation, you might want to understand how VeriPlan projections based upon taxable bond return rates can be reconciled with tax exempt bonds. Please see the section titled: "Tax-exempt municipal securities and VeriPlan's return assumptions" on the Optimizations worksheet.

Projected compounded total (pre-tax; pre-cost) real returns on stock/equity assets

VeriPlan's total real dollar return assumption for the stock/equity asset class reflects the historical rate of return achieved by large capitalization U. S. stocks.

Regarding stock or equity securities, there is a very extensive scientific finance literature discussing past and future equity risk premiums that have been and might be paid. Numerous academic studies have been conducted, and an extensive discussion continues. Obviously, this subject is vital to any professional or amateur investor. Underlying much of this discussion is a search of ways to develop potentially informative or predictive indicators about the future.

Predictability is the holy grail of equity returns, but this particular investment grail is likely always to be as elusive as the grail of legend. The past can be informative. However, the future is completely unpredictable. Anyone who claims or implies that he can make you richer will probably make you poorer. (This is a probability assessment and not a prediction.)

With these caveats in mind, the table below presents the total return assumption that VeriPlan uses to develop its centerline projections for the stock/equity asset class. This total return is composed of the long-term real risk free return on US T-bonds plus the average historical equity risk premium over the long-term RFR.

Stock/Equity Asset Class -- Projected Total Annual Real Returns [before any investment costs or taxes]

1.54%	<< Historical long-term real risk free return on US T-Bonds since 1928 (%/year)
5.06%	<< Historical Average Equity Risk Premium over the long-term RFR since 1928 (%/year)
6.60%	<< Historical real dollar stock/equity asset total return assumption for VeriPlan's centerline

16.6: Total real growth assumptions for your property and other assets

On the yellow-tabbed Property+Debt worksheet, you provide VeriPlan with current value and growth estimates for your property assets, which are not currently priced on real time securities markets. Using this information, VeriPlan will automatically project the future value of your property and other assets net of your investment costs. Such non-financial assets are your property, real estate, and other investments including personal businesses, private equity interests, limited partnerships, etc.

Because your property assets may lack current fair market values that can be measured from real-time securities markets, and because they often are subject to extended lock up periods, VeriPlan treats your property and other assets separately from your more liquid cash, fixed

income, and equity financial asset classes. For your non- publicly traded property and other assets, VeriPlan uses your judgmental estimates about the current fair market values and growth rate prospects for these assets. VeriPlan automatically projects the future values of these property and other assets. Projected appreciation is reduced by costs that you indicate.

Keep in mind that, all other things being equal, an asset that lacks a public market will trade privately at a sometimes substantial discount compared to a similar publicly traded asset. When in doubt, intentionally applying a discount to reduce current values would be a reasonable and conservative financial planning practice.

All net cash flows related to your earned income, withdrawals, living expenses, debt payments, ordinary taxes, and financial asset capital gains distributions are added to or taken from your cash, fixed income, and equity financial asset classes. Your property assets are assumed to be held perpetually unless you utilize VeriPlan's automated future property-by-property sales facilities on the Property+Debt worksheet. Your interests in hedge funds, limited partnerships, and other alternative private capital investments may be subject to significant lockup periods and sales disincentives. Similarly, if you have an actively-managed private business, it could take years to prepare to sell and sell.

Therefore, VeriPlan's projected values for your property assets are 'gross' with respect to any potential accrued capital gains taxes and sales expenses. VeriPlan's projected values for your property and other assets would be subject to long-term capital gains taxes upon any future disposition, if you do not utilize some device to reduce or eliminate capital gains taxes. Concerning projected sales costs, these would also diminish VeriPlan's projected asset values for your property and other assets.

16.7: Data sources for VeriPlan's return assumptions

This section documents the primary sources of VeriPlan's asset return assumptions. Current links to these sources are maintained for you on The Skilled Investor website. Google "Scholar" is another way for you to find objective financial research (see below).

There are a very wide variety of sources that address the subject of long-term historical asset class returns and risk premiums. This section makes reference to some of the more useful sources that were consulted to develop VeriPlan's return assumptions.

Inflation data

- * Consumer Price Index-Urban Wage Earners and Clerical Workers; U.S. Department Of Labor -- Bureau of Labor Statistics;

Risk Free Rates of Return

- * St. Louis Federal Reserve database (FRED); <http://research.stlouisfed.org/>
- * Professor Aswath Damodaran, New York University Stern School; Professor Damodaran's excellent site provides numerous useful data sets and valuation tools. Damodaran Online: <http://pages.stern.nyu.edu/~adamodar/>
- * The equity risk premium literature discusses risk free rates of return extensively.

Returns on bond/fixed income assets

- * Compared to the equity risk premium literature, material on the pre-tax, long duration corporate bond market premium is less plentiful. Two papers to start with are:
- * Edwin J. Elton, Martin J. Gruber, Deepak Agrawal, and Christopher Mann, "Explaining the Rate Spread on Corporate Bonds," The Journal of Finance; VOL. LVI, No. 1; February 2001, p. 247-277;
- * Jeffery D. Amato and Eli M. Remolona, "The Credit Spread Puzzle," BIS Quarterly Review, December 2003, p 51-63;

Equity risk premiums -- An immense literature exists.

- * A large, though not exhaustive, compilation can be found in: Richard A. Derrig and Elisha D. Orr, "Equity Risk Premium: Expectations Great and Small", North American Actuarial Journal, Vol. 8, no. 1, [vp]. Jan 2004; https://www.casact.org/sites/default/files/database/forum_04wforum_04wf001.pdf
- * Fernando Duarte and Carlo Rosa, "The Equity Risk Premium: A Review of Models", FRBNY Economic Policy Review / December 2015 Pages 39-57
- * Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2020 Edition Updated: March 2020, Aswath Damodaran, Stern School of Business (Downloadable from SSRN)

For a variety of related articles, see *The Skilled Investor* website:

[Find RETURN PREMIUM articles on *The Skilled Investor* website](#)

[Find SECURITIES VALUATION articles on *The Skilled Investor* website](#)

If you are interested in further research involving objective academic research on these subjects, the best approach for someone without access to paid academic research services is to use Google Scholar. 1) go to google.com, 2) search " Scholar ." Google Scholar provides access to many academic working papers and articles published in academic journals. It eliminates the problem of having to sort through the blizzard of other, non- academic listings that would surface, if you used the main Google site. Experiment with key words and see what you find. If you choose to do this, you should have spare time, patience, and some educational background in economics, finance, business, and/or mathematics. Note that financial industry information is often a waste of time due to lack of depth and sales bait focusing on you as their profit center.

Chapter 17: Portfolio Risk worksheet

17.1: Methods to vary investment asset class return assumptions and values

17.2: Set the Monte Carlo Variance Tool

17.3: Set the Standard Deviation Variance Tool

17.4: Set the Current Portfolio Revaluation Tool

17.5: Set the Safety Margin Tool

17.5.1: Risk-adjusted portfolio returns and the safety margin dilemma

17.5.2: Taxation and the Portfolio Safety Tool

17.6: How VeriPlan measures the price volatility or risk of your asset classes

17.7: Explanation of the Monte Carlo Variance Tool

17.1: Methods to vary investment asset class return assumptions and values



VeriPlan provides four facilities to simulate investment projection variability. These methods develop projections for the cash, bond, and stock financial asset classes. Some of these methods allow you to develop projections with return assumptions that differ from VeriPlan's 50 percentile, "centerline" assumptions, which are detailed on the adjacent Portfolio Return worksheet. While these methods are automatically combinable, you are encouraged to use them one at a time, so that you will have a more clear understanding of how to interpret these altered projections.

A) The Monte Carlo Variance Tool allows you to vary bond and stock asset class returns by individual percentiles from 1% to 99% with the 50th percentile equaling VeriPlan's centerline projection assumptions.

- B) The Standard Deviation Variance Tool allows you to vary financial asset class returns in proportion to their historical volatility or risk.
- C) The Current Portfolio Revaluation Tool adjusts your current financial assets simulate substantial near-term asset value changes without any long-term recovery.
- D) The Safety Margin Tool projects how long your cash and bonds would pay the bills without other income or stock assets.

If you wish to change the financial asset class growth rates that are used by VeriPlan upward or downward, use Methods A or B. The natural human tendency is to test the negative or downside, but since the future is not predictable, whenever you test for a downside metric, you should also test for the corresponding upside metric to develop an appreciation for the uncertainty of the future and the risks and benefits of owning financial investment assets.

Some VeriPlan users might wish to understand how substantial near-term changes to the value of their current portfolio might affect their lifetime projections. The current portfolio revaluation tool provides an efficient means to revalue your current portfolio, so that your projection baseline will start with lower or higher asset class values. Nevertheless, you should be careful in assuming that asset valuation markets are "wrong" and that such current "wrong" valuations will be sustained into the future. At any point in time, it is difficult to evaluate whether current markets are over- or under-valuing assets with respect to the long-term.

The Safety Margin Tool helps you to understand how long at any point in the future your cash and bonds might pay the bills in a major financial crisis where your ordinary income has ceased and your stock values have crashed.

17.1.1: In absolutely no sense are VeriPlan's projections predictions

No financial or investment model can "forecast" or "predict" the future and VeriPlan does not attempt to do so. That is why VeriPlan uses the term "projection" to clarify that historical averages are used to develop its centerline projections. VeriPlan is for concerned people who want comprehensive, detailed, and internally coherent projections of personal financial scenarios that COULD unfold. It is a personal decision support tool for families to better understand financial factor inter-relationships and to explore alternative financial decisions that could be taken now. Instead of viewing these projections as predictions, ask yourself how you would manage, if a particular projection were to come true as your lifecycle evolves.

When reliable foresight is not possible, as an alternative, you can use rationally based scenario planning techniques to understand better how you might manage in a variety of possible future situations. After testing a reasonably wide variety of scenarios using your personal data, if you are comfortable that you would be able to manage your future financial affairs, then this tool will have served as validator of your current personal financial practices. Alternatively, if you do not feel comfortable about how you might manage in the future under the various circumstances presented in VeriPlan's projections, then this tool might help you to explore alternative financial behaviors that you could begin now that might put you in a better position in the future.

17.2: Set the Monte Carlo Variance Tool

VeriPlan's Monte Carlo Variance Tool is a investment performance variance facility based on the Monte Carlo statistical method. It allows you to project investment performance using parameters that systematically vary your financial investment returns below or above the compounded returns of the 50th percentile centerline projection.

With this tool, the user can enter any whole integer number from 1 to 99 to select long-term historical bond and stock performance percentiles that are ordered from the least (number 1) to the greatest (number 99), using the almost of 100 year historical performance record. The 50 percentile equals VeriPlan's centerline investment parameters. For any percentile you choose, VeriPlan's projections will automatically take into account your particular strategic bond to stock asset allocation, when it varies your investment performance parameters.

VeriPlan's Monte Carlo Variance Tool is based upon a systematic Monte Carlo statistical sampling study of historical bond and stock returns that used various asset allocations, investment models, and investment holding periods. Using almost 100 years of data, the Monte Carlo statistical sampling method was used to simulate investment portfolio performance across 11 asset allocations, 3 investment models, and 6 different decade-long time periods. By sampling these 198 combinations 5,000,000 times each, the range of portfolio value outcomes was calculated for each of the combinations.

For more details, lower on this worksheet you will find a section titled "Explanation of the Monte Carlo Variance Tool."

VeriPlan's approach to Monte Carlo simulation does not interfere with a user's development of their lifetime financial projection models. If a user decides to vary their investment return assumptions using VeriPlan's Monte Carlo percentile mechanism, changes to their projections will still be characterized by sub-second computer response time.

How to use VeriPlan's Monte Carlo Variance Tool

Depending up the whole number integer, between 1 and 99, that you enter in the gray box below, VeriPlan will develop projections representing historical performance percentile outcomes ordered from the least (1) to greatest (99).

Choose an historical bond and stock performance percentile

50 <<< Enter any whole integer from 1 to 99 (The default is 50)

1.000 <<< Resulting bond and stock return variance multiplication factor

While the natural tendency is to choose performance outcomes below the 50th percentile, it is important that you evaluate projections that are the mirror image of your skepticism. If you evaluate the 25th percentile, also evaluate the 75th percentile, etc.

Develop perspective on the interpretation of portfolio performance variance

If you intend to use this Monte Carlo Variance Tool, you should study the section below titled "Explanation of the Monte Carlo Variance Tool." In particular, look across the 1 to 99 percentile charts, while noting the particular bond and stock asset allocation lines that are closest to your chosen asset allocation on the yellow-tabbed Asset Allocation worksheet.

The table below is pessimistic perspective analysis focused on investment losses. A similar analysis could have be performed relative to any arbitrary positive cumulative performance outcome, such as 2%, 5%, etc., but losses are what people tend to fear most. This is an analysis of the total number of loss percentiles, across all 11 asset allocations, 3 investment models, and 6 different decade-long time periods. A cumulative loss percentile is one in which the Internal Rate of Return was negative in real, constant purchasing power dollar terms. This means that the dollars invested initially and through the years ended up being worth less at the end of the period than their invested values. The user's particular asset allocation and holding period made a significant difference in these loss percentile outcomes. The three investment models did not.

Clearly, in these extensive simulations, a more balanced and diversified portfolio with to both bonds and stocks experienced fewer loss years than either bond heavy or stock heavy asset allocations. One might be surprised that 100% bond portfolios experienced many more loss years than 100% stock portfolios. You should note that this Monte Carlo study was conducted using the 10-Year US Treasury bond performance history from 1928 to 2023. Instead of repetition here, you are encouraged to read Section 1 of the adjacent yellow-tabbed Portfolio Return worksheet titled: "Apportion your projected bond returns between US Treasury and AAA bonds." While very safe and a proxy for the long-term risk free rate of return, Treasury bonds have had about a 1.5% compounded return in real dollars over the years. Whereas stocks, as measured by the S & P Index, have experienced a compounded return of about 6.75% in excess of inflation over the same period.

The number of decades for the investment period also made a significant difference, however, the 40, 50, and 60 year periods were quite similar for all but the very bond heavy asset allocations. The decision was made to average the 10, 20, and 30 year periods, since this is a long-term / lifelong financial planning application. This 10, 20, and 30 year average will understate the variation of the 10 year holding period and overstate the variation of holding periods longer than 20 years. Given the complexity of this simulation modeling exercise it was decided not to incorporate each decade into the model. If you are spending a lot of time modeling your lifetime projection with very pessimistic assumptions, you can make mental adjustments by some number of percentiles, if your time frame is short or longer. However, you should ask yourself why your focus is shorter-term, unless you are quite old already.

Regarding investment models, they made no material difference in this Monte Carlo study. Each of the three investment models invested \$1,000 initially. Then, each model invested either \$0, \$100, or \$200 each year thereafter across the number of years under consideration for each decade-long period. For example, one would expect to see the greatest difference between the was there a single percentile difference. The other 52 out of 66 table entries were the same. You can detect those that had a difference in the chart below whenever an entry ends in "x.5", which is the average of the \$1,000/+\$0 and \$1,000/+\$100 investment models.

Number of percentiles out of the 99 with cumulative losses by decile asset allocations

10/20/30 Year Average	Bond to Stock Decile Portfolios	10 Years	20 Years	30 Years	40 Years	50 Years	60 Years
23	100% Bonds & 0% Stocks	29	22	17.5	14	11.5	9.5
13	90% Bonds & 10% Stocks	20	12	7.5	4.5	3	2
8	80% Bonds & 20% Stocks	14	6.5	3	1.2	0.5	0
5	70% Bonds & 30% Stocks	11	4	1.5	0.5	0	0
4	60% Bonds & 40% Stocks	9.5	3	1	0	0	0

4	50% Bonds & 50% Stocks	9	3	1	0	0	0
5	40% Bonds & 60% Stocks	10	3.5	1	0	0	0
5	30% Bonds & 70% Stocks	11	4	1.5	0.5	0	0
6	20% Bonds & 80% Stocks	12	5	2	1	0	0
7	10% Bonds & 90% Stocks	13	6	3	1	0	0
8	0% Bonds & 100% Stocks	14	7	3	2	0.5	0

Loss percentile color coding

Red = 10th percentile or higher
 Pink = 5th to 10th percentile
 Yellow = 0 to 5th percentile
 Green => No loss percentiles

17.3: Set the Standard Deviation Variance Tool

The Standard Deviation projection variance tool automates the development of projections that use asset class appreciation assumptions, which are systematically lower or higher than VeriPlan's centerline assumptions. This method is consistent with risk-adjusted, asset valuation theory. After a satisfactory centerline projection has been developed, every VeriPlan user should test both negative and positive return scenarios surrounding this centerline projection.

This projection variance tool allows you to set how much you wish to vary, downward or upward, VeriPlan's centerline cash, bond, and stock financial asset class growth rates. It provides a simple method to vary the relative growth rates of your financial asset classes in a manner that is proportional to the relative risk or price volatility of each of your asset classes. In effect, this tool allows you to test projections where asset returns across all asset classes are generally worse or generally better than they have been in the long-term historical past.

You can investigate the various impacts of minor-to-major, negative-to-positive deviations around the centerline projection growth rates that are supplied with VeriPlan. Instead of guessing how much to vary the returns of each asset class, VeriPlan automatically calculates these adjustments for you.

For each financial asset class, VeriPlan develops a relative risk measure that is based on the statistical standard deviation of long-term historical asset class price volatility. VeriPlan multiplies these asset class risk measures times a projection scaling percentage that you set below. The result is a negative or positive return scaling factor, which is proportional to the risk or volatility of each asset class. Finally, VeriPlan uses these factors to adjust downward or upward its centerline rates of total return for each asset class.

More information on these asset class price volatility or risk measures can be found below in the section titled: "How VeriPlan estimates the price volatility or risk of your asset classes."

While this projection variance tool does not force you to do so, whenever you investigate a particular variation that is either below or above the centerline historical trend, you should also evaluate the corresponding mirror image projection in the opposite direction. If you investigate only negative or positive deviations, without understanding their counterparts, then you are planning with a consistently pessimistic or optimistic bias relative to the long-term historical trend.

Using VeriPlan's projection variance tool, involves two steps:

Step 1: Choose a "below" or "above" average projection with the PROJECTION SELECTOR

Use this bold border user data entry box to choose a variation that is below or above historical averages:

0 << Enter -1 (negative one) to select a negative or "below average" returns projection
<< Enter +1 (positive one) to select a positive or "above average" returns projection
<< Enter 0 (zero) to turn off this projection variance tool and use a "Centerline" projection

Step 2: Determine the SCALING FACTOR for your adjustments to VeriPlan's centerline averages

Use this bold border user data entry box to enter a POSITIVE SCALING PERCENTAGE (usually from 0% to 10%).

5.00% << Percentage of EACH asset class's standard deviation that will be applied to adjust the projected total returns of each asset class in the "below" or "above" return variability

Note that applying a small portion of the variance might not seem like it will have much impact, but it will. Because these small adjustments compound over the years, they can have a significant long-term impact on a projection.

You should experiment with this scaling factor by inspecting the resulting asset class adjustments shown in the blue boxes in the chart below.

For example, if you would like to try a projection where the return of the equity asset class is reduced, first set the PROJECTION SELECTOR in Step #1 above to a -1 (negative one). Then experiment with the SCALING PERCENTAGE above. Adjust the scaling percentage, until your equity adjustment in the blue equity asset class box below is close to -.50%. When the equity rate adjustment is set where you want it to be, then the other return adjustments that are shown in blue boxes for all the other asset classes will already be set automatically in proportion to the relative volatility of each asset class.

In a similar manner, of course, you could pay attention to any of the other blue asset class boxes, when calibrating your adjustment benchmark rate. Then, the returns for the remaining asset classes would adjust automatically relative to the asset class adjustment that you are paying

attention to. In summary, this tool will always derive return adjustments that are proportional to relative historical asset class risk.

Asset class return adjustments for projections below and above historical centerline projection averages

This table shows the risk-adjusted return adjustments on projected returns for these financial asset classes. It also indicates any adjustments that you may have made using the asset class return adjuster tool below.

NOTE THAT THE RETURN ASSUMPTIONS BELOW RESULT FROM YOUR ADJUSTMENTS IN THE BOLD BORDER BOXES ABOVE IN THIS SECTION AND FROM ANY OTHER ADJUSTMENTS THAT YOU MAY HAVE MADE IN THE BOLD BORDER BOXES OF THE ASSET CLASS RETURN ADJUSTER TOOL BELOW. THEY ARE NOT DIRECTLY USER CHANGEABLE HERE.

Cash asset class

0.27%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + percentile adjustment to the total real return from this projection vari:
0.00%	<< AND any other - or + adjustment that you make in the asset class return adjuster
0.27%	<< Projected total real return for this asset class with all adjustments (%/year)

Bond/Fixed Income asset class

2.33%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + percentile adjustment to the total real return from this projection variance
0.00%	<< AND any other - or + adjustment that you make in the asset class return adjuster too
2.33%	<< Projected total real return for this asset class with all adjustments (%/year)

Stock/Equity asset class

6.60%	<< Real return assumption for this asset class in the Centerline projection (%/year)
0.00%	<< Your - or + percentile adjustment to the total real return from this projection variance
0.00%	<< AND any other - or + adjustment that you make in the asset class return adjuster too
6.60%	<< Projected total real return for this asset class with all adjustments (%/year)

Changing your Property Assets growth rate assumptions

Rather than making return adjustments in this section to your property assets, instead, go to the yellow-tabbed Property+Debt worksheet and make your changes directly. Because your property assets presumably are not traded on competitive securities exchanges, VeriPlan allows you to make your own best estimates of fair market value and real dollar growth prospects for each of your property assets.

17.4: Set the Current Portfolio Revaluation Tool

This current portfolio revaluation tool provides an efficient means to revalue your current financial asset portfolio, so that your projection baseline can start with lower or higher asset class values.

Some VeriPlan users may want to understand how substantial near-term changes to the value of their current portfolio might affect their lifecycle projections. This current portfolio revaluation tool provides an efficient means to revalue your current portfolio, so that your projection baseline can start with lower or higher asset class values.

For any of VeriPlan's five primary asset classes, this tool enables you to increase or decrease the value of your current portfolio holdings by percentages that you choose. This means you can alter the value of your current portfolio without adjusting your individual asset entries on the various yellow-tabbed 'Your Assets' worksheets.

This tool revalues **ONLY** your current portfolio assets. It does not alter any of VeriPlan's other projection logic related to your future income, expenses, debts, taxes, asset allocation, asset returns, or investment costs.

This tool automatically works in conjunction with any of VeriPlan's other tools and worksheet settings. You could use this tool simultaneously with the projection variance tool and the asset class return adjuster tool on this worksheet. However, exercise caution, if you use such combinations. For example, if you use this tool to reduce substantially the value of your current holdings in an asset class, then an increase in future growth rates might be as appropriate or even more appropriate than a decrease in future growth rates.

Normally, you would use your portfolio's current securities market values, when you develop your centerline projections in VeriPlan. This current portfolio revaluation tool should be used in your alternative, "what-if" scenario planning. It can test the robustness of your centerline lifecycle plan for near-term events that could change the value of your portfolio both substantially and enduringly. For example, if you were to evaluate the timing of an impending retirement, you might wish to understand the lifecycle impact of a large and enduring near-term change to the value of your portfolio.

Certain other cautions are in also order, when you use this tool. Current securities market values are the ‘best available’ assessment of forward looking risk-adjusted asset values. This tool allows you to use different values, which might not be the ‘best available.’ For more discussion on this topic, please read the section below titled “A caution about deviating from current securities market values.”

Your current portfolio revaluation percentages

For each of the five primary asset classes, you can enter a percentage adjustment. VeriPlan will automatically adjust the value of every asset that you currently hold in that asset class. You can use different adjustment values in any or all of the five asset classes, and you can mix positive and negative adjustments.

While people are usually concerned about a substantial and enduring decline in the value of their portfolio securities, this tool also allows you to test the potential for substantial unanticipated near-term increases in asset class values.

You make your adjustments in the bold border user data entry boxes below. For example, if you enter -15% for your adjustment of an asset class, then VeriPlan would revalue each asset in that asset class by multiplying the asset values you had already entered on the respective financial asset or property worksheet by $(100\% - 15\%)$ or 85%. If you enter +25%, then VeriPlan would revalue each asset in that asset class by multiplying your current asset value entries by $(100\% + 25\%)$ or 125%.

Whenever you enter a non-zero percentage adjustment, reminder notices will appear automatically on the financial assets and property assets worksheets.

Your CASH asset class Adjustment

0.00% << For your Cash assets, enter a negative or positive percentage adjustment
^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* Adjusting cash values would be done very infrequently, if ever. This adjustment has been included primarily for reasons of functional completeness. However, if you intend to hold a large portion of your assets in cash, you could use this adjustment with additional return reductions in the projection variance tool above to model an event that would boost inflation beyond current expectations both substantially and enduringly.

Your BOND-FIXED INCOME asset class Adjustment

0.00% << For your **BOND-FIXED INCOME** assets, enter a negative or positive percentage adjustment. ^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* Bond market valuation is complex, but generally, bond market prices are related inversely to interest rate expectations. Domestic and international bond interest rates are influenced by economic growth, economic capacity utilization, inflationary expectations, monetary policy, and the return requirements of securities owners.

Your STOCK-EQUITY asset class Adjustment

0.00% << For your **STOCK-EQUITY** assets, enter a negative or positive percentage adjustment. ^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

* Overall equities market prices anticipate business cycles and demonstrated long-term cyclical patterns. Equities have shown a general tendency to revert toward very-long term averages, as measured by indicators such as price-earnings ratios. Nevertheless, by definition any system that demonstrates cyclicity must revert toward or deviate from an average value. Furthermore, average values are not stable and cyclicity itself causes the cycle average to be revised continuously. The scientific finance literature provides paltry evidence that many investors, and especially individual investors, have consistently capitalized by accurately anticipating changes in these equity cycles. Whether the market will revert toward the norm or deviate farther from the average lacks a predictable answer at any point.

* Despite these observations, it may be useful in scenario planning to pay attention to where equity market values are in the current cycle relative to the long-term historical average, when you are planning for your financial future. The current value of one's equity portfolio relative to cyclical averages can significantly affect the feasibility of your personal financial plan. Because individuals have some flexibility to adjust their earning and consumption behaviors, they might take alternate actions depending on where they think equity market values might be in a cyclical pattern.

17.5: Set the Safety Margin tool

When planning for a more secure financial future, some individuals are worried about the safety margin provided by the assets that they already have acquired and the assets that they hope to add in the future. A significant concern that many people share relates to the possibility of a

major and extended setback in the market value their portfolio assets, while they might also experience a simultaneous drop in or complete loss of personal income.

At any point in the future VeriPlan's portfolio safety tool projects how long your cash, bond, and stock portfolio assets would cover necessary expenses, if all of your expected income sources ceased. This projects and stress tests your future capacity to weather severe financial risks. A multi-year period of extended unemployment during your working years could be such a situation. If a skilled and motivated worker were to be involuntarily unemployed for many years, one would expect that there would be a simultaneous financial crisis and a significant decline in asset values. Therefore, this tool allows the user to reduce future asset values according to their own judgement.

VeriPlan's portfolio safety tool projects how long your adjusted income from all sources and your adjusted portfolio assets would cover your necessary expenses in any projection year in the future. This tool allows you to set your own parameters, and it measures your projected capacity to weather negative financial risks of great severity that could materialize. In effect, this is a flexible stress test of your projections.

With this tool, you can adjust your future ordinary living expenses, planned extraordinary expenses, and debt payment percentages to reflect the amount of "belt tightening" that you think you would do in any future personal financial crisis. This sets your future expenditure requirements compared to the lifetime financial plan that you have developed in VeriPlan.

Next, you can input asset reduction percentages to adjust downward the value of your projected portfolio holdings. You can reduce separately your future cash, bond, and stock assets from 0% to 100%.

Once you have set these reduction parameters, then VeriPlan will automatically project at any year in the future how long your potentially reduced income and assets would cover your adjusted expenditure needs. In each future projection year, this safety margin tool simply divides the adjusted values of your cash, bond and stock assets by an annualized five year moving average of your projected annual necessary expenditures. The result is an expense coverage ratio that is measured as "years of expense coverage" and is shown on the blue-tabbed Safety Margin graphic.

The Safety Margin graphic plots these annual ratios across your lifecycle projections, and the Graphics Data worksheet provides that data for this graphic. This tool does not affect

VeriPlan's core logic for developing integrated lifetime financial plans. The parameters you set below WILL NOT change your baseline model. These expenditure and asset reduction factors apply ONLY to the safety margin graphic and to its data on the graphics data worksheet. None of VeriPlan's other inputs or outputs are affected.

This portfolio safety tool projects financial risk capacity rather than risk tolerance. A person with a very substantial asset buffer might feel either financially risk tolerant or risk intolerant. Possessing assets may or may not alter a person's views about investment risk. And, if so, more assets could make some persons more tolerant of investment risk and others less tolerant of such risks.

Your portfolio safety margin settings

In the sections below, you can estimate how much you would reduce these factors in a personal or general financial crisis. **Note that all entries are on a REDUCTION BASIS.** For example, if you think that on average in the future you might be able to REDUCE ordinary expenses by 10%, then enter 10%.

STEP 1: Enter expected reductions of Ordinary and Major Planned Expenses

Because you might be able to reduce some of your ordinary and major planned expenses in difficult times, enter below your assumptions about your ability to reduce expenses.

Use these gray user data entry boxes to indicate the percent of your annual ORDINARY and MAJOR PLANNED EXPENSES that you think you could typically eliminate, if you lost some or all of your income sources and your portfolio lost value. Your ordinary expenses are those that you entered in Section 1 of the Expenses worksheet. Your major planned expenses are those expenses that you entered in Section 3 of that worksheet.

<< Enter the % by which you could **REDUCE YOUR ORDINARY EXPENSES**
(usually a number between 0% and 30%)

^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

<< Enter the % by which you could **REDUCE YOUR MAJOR PLANNED EXPENSES**
(a number between 0% and 100%)

^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

STEP 2: Enter your expected reductions of Debt Payments

Typically, it is difficult to reduce debt payments, but if you believe you could have some latitude in debt repayments, you can enter a reduction percentage below.

<< Enter the % by which you could **REDUCE YOUR DEBT PAYMENTS**
(usually will be 0%)

^^ Type a number with the % sign, and verify that your percentage entry is what you intend.

STEP 3: Enter your expected reductions in Cash, Bond, and Stock portfolio values

CASH: If you make a practice of keeping your cash in insured account, no reduction may be needed.

<< Enter the % by which to **REDUCE YOUR CASH ASSETS**
(usually 0%, if your cash is insured)

BONDS / FIXED INCOME: Some percent of your total bond/fixed income assets might not be as readily available due to bond market factors.

<< Enter the % by which to **REDUCE YOUR BOND / FIXED INCOME ASSETS**
(perhaps between 0% and 30%)

STOCKS / EQUITIES: Obviously, stock asset values are the most volatile and the part of the portfolio that typically creates the most concern.

<< Enter the % by which to **REDUCE YOUR STOCK / EQUITY ASSETS**
(a number 0% and 100%)

17.5.1: Risk-adjusted portfolio returns and the safety margin dilemma

Individuals face a dilemma. Both less risky and more risky investment strategies may not achieve desired results for different reasons. When assessing investment strategies with different risk levels, it can be helpful to understand how the "safer" portion of portfolio assets might evolve across your lifetime.



When making investment decisions, individuals are confronted by the dilemma that more conservative investments historically have yielded substantially lower returns than riskier investments. With risk-adjusted market returns, you cannot have your cake and eat it too. If you take on higher risk, you can save and invest less, because the assets you hold are expected to grow at a more rapid rate. However, the outcome is less certain. Conversely, if you expose yourself to less investment risk, you must plan to save and invest more, but the outcome is more certain. How to strike a personally appropriate balance between risk and return is part science and part art. There are no easy answers, because both the shorter-term and longer-term future are fundamentally unknowable.

It may not be sufficient for you simply to estimate your level of anxiety over investment risk and then set an allocation between more or less risky assets that reflects what is comfortable to you. Many people will never be comfortable with investment risk, until they have a very

substantial wealth buffer. Even then, many such persons may never be at ease. For many investors, unless they incur more significant investment risks than more conservative and comfortable investment strategies usually deliver, they are unlikely to be able to build adequate assets to escape from the rational or irrational fear of financial ruin that could be brought about by major stock market reversals in the future.



You can test this by experimenting with various settings in VeriPlan. It will soon become clear that heavily conservative asset allocations focused on cash and fixed income assets tend to grow slower than equities using very long-term relative asset class growth rates. Long-term success with such conservative allocations, relies far more on a continued high rate of saving, which requires greater discipline to sustain year-after-year and decade-after-decade. Conversely, equity focused strategies rely more upon growth in asset values, although these strategies still tend to require significant savings -- just at lower rates.

A partial solution to this dilemma for some investors is to understand better how different levels of exposure to investment risk could affect portfolio values over their lifecycle. VeriPlan allows you to do this using the five different asset allocation methods, which are described on the asset allocation tools worksheet. However, more knowledge only helps some investors to sleep better at night. For all investors, real uncertainty is still there concerning what will actually happen, as opposed to what could happen.

Another way to address investment risk-return tradeoffs and personal risk tolerance is to project a family's ability to meet its financial obligations using assets that would tend to hold their value better through adverse, dire, and extended periods of down economic cycles and depressed securities markets. As a method to manage the inevitable anxiety, it is potentially useful to project how large a liquid asset buffer you might build over time.

This portfolio safety tool can provide insights about your potential future by projecting asset buffers that you might hold at various points across your lifetime. When you experiment with VeriPlan's asset allocation tools in conjunction with this portfolio safety tool, you can get a much better feel for the interactions between risk-adjusted asset class returns and the safety margin provided by more liquid assets across time.

Note that you can also use this portfolio safety tool in conjunction with all other portfolio projection functionality provided by VeriPlan. For example, if you wish to alter the investment growth rates that are used by VeriPlan, you can do so using the other risk and returns tools. The impact of any changes that you make to projected asset growth rates will also be reflected in these portfolio safety margin calculations and the safety margin graphic.

17.5.2: Taxation and the Portfolio Safety Tool

This section discusses some tax implications related to liquidating financial assets in a personal financial crisis.

Regarding taxation, note that the impact of taxation on asset liquidations is not taken into account in the development of VeriPlan's safety margin factor. For most people, taxes in such situations are likely not to be a terribly important factor -- particularly compared to the loss of income. When people have a significant loss of income, yet they have assets to rely upon, opportunities are created to rearrange one's financial affairs. Prior to a significant and unanticipated decline in earned income, a person is likely to have structured their finances to take advantage of tax minimization opportunities, such as tax deductions, tax-deferred investing, etc. When income is dramatically reduced, marginal tax rates and taxes paid usually are reduced significantly and tax deductions can go unutilized.

Therefore, people with assets might be able to rearrange assets within and between taxable and tax-advantaged accounts without incurring significant or perhaps any taxes in the process of these making these rearrangements. (Of course, they need to keep transactions costs to a minimum.) For example, a loss of income may be an opportunity to convert traditional IRA assets to Roth IRAs, recognizing taxes at significantly lower rates or perhaps avoiding taxes altogether, if circumstances and underutilized deductions permit.

Because in each projection year, VeriPlan recognizes the net interest or asset earnings yield on both cash and fixed income assets for current taxation purposes, these assets will carry a high

basis in your taxable accounts within VeriPlan. Therefore, liquidating taxable cash and fixed income assets is likely to involve much lower or zero taxes, when earned income unexpectedly drops significantly.

Finally, it is generally more optimal from a taxation standpoint to maintain your allocations to cash and fixed income assets --versus your allocations to equities-- in tax-deferred accounts, when possible. The reason relates to ordinary income tax rates on cash and fixed income assets versus possible lower tax rates via long-term capital gains taxation on equity assets.

However, when one is under age 60 and faces the kind of financial crisis addressed by this Portfolio Safety Tool, there is a concern about federal and possibly state early withdrawal penalties from tax-advantaged accounts. This creates a quandary. Should some or a substantial amount of cash and fixed income assets be maintained in taxable accounts to avoid the potential of having to pay early withdrawal penalties in a personal financial crisis? In general, this concern can be overblown.

First, if a younger person has assets in both taxable and tax-advantaged accounts, he should find it possible to rearrange assets so that cash and fixed income assets can be withdrawn from taxable accounts to avoid early withdrawal penalties. This would require some buying and selling that could be sensitive both to the tax basis in various accounts and to wash sale rules. However, rearranging between taxable and tax-advantaged accounts should be achievable with relatively low taxes and expenses. This would be feasible, if low-cost investments and low transactions cost custody accounts were utilized, and if the living expenses to be covered were not so lavish as to require withdrawals that push one into higher tax brackets. Taxes and tax rates in these circumstances should already be far lower, because the loss of planned and presumably taxable income sources is the reason why asset withdrawals would be required in the first place.

Second, when a younger person holds most of his assets in tax-advantaged accounts and must liquidate some of them to meet expenses his expenses, he would be subject to early withdrawal penalties, unless he qualifies under the few exceptions that are available. This can be a reasonable risk that a younger person takes in holding a high percentage of assets in tax-advantaged versus taxable accounts. For the younger investor facing high current earned income tax rates, the advantages of tax-advantaged versus taxable investing are likely to outweigh strongly the risks of possible early liquidations, which force an early withdrawal penalty. From the standpoint of probabilities, this is demonstrated in "Optimal Asset Location and Allocation

with Taxable and Tax-Deferred Investing" by Robert M. Dammon, Chester S. Spatt, and Harold H. Zhang in The Journal of Finance, Vol. LIX, No. 3, June 2004.

17.6: How VeriPlan measures the price volatility or risk of your asset classes

This section provides supporting data and describes the volatility or risk measures that VeriPlan uses with the projection variance tool. It also provides information about the ratios of historical risk to historical return for each asset class. VeriPlan uses these ratios to scale the "below average" and "above average" projection scenarios in the projection variance tool above.

Note that these volatility rates and ratios are used ONLY by the projection variance tool. They are NOT used by the asset class return adjuster tool below, since you make your own adjustments directly to the asset class rates of return yourself, when you use the asset class return adjuster tool.

Price volatility measures for your Cash, Bond/Fixed Income, and Stock/Equity assets

Generally, investment risk is measured by the amount that prices of an asset fluctuate in the public securities markets over time. The wider the fluctuations relative to the average price, the higher the risk. When comparing two assets or two asset classes, levels of fluctuations in the past are expected to be indicative of relative price fluctuations in the future. The statistical standard deviation of price fluctuations over time is the most common measurement of price volatility or risk.

VeriPlan uses historical measures of asset price volatility solely to adjust its projected asset class rates of return in the projection variance tool above. VeriPlan uses relative asset class price volatility or risk as a means to scale asset growth rates proportionately. Instead, of using arbitrary adjustments VeriPlan follows the well-established principle that investment risk and return are related. In general, the higher the risk, higher the return.

Whenever possible, it is preferable to use price volatility data which is drawn from the same historical period that is used to measure total return rates. Additionally and whenever possible, the same time period should be used to develop measures for all asset classes. Furthermore, since securities price volatility tends to fluctuate across the economic business cycle, this is an additional reason to use a reasonably long measurement period, whenever possible. Averages for longer periods tend to even out changes in variability across economic cycles.

In practice, completely comparable long-term historical data are sometimes difficult obtain. Long-term historical volatility or price fluctuation data are readily available for the T-bill, T-bond, and equity markets. For similarly long time periods, this is not the case for other cash equivalent rates or taxable corporate bonds. Therefore, VeriPlan uses the standard deviations of the long-term T-bill and T-bond assets as its volatility measures of the cash and bond asset classes. Because the spread on cash equivalent assets versus the short-term T-bill risk free rate of return is very narrow, it is likely that this method only understates the incremental risk on cash assets by a small amount. The somewhat wider spread of high quality corporate bond returns to T-bond returns means that incremental risk would also be higher. However, for purposes of proportional scaling of long-term historical return rates, it must serve as an acceptable proxy in lieu of better long-term data.

Historical Securities Price Volatility -- Asset Class Standard Deviations

This table presents the VeriPlan's risk data for the Cash, Bond, and Equity asset classes since 1928 up through the most recent full year for which data is available.

3.83%	<< Annual Standard Deviation for the cash and cash equivalents asset class prices (since 1928)
8.97%	<< Annual Standard Deviation for the Bond/Fixed Income asset class prices (since 1928)
19.23%	<< Annual Standard Deviation for the Stock/Equity asset class (since 1928)

Ratios of price volatility to total returns for your asset classes

This section provides the ratios of volatility to total real return for the cash, bond, and stock asset classes.

Measuring the volatility of asset class price fluctuations demonstrates that, in an absolute sense, equities are more volatile than bond or fixed income securities, and fixed income securities are more volatile when compared to cash assets. However, there still are significant fluctuations around the returns for each of these asset classes over time. This is demonstrated by the ratios of the historical standard deviations of asset classes to historical asset class returns, which are presented in the table below. These volatility to return ratios are used above in the projection variance tool to scale projected total returns of the various asset classes.

Ratios of the Annual Volatility of Real Returns to Compounded Average Asset Class Total Returns (Note that these are "volatility-to-return" ratios and not percentages.)

14.33	<< Cash and cash equivalents asset class (Standard Deviations / Geometric Annual Average Total Historical Returns)
3.84	<< Bond/fixed income asset class (Standard Deviations / Geometric Annual Average Total Historical Returns)
2.91	<< Stock/equity asset class (Standard Deviations / Geometric Annual Average Total Historical Returns)

17.7: Explanation of the Monte Carlo Variance Tool (information)

Overview of the Monte Carlo statistical method

In probability and statistics, the "normal," bell-shaped statistical distribution model is used most often, because it is a reasonable method to model variation within many population distributions. However, historical investment data tends to be characterized by significantly more negative and positive outcomes than the normal, bell-shaped distribution would predict. Thus, historical investment data creates a "fat-tails" problem for the normal distribution.

The Monte Carlo method can overcome these statistical problems. If you desire more detailed background information, just search " Monte Carlo method " in your favorite browser.

In summary, the Monte Carlo method requires: a) an input data set, b) a randomized sampling method, and c) a sampling engine. When the sampling engine runs a large number of random samples against the input data set, a probability distribution that characterizes the data will emerge. When a sufficiently large number of samples are drawn, the statistical "law of large numbers" indicates that the sample distribution should approximate the actual distribution of the data.

There are several problems with how the Monte Carlo method often has been applied to investment performance projections, including:

- 1) limited historical periods, when much longer data series are available,
- 2) ignoring correlations between asset classes,
- 3) the cumbersomeness of calculations, and
- 4) the failure to run sufficiently large samples.

We will not detail these concerns here. Instead, the sections below describes how VeriPlan has overcome these problems.

VeriPlan's "Painless" Monte Carlo investment performance variation methods

VeriPlan's Monte Carlo method allows you to project investment performance using parameters that systematically vary below or above the compounded returns of the 50th percentile centerline projection.

The term, "painless," is used, because VeriPlan's Monte Carlo sampling approach is based upon a systematic Monte Carlo study of historical bond and stock returns using various asset allocations, investment models, and investment holding periods. This study revealed that it was unnecessary to rerun Monte Carlo simulations against the same almost 100 year historical performance data even if cash flow patterns varied.

VeriPlan's approach does not interfere with a user's development of their lifetime financial projection model. If a user decides to vary their investment return assumptions with VeriPlan's Monte Carlo mechanism, any change to their projection will still be characterized by sub-second computer response time.

The typical Monte Carlo method requires many seconds or even minutes to calculate with sampling runs often with only some tens of thousands of samples drawn. Such limited sampling runs can generate performance distributions that vary significantly, while always disrupting the use of the software. Instead, we first ran a large study and our comparison of different cash flow investment models over various decades indicated similar outcomes. Running Monte Carlo simulations against specific user cash flows was not necessary to approximate reasonably investment projection variability on a percentile basis.

Overview of VeriPlan's Monte Carlo study

The Monte Carlo statistical sampling method was used to simulate investment portfolio performance across 11 asset allocations, 3 investment models, and 6 different decade-long time periods. By sampling these 198 combinations 5,000,000 times each, the range of portfolio value outcomes was calculated for each of the combinations.

For each of these 198 combinations the 5,000,000 portfolio outcome values were arranged from the least to the greatest and distribution percentiles from 1% to 99% were calculated.

Next, the Internal Rate of Return (IRR) was calculated within each single percentile given the investment model that was being simulated for a particular asset allocation model. Calculating the IRR by percentile allowed the development a performance index relative to the 50 percentile centerline projection value set to 1 (one).

For each of the three investment models and six decade-long periods, an IRR index and performance outcome table was developed with 1% to 99% percentiles horizontally and the 11 asset allocations vertically. Next, each performance matrix was color coded by percentage performance ranges to enable easy visual comparison.

While there were variations between the three investment models and six decade-long periods, the evaluation determined that an average of two investment models and the 10, 20, and 30 year periods was representative of US historical investment performance variation for bonds and stocks. The third investment model was not used because it was redundant. Furthermore, the 40, 50, and 60 year periods were not used because they were characterized by increasing narrowing of performance outcomes.

Following this research, this summary Monte Carlo model was embedded within VeriPlan. A user can choose to develop a projection with any percentile from 1 to 99 to understand historical performance variation. The user can develop a centerline performance model, and then use VeriPlan's comparison tool to evaluate variations around the 50th percentile.

This "painless" Monte Carlo facility is fully and automatically integrated with all other functionality in VeriPlan. For example, it is automatically integrated with whatever bond and stock asset allocation ratio that the user has chosen. The research used 11 decile bond and stock asset allocation models, and interpolation is used to map the two adjacent decile asset allocation models to the precise bond and stock asset allocation model chosen by the user.

You should note that the research described above required a significant amount of time and effort. This study will not be re-run with every annual release of VeriPlan, because that should not be necessary. Each additional year of data following 2023 would add another year to the 96 years of the sample used to develop the variability indexes described here.

If data points following 2023 are similar to the compounded average, updating this study would have very little effect. If it were significantly different from the compounded averages, the effect would be greater. As years pass, we will test to see whether multiple years have a greater impact, and decide whether it is necessary to rerun this study and update this model.

Cash assets have not been included in this Monte Carlo simulation study. In all projections whether or not the user selects different percentiles, their real dollar cash holdings will be

Averaged 10/20/30 Year IRR Index Ratios for a \$1000 initial investment and \$0 or \$100 subsequent annual investments

The lower part of this chart shows the computed annual compounded returns for the 1928 through 2023 study period. Performance percentiles are segregated by color to make the chart more easy to understand.

AVERAGED 10/20/30 YEAR HOLDING PERIODS with 5,000,000 sampling runs for each 10% bond and stock combination														
Internal Rate of Return (IRR) Index for Each Percentile --- Relative to the 50th Percentile (= 1.00)														
BOND %	STOCK%	50 Percentile Compounded Return for Asset Allocation	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
100%	0%	1.44%	-2.29	-1.90	-1.66	-1.48	-1.33	-1.20	-1.09	-0.99	-0.90	-0.81	-0.74	-0.67
90%	10%	2.12%	-1.17	-0.91	-0.75	-0.62	-0.52	-0.44	-0.36	-0.30	-0.24	-0.18	-0.13	-0.08
80%	20%	2.76%	-0.70	-0.50	-0.37	-0.27	-0.19	-0.12	-0.07	-0.01	0.03	0.08	0.12	0.17
70%	30%	3.37%	-0.50	-0.31	-0.20	-0.12	-0.05	0.01	0.06	0.11	0.15	0.19	0.22	0.26
60%	40%	3.93%	-0.42	-0.25	-0.14	-0.06	0.01	0.06	0.11	0.15	0.19	0.23	0.26	0.30
50%	50%	4.46%	-0.40	-0.24	-0.13	-0.05	0.01	0.07	0.12	0.16	0.20	0.23	0.27	0.31
40%	60%	4.95%	-0.43	-0.26	-0.15	-0.07	-0.01	0.05	0.10	0.14	0.18	0.22	0.25	0.29
30%	70%	5.41%	-0.48	-0.31	-0.19	-0.11	-0.04	0.01	0.07	0.11	0.15	0.19	0.22	0.26
20%	80%	5.83%	-0.55	-0.36	-0.25	-0.16	-0.09	-0.03	0.02	0.07	0.11	0.15	0.19	0.23
10%	90%	6.21%	-0.62	-0.43	-0.31	-0.22	-0.14	-0.08	-0.03	0.02	0.07	0.11	0.15	0.19
0%	100%	6.56%	-0.71	-0.51	-0.38	-0.28	-0.20	-0.14	-0.08	-0.03	0.02	0.06	0.10	0.14

Real Dollar Return Ranges			RED = NEGATIVE				YELLOW=0% TO 1%					ORANGE=1% TO 2%			
BOND %	STOCK%	50 Percentile Return for Asset Allocation	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	
100%	0%	1.44%	-3.30%	-2.74%	-2.39%	-2.13%	-1.91%	-1.73%	-1.57%	-1.42%	-1.29%	-1.17%	-1.06%	-0.91%	
90%	10%	2.12%	-2.48%	-1.93%	-1.58%	-1.32%	-1.11%	-0.93%	-0.77%	-0.63%	-0.51%	-0.39%	-0.28%	-0.14%	
80%	20%	2.76%	-1.94%	-1.37%	-1.01%	-0.74%	-0.53%	-0.34%	-0.18%	-0.04%	0.09%	0.21%	0.32%	0.43%	
70%	30%	3.37%	-1.67%	-1.06%	-0.68%	-0.39%	0.16%	0.04%	0.21%	0.37%	0.51%	0.64%	0.76%	0.87%	
60%	40%	3.93%	-1.64%	-0.97%	-0.54%	-0.23%	0.03%	0.25%	0.44%	0.61%	0.76%	0.91%	1.04%	1.16%	
50%	50%	4.46%	-1.80%	-1.06%	-0.58%	-0.23%	0.06%	0.30%	0.52%	0.71%	0.88%	1.04%	1.19%	1.33%	
40%	60%	4.95%	-2.13%	-1.29%	-0.76%	-0.36%	-0.04%	0.24%	0.48%	0.70%	0.90%	1.08%	1.25%	1.40%	
30%	70%	5.41%	-2.60%	-1.66%	-1.05%	-0.60%	-0.23%	0.08%	0.35%	0.60%	0.82%	1.03%	1.22%	1.39%	
20%	80%	5.83%	-3.19%	-2.12%	-1.44%	-0.94%	-0.52%	-0.17%	0.14%	0.41%	0.66%	0.89%	1.11%	1.31%	
10%	90%	6.21%	-3.88%	-2.69%	-1.93%	-1.36%	-0.89%	-0.50%	-0.16%	0.15%	0.43%	0.69%	0.93%	1.16%	
0%	100%	6.56%	-4.67%	-3.34%	-2.49%	-1.86%	-1.34%	-0.90%	-0.52%	-0.18%	0.13%	0.42%	0.69%	0.93%	

Summary notes:

- A) Bonds = US 10-Year Treasury Bonds cumulative annual (geometric) total return with interest (01/01/1928 to 12/31/2023 = 96 years)
- B) Stocks = US S&P Index cumulative annual (geometric) total return with dividends (01/01/1928 to 12/31/2023 = 96 years)
- C) Inflation = US Consumer Price Index (CPI-U) (01/01/1928 to 12/31/2023 = 96 years)
- D) Annual inflation was removed from bond and stock annual percentage returns to derive real, constant purchasing power dollar percentage returns
- E) An annual Bond and Stock weighted average real dollar return was derived for each year from 1928 to 2023 for each decile asset allocation portfolio.
- F) 5,000,000 Monte Carlo statistical sampling runs were done for each combination of the a) 11 bond/stock decile portfolios, b) 6 holding periods (10, 20, 30, 40, 50, & 60 years), and c) 2 investment models (\$1,000 initial and either \$0 or \$100 each year thereafter)
- G) The ending portfolio values of each outcome within each 5,000,000 sampling run were sorted from the least to greatest. Then single percentiles from 1% to 99% were calculated. Each single percentile represented 50,000 outcomes.
- H) For each of the statistical sampling runs, the Internal Rate of Return (IRR) was calculated to derive a distribution index with the 50% value set to 1 (one).
- I) Charts were developed for percentage portfolio returns across the 11 portfolios and percentile from 1% to 99% for each of the six holding periods and two investment models.
- J) Charts were color-coded with the standard method shown above, so that they could be visually evaluated and compared more easily.
- K) This evaluation determined that the two investment models and 10, 20, and 30 year holding periods were sufficiently similar to be blended and used as a single distribution model for evaluating the variability of lifetime projections. Note that the 40, 50, and 60 year periods were similar to the 30 year period with mildly reduced variation.
- L) Among the 10, 20, and 30 year periods, the 10 year period demonstrated the most variability and the 30 period the least. Nevertheless, a focus on the higher variability

of shorter-periods can distort decision-making about multi-decade portfolio management strategies. Thus, it was decided blend the three periods into a single aggregate.

- M) The 40, 50, and 50 year periods were not included, because they were increasingly similar and would tend to obscure the higher variability of the blended 10, 20, and 30 year periods.

Chapter 18: Investment Costs worksheet

- 18.1: Enter maximum investment costs that are reasonable to you
- 18.2: Commit to a reasonable cost investment strategy
- 18.3: Project returns lost to excessive sales loads
- 18.4: Where to find investment expense information about your financial assets
- 18.5: Paying less to get more
- 18.6: Where to direct the recurring gift of your excessive investment costs?
- 18.7: Why do investment cost-inefficiencies seem so large? (Because they are!)

Choose between your current investment costs or your reasonable cost settings

VeriPlan will automatically reduce historical investment asset class projections by the dollar weighted average portfolio costs of the individual entries of your current portfolio, if you have made individual asset entries on the Financial Assets worksheet. Alternatively, if you intend to adopt a low cost investment strategy, you can enter your reasonable cost assumptions below in Section 1 and VeriPlan will use those alternate investment cost assumptions in your projections.

<< Enter 0 (zero) to use your "Current Portfolio Costs"; Enter 1 (one) to use your "Reasonable Investment Costs"

You must enter a 1 (one) in the bold border entry box above to activate this tool. If you do not, any entries you have made for reasonable costs below will be ignored.

What expected real-dollar asset class returns are my projections using, given my choice between the actual costs of my individual asset holdings entries on the Financial Assets worksheet versus my reasonable investment cost assumptions below?

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets
0.27%	2.33%	6.60%
0.31%	1.23%	1.61%
-0.04%	1.11%	4.99%

Your adjusted assumptions for expected gross real dollar asset class returns are:
Your annual weighted average investment expenses (%)
Your net expected real dollar asset class returns (%)

Introduction



Excessive investment costs are a huge problem for the average investor

VeriPlan's projections automatically analyze the impact of five types of investment expenses across your lifetime:

- 1) Fees to buy investments (e.g. front-end purchase "loads")
- 2) Investment portfolio management fees (e.g. the management expense ratio)
- 3) Annual marketing and sales fees (e.g. 12b-1 fees for investment funds)
- 4) Fund trading costs (e.g. portfolio trading and market impact costs indicated by portfolio turnover)
- 5) Personal account custody fees, commissions, and advisory fees (e.g. annual percent of asset charges on account balances for advice and client services, which are in addition to portfolio management charges; Alternatively these charges could be the annualized percentage cost of transactions commissions paid directly to buy and sell securities.)

VeriPlan allows you to compare automatically the lifecycle investment costs of your current portfolio with investment costs that you believe are reasonable. In particular, VeriPlan allows you to compare full lifetime investment costs:

- a) that reflect the costs of your current portfolio, OR
- b) that are based on the investment costs that you believe are reasonable to pay.

VeriPlan has automated the projection and analysis of investment costs across your lifecycle projections. As its default, VeriPlan automatically evaluates the investment cost entries that you provide for your individual asset holdings on the financial assets and property assets worksheets.

VeriPlan handles the rest automatically, unless you decide that your investment costs are too high and you make changes to your portfolio and update your holdings in VeriPlan. You should note that 95+% of investors pay grossly excessive investment costs and should reduce them ASAP.

VeriPlan will automatically maintain the characteristics of your current assets including expected asset class returns and volatility, expected after-tax yields, evolving tax basis, current investment cost-efficiency, etc. The investment cost-efficiency associated with your current asset portfolio will determine your portfolio's overall cost-efficiency throughout your lifetime projections. Unless you activate some of the controls provided on this investment costs worksheet, VeriPlan will assume that you will continue your current investment cost practices.

To measure the assets that you would lose to excessive costs, VeriPlan will also calculate automatically the cumulative lost returns for these costs, including the returns that could have been earned on the foregone value of these lost assets. Lost annual returns and cumulative assets associated with your investment cost-inefficiencies are projected relative to what you believe are reasonable investment costs to pay. The higher you set your assumptions about reasonable investment costs to pay, then the lower VeriPlan's projected cost-inefficiencies will be. If you set your reasonable cost assumptions higher than those associated with your current investment portfolio, then VeriPlan will project no cost-inefficiencies associated with your future financial asset returns and portfolio.

VeriPlan's corrects problems of limited disclosure, lost assets, and hidden costs by comparing costs associated with your current portfolio to your entries below regarding what you believe are reasonable investment costs to pay. This tool projects your portfolio's full lifecycle investment cost-inefficiencies, which are the opportunity cost to you of continuing to pay excessive fees. To illustrate this opportunity cost, VeriPlan projects the value of your annual investment cost-inefficiencies and what you could have been earned cumulatively, if you had kept, invested, and compounded these lost assets using a cost-efficient strategy. For most investors, their expected opportunity costs are huge, and they may be startled when they finally understand the projected magnitude of these controllable cost-inefficiencies over their lifecycle.

Some of your maximum reasonable cost settings could relate to paying advisors, if you choose to use financial and investment advisors. Because advisor compensation is an important and complex topic, this worksheet has a separate section below in this chapter that you may wish

to review, as you determine your maximum investment cost settings. See the below titled: "Paying a good financial advisor for good advice." Also, you might read the numerous articles on this subject available at The Skilled Investor website.

Finally, some people may believe that if they pay more for an investment, they will get more in the long-term. Paying more and getting more should always be the case with pencils, hamburgers, lumber, cars, beer, etc., where unit prices are known. However, investment securities prices are determined on real-time markets, and result from speculation about valuation. These values depend completely on unknowable future events. There is no scientific evidence that you will get more when you pay more to invest. In fact, the opposite has been proven to be true. For further information, see the section below titled: "Pay less to get more." Also, read the numerous articles on this subject available at The Skilled Investor website.

For your property and other assets, VeriPlan does not separately identify cost-inefficiencies. However, it does project asset values which reflect the investment returns and costs that you provide. Property and other assets are often subject to much less efficient markets and usually involve higher costs, when they are purchased and/or sold. VeriPlan assumes that you will hold your property and other assets throughout your projections. Depending upon the recurring investment costs that you enter on VeriPlan's property worksheet, VeriPlan projects returns and cumulative asset values that are net of the costs that you have entered.

Find PAYMENT OF ADVISORS articles on *The Skilled Investor* website

Finally, some people may believe that if they pay more for an investment, they will get more in the long-term. Paying more and getting more should always be the case with pencils, hamburgers, lumber, cars, beer, etc., where unit prices are known. However, investment securities prices are determined on real-time markets, and result from speculation about valuation. These values depend completely on unknowable future events. There is no scientific evidence that you will get more when you pay more to invest. In fact, the opposite has been proven to be true. For further information, see the section below entitled: "Pay less to get more." Also, read the numerous articles on this subject available at *The Skilled Investor* website.

[Find INVESTMENT RETURN articles on *The Skilled Investor* website](https://www.theskilledinvestor.com/financial/investment-returns.html)

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For your property and other assets, VeriPlan does not separately identify cost-inefficiencies. However, it does project asset values which reflect the investment returns and costs that you

provide. Property and other assets are often subject to much less efficient markets and usually involve higher costs, when they are purchased and/or sold. VeriPlan assumes that you will hold your property and other assets throughout your projections. Depending upon the recurring investment costs that you enter on VeriPlan's property worksheet, VeriPlan projects returns and cumulative asset values that are net of the costs that you have entered.

18.1: Enter maximum investment costs that are reasonable to you

Use this section to set the investment costs that you believe are reasonable to pay. You can set your reasonable investment cost assumptions by the type of cost and by financial asset class.

All investment costs could be considered investment cost-inefficiencies. You could drive out as many costs from your investment portfolio as possible, and there still would be minimal costs. Even the most cost-conscious investor must pay a small amount of investment costs -- but only a very small amount. Therefore, VeriPlan measures cost-inefficiencies on a relative rather than absolute basis.

VeriPlan allows you to set maximum acceptable investment cost levels and to decide what is and is not an investment cost-inefficiency. You can set investment cost levels in VeriPlan that you believe are reasonable to pay. Then, VeriPlan will automatically project, as cost-inefficiencies, only those costs that exceed the maximum reasonable cost levels that you are willing to pay.

In this section, VeriPlan comes configured with low % default reasonable investment cost settings. Actual costs for a very low-cost, passive, broad index investment strategy would be slightly more than zero % per year. You can change these cost settings to match your personal preferences. Suggested low-cost settings are noted just under the reasonable cost assumptions table below, so that you could restore them. Note also that VeriPlan will validate your entries and impose upper limits on user data entries that are well above the already high costs charged in the industry.

- * If you set your personally acceptable maximum costs at levels which are below your current portfolio's valuation weighted average costs for each type of cost and asset class, then VeriPlan will automatically calculate your incremental losses due to these excessive costs. VeriPlan will display your yearly and cumulative losses on its graphics and data worksheets.

- * If you choose any personal maximum asset class cost settings that exceed your current portfolio's valuation weighted average costs, then VeriPlan will simply project zero inefficiency for that type of investment cost for that asset class.

Entering the maximum investment cost assumptions that you believe are reasonable

You can test the impact of a wide variety of investment costs on your portfolio projections by setting acceptable investment costs below by type of cost and asset class. After entering below the maximum fees that you believe are reasonable to pay, you can review VeriPlan's efficiency and lost assets graphics to decide how much investment costs might eat into the long-term growth potential of your projected portfolio.

Use the bold border user data entry boxes below to enter of FEE, EXPENSE, OR SALES LOAD PERCENTAGES.

Non-recurring one-time Investment Costs

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets	
0.00%	0.00%	0.00%	<< Enter your Maximum Front-end Sales Load assumptions for investment purchases

Annually Recurring Investment Costs

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets	
0.30%	0.20%	0.10%	<< A -- Enter your Annual Maximum Asset Management Fee
0.00%	0.00%	0.00%	<< B -- Enter your Annual Maximum Sales Fee assumptions
NA	20%	10%	<< Enter your Annual Maximum Portfolio Turnover assumption
0.00%	0.04%	0.06%	C -- Trading Costs derived from Your Maximum Turnover Assumption
0.10%	0.10%	0.10%	<< D -- Enter your Annual Maximum Asset Custody, Commission, &
0.40%	0.34%	0.26%	A+B+C+D -- Annual expense assumptions for a reasonable cost structure

Suggested maximum reasonable cost assumptions:

- * Maximum Front-end Sales Load = 0% for each of the three financial asset classes
- * Maximum Asset Management Fee = .30% for Cash; .20% for Bonds; .10% for Stocks
- * Maximum Sales Fee = 0% for each of the three financial asset classes

* Maximum Portfolio Turnover = 20% for Bonds, 10% for Stocks

* Maximum Asset Custody, Commission, and Advisory Fees = .1% for Cash; .1% for Bonds; .1% for Stocks

How would my reasonable investment cost assumptions above affect real dollar asset class return assumptions in VeriPlan?

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets
0.27%	2.33%	6.60%
0.40%	0.34%	0.26%
-0.13%	2.00%	6.34%

Your adjusted assumptions for expected gross real asset class returns (NO

Your maximum annual expense assumptions for a low-cost strategy

Your expected net real asset class returns for a low-cost strategy (NO USE

18.2: Commit to a reasonable cost investment strategy

At the top of this worksheet, you can make a choice as to whether VeriPlan will use:

a) the investment costs of your existing portfolio, which are summarized below in this section, OR

b) your reasonable investment cost settings from the section above

to develop your centerline lifecycle projections and any variations upon them.

As a default, VeriPlan uses the current cost structure of your investment portfolio to develop your projections. However, if you wish you can use the selector at the top to have VeriPlan develop your centerline projections using your reasonable cost settings from above. When you set this selector to use your reasonable cost settings, then not just VeriPlan's investment cost-efficiency graphics will be affected, but all other graphics and data worksheets will reflect these reasonable cost settings.

This is your portfolio cost selection from the top of this worksheet:

0 << 0 = "Current Portfolio Costs" and 1 = "Reasonable Investment Costs"

Notes:

- 1) If you set reasonable investment costs at the top of this worksheet, which are higher than the weighted average costs derived from your current investment portfolio, then VeriPlan will use the lower of your actual or reasonable costs.

- 2) You can develop lifetime projections without making any entries on the financial assets worksheet. VeriPlan will automatically use the reasonable cost settings above for any asset class without asset entries. This will affect future financial assets invested from positive net cash flow. Once one or more assets has been entered for an asset class on the financial assets worksheet, then VeriPlan will automatically use the cost characteristics of those asset entries, unless you set the selector above to a "1".

CAUTION: If you set the selector above to have VeriPlan develop projections using your reasonable, and presumably lower, cost settings in the section above, then the recurring investment costs associated with your actual portfolio would still be higher than the costs that VeriPlan would project for you. If you choose to focus on financial projections with more reasonable and lower costs, then you would, of course, also need to take steps to lower the actual investment costs of the financial assets in the investment portfolio that you own in the future.

Investment cost and return assumptions being used to develop your projections.

Weighted average investment costs (%) calculated from EITHER: "Current Portfolio Costs"
OR "Reasonable Investment Costs"

Note that, if you choose to develop projections using your reasonable investment cost entries above, and your portfolio's weighted average costs in a particular asset class cost category are actually lower, then VeriPlan will use your lower costs.

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets
-------------	----------------------------	-----------------------

Non-recurring Investment Costs

0.00%	0.00%	0.58%	<< Front-end Sales Loads on investment purchases (%)
-------	-------	-------	--

Annually Recurring Investment Costs

0.19%	0.73%	0.87%	<< annual asset management fees (%)
0.00%	0.00%	0.26%	<< annual sales fees (%)
NA	0.06%	0.16%	<< annual trading costs derived from portfolio turnover (%)
0.12%	0.44%	0.32%	<< annual asset custody, commission, & advisory fees (%)
0.31%	1.23%	1.61%	<< <u>Total Recurring Annual Investment Costs</u> (%)

What are expected returns, given either my actual investment cost entries or my reasonable investment cost assumptions?

Cash Assets	Bond & Fixed Income Assets	Stock & Equity Assets
0.27%	2.33%	6.60%
0.31%	1.23%	1.61%
-0.04%	1.11%	4.99%

Your adjusted assumptions for expected gross real dollar asset
Your annual weighted average investment expenses (%)
Your net expected real dollar asset class returns (%)

18.3: Project returns lost to excessive sales loads

Investment sales loads compensate industry representatives to sell investments. Despite claims that loaded investments are "good" or "better," sales loads have no impact on the gross investment performance of the underlying investment. Before costs, loaded and unloaded investment returns are the same. However, after you pay a load, you own less of the investment asset. Why do you think, these fees are called "loads?"

If you really think that financial advisors can pick better funds for you, you need to read "Assessing the costs and benefits of brokers in the mutual fund industry" by Professors Bergstresser, Chalmers, and Tufano. In their conclusion, they state that: "We begin with a positive hypothesis: the prominence of funds sold through brokers implies that brokers provide consumers with valued services. Our study has identified few, if any, of these benefits."

Sales loads create 'phantom' assets and lost returns that VeriPlan will track for you automatically

Front-end sales loads cause assets to disappear at the outset and to be forgotten about in subsequent performance evaluations. VeriPlan does not forget about loads. Instead, it automatically projects the lifecycle value of the assets and returns lost through paying loads.



Donna Donkey asks, “Do you think this makes me faster?”

Why do you think they call it a load anyway?”

Many justifications for loads might be offered during the sales process, but once a front-end load is charged, your diminished portfolio will 'forget' about the load charge for the rest of your life. Loads become 'phantom' assets, which are rarely spoken of or measured subsequently, even though you may remember that you paid them in the past. The future performance of your reduced investment portfolio may be benchmarked against some index, but the load charges that you paid would no longer be a part of this evaluation. VeriPlan will not forget about the loads you have paid and will pay and the phantom lost assets related to these load charges. (Note that in effect, back-end loads also create similar phantom assets. With a 2% back-end load, for example, the charge will remain visible while you retain a particular holding and then will slip away, when the asset is sold.)

To illustrate the possible opportunity costs of paying loads, VeriPlan projects the annual value of returns lost to sales load cost-inefficiencies, which exceed sales load charges that you consider to be reasonable. It automatically calculates what you could have been earned

cumulatively, if instead you had kept, invested, and compounded these sales load charges using a more cost-efficient strategy.

Paying a sales load may be the method you prefer to compensate your broker or advisor

Sales loads are one of the ways you might choose to compensate an advisor, and the industry will tell you that this is why you pay loads. If you want to compensate your advisor through sales loads, VeriPlan can help you to understand the full lifetime cost to you.

As discussed elsewhere on this worksheet, a sales load might be the method that you prefer to compensate your broker or advisor. If the sales load charged is reasonable for the services delivered, then you may consider this to be a convenient compensation method. A key question is whether the investment sales load charges that you pay are reasonable within the context of your lifecycle financial affairs.

Average sales load percentages that you have paid for past purchases and might pay on future purchases

This section lists the sales load percentages, by asset class, that VeriPlan is using currently to develop your projections. VeriPlan will project lifetime investment costs to you related to sales loads that you have paid in the past, and might pay in the future.

VeriPlan presents information about both your past and future sales load costs, because both are important to understand. However, sales loads that you have paid in the past represent phantom assets that are entirely gone from your portfolio, which you cannot retrieve. Regarding sales loads that you may pay in the future, you can control these potential costs.

Sales load charges are encountered frequently with fixed income and equity investments. When you purchase a load-bearing investment, these sales loads compensate your broker or advisor and his firm. Sales loads on money market funds are relatively rare, but they actually do exist. Therefore, for consistency, VeriPlan collects information from you about that sales load percentages that you have paid on each of your portfolio holdings across all your asset classes.

Unless you instruct VeriPlan to use your reasonable cost assumptions above, then VeriPlan will assume that you will continue to pay sales loads on your future investment purchases at the rate you have in the past. The following boxes show the average sales load percentages that you have paid in the past weighted within each of your financial asset classes. In calculating these

sales load percentages, VeriPlan weights its calculations by the current value of individual asset in that asset class, whether or not a sales load was actually paid to acquire that asset. Current accounts with zero loads paid will reduce the weighted average of an asset class.

Actual valuation weighted average sales load percentages for your financial asset classes:

0.00%	<< The weighted average sales load percentage on past purchases for your Cash Assets
0.00%	<< The weighted average sales load percentage on past purchases for your Fixed Income
0.58%	<< The weighted average sales load percentage on past purchases for your Equity Assets

The maximum sales loads from Section 1 that you consider are reasonable to pay:

0.00%	<< Your maximum reasonable front-end sales load assumptions for your Cash Assets
0.00%	<< Your maximum reasonable front-end sales load assumptions for your Fixed Income Assets
0.00%	<< Your maximum reasonable front-end sales load assumptions for your Equity Assets

Excessive sales load percentages that you have paid in the past:

0.00%	<< Difference between your actual and maximum sales load percentages for your Cash Assets
0.00%	<< Difference between your actual and maximum sales load percentages for your Fixed Income
0.58%	<< Difference between your actual and maximum sales load percentages for your Equity Assets

* If your reasonable maximum equals or exceeds your actual average sales loads, the percentage above will be zero.

The shadow of sales loads that you have paid in the past

VeriPlan does not forget about sales loads that you have paid in the past. VeriPlan uses your current portfolio's tax basis, load percentages paid, and turnover frequency to estimate the value of the sales loads that you have paid in the past. This section also lists the current total tax basis for each of your financial asset classes.

VeriPlan can measure and project automatically an approximate value for the phantom sales load assets lost to your portfolio. If visible cost-inefficiency patterns can be projected to continue into the future, then so can a pattern of past inefficiency with respect to sales loads. An inefficiently managed investment portfolio was diminished and will continue to be diminished in the future by both visible costs and load charges that slipped off the radar screen.

Using the tax basis of your current investments, VeriPlan develops a lower bound estimate of your past sales load payments. Once it has estimated the value of your lost sales load payment

assets, then VeriPlan can project the future annual returns that you might have earned on these lost assets with a more cost-efficient strategy.

For each of the assets that you enter on VeriPlan's financial assets worksheet, you are asked to supply a current estimate of your total tax basis. The tax basis of your assets should include your original capital contribution plus any loads that you paid to acquire each asset that you currently hold. Furthermore, your total tax basis for each assets might have increased over time to reflect any new investments and reinvested distributions. If you paid loads on these new investments and reinvested distributions, then your current tax basis should also include these subsequent sales load payments.

Gee, you say, "I have not been tracking my sales loads and other investment expenses as part of my investment asset tax basis." Well, you should be. Particularly, if you pay loads regularly, trade more frequently, and have more substantial assets, these expenses can mount up. Since many investment expenses, such as sales loads on purchases, are not currently deductible, they must be added to your tax basis. Eventually, such investment expenses can reduce your tax bill. If you do not maintain accurate current records, then you are more likely to overlook these expenses with the passage of time and disposal of records. (See IRS Publication 550, "Investment Income and Expenses" for more information.) Nevertheless, even if you have not keep good records on investment expenses, if you enter the cash amount that you invested and the front-end load percentage paid, VeriPlan will still develop a reasonable, albeit, slightly lower estimate of the sales loads you may have paid in the past.

These are the overall tax basis totals for each of your financial asset classes:

\$15,000	<< Tax basis of your Cash Assets
\$10,000	<< Tax basis of your Fixed Income Assets
\$100,000	<< Tax basis of your Equity Assets

How VeriPlan estimates the cost of excessive sales loads that you have paid in the past

To develop its cost-efficiency projections related to your past sales load payments, VeriPlan:

- * separates assets within each of your asset classes into two groups: 1) assets held in taxable accounts plus Roth 'tax-now-not-later' accounts and 2) assets held in traditional

'tax-deferred' accounts. (This is necessary, because the information in the tax basis tends to differs between these two groups.)

- * calculates your total tax basis within the two groups above for each asset class ;
- * within each of these two groups in each asset class, it multiplies your tax basis for that group by the weighted average sales load percentage for that group ;
- * projects the annual lost returns that you might have earned with a more reasonable cost investment strategy, using the combined estimates of assets lost to excessive past sales loads within each financial asset class.

Repeated sales load charges due to turnover of your financial asset portfolio

You may have paid multiple sales loads on the same assets when bought and sold them in the past. In this section, you should indicate the number of times that you have paid a sales load, when you turned over your current portfolio.

VeriPlan's method of estimating your past sales load charges, described above, assumes implicitly that you paid a sales load only one time, when you bought an asset. Thereafter, you simply held that asset in your portfolio. If instead, if you have bought and sold assets and have paid repeated sales load charges, then your historical sales load costs would be higher. If your financial asset portfolio has turned over and has involved multiple sales load payments, then by asset class over the life of your portfolio, you should enter your estimates of these turnover factors in the bold border user data boxes below.

How many times have you paid sales loads, within these groups and asset classes?

In your Taxable and Roth 'tax-now-not-later' accounts	In your traditional 'tax-deferred' accounts	
1	1	<< Times for your <u>Cash assets with load charges</u> [1 (one) is t
1	1	<< Times for your <u>Fixed Income assets with load charges</u> [1
20	1	<< Times for your <u>Equity assets with load charges</u> [1 (one) is

- * If you estimate that you have paid loads 2 and 1/2 half times across all your load bearing assets within an asset class group, then you should enter 2.5 for that group. At a

minimum, this turnover factor would be a 1 (one) for all those assets in your portfolio that have involved a purchase load. (Assets without loads should simply be ignored, when you make your turnover estimates. VeriPlan automatically excludes them.)

* Even if you agreed to some other form of load charge, such as a back-end load, when you agreed to purchase your investments that involved loads, just assume that you paid a load at the front-end when you make your turnover load-bearing turnover estimates above.

Given your entries on the financial assets worksheet about sales load percentages paid and about the tax basis of your assets, plus your turnover estimates above, these are VeriPlan's estimates by asset class of the total sales loads that you have paid in the past.

Your estimated excessive sales load payments in the past by financial asset class

In your Taxable and Roth 'tax-now-not-later' accounts	In your traditional 'tax-deferred' accounts	
\$0	\$0	<< Estimated excessive load payments for your Cash Assets in the past
\$0	\$0	<< Estimated excessive load payments for your Fixed Income Assets in the past
\$16,304	\$0	<< Estimated excessive load payments for your Equity Assets in the past
\$16,304	\$0	<< Column totals
\$16,304	<< VeriPlan's estimate of your total PAST excessive sales loads payments for your taxable, Roth 'tax-now-not-later', and traditional 'tax-deferred' accounts	

18.4: Where to find investment expense information about your financial assets

When you list each of your current assets on the 'Your Profile' worksheets, you tell VeriPlan about the investment costs that you have paid. This section discusses how you can collect cost information about your current investments.

There may be multiple sources to find information about the five investment costs that this investment cost tool measures. When you find these investment costs for your particular holdings, you should enter them on the financial assets worksheet. You should also enter similar investment costs for your property and other assets on the property assets worksheet. However, if an asset is not traded on an exchange or valued based on exchange-traded assets, you will only

be able to obtain cost information from the providers. Also note that VeriPlan does not collect data for all five costs are collected for each type of asset. For example, Cash asset turnover is not a useful indicator for costs, therefore is not collected by VeriPlan. See the data input columns and notes on the various input worksheets for your assets to understand the differences.

Every investment, whether publicly or privately traded, should have a Prospectus and other disclosure materials that may include information on: 1) initial costs to purchase/loads: 2) annual investment management fees, 3) annual sales charges, and 4) account holding, transactions, and advisory fees. These materials may include information on portfolio turnover, as well. Because these are legally mandated documents, they can be your best source of cost information, but you sometimes need to dig through the small print.

For virtually all investments, you would have purchased them through some type of broker or advisor. This broker should be able to provide accurate information about your investment costs. The written statements of your full-service or discount broker may provide some of this investment cost information.

For publicly traded investments -- those that trade on the various public exchanges -- you may have other additional web-based sources to gather investment cost information.

Morningstar is a leading source of reasonably detailed information on many publicly traded investments -- particularly regarding investment funds such as mutual funds, exchange traded funds, annuities, separate accounts, etc.

<https://www.morningstar.com/>

While Morningstar charges various subscription fees for certain services, the Morningstar.com website offers a significant amount of information that does not require a subscription fee. Because websites often change, it is not possible to list specific Internet links that will remain usable over time. Instead, if you wish to use Morningstar.com, simply go there and select first the category of investment that you are researching. Next, either choose one of the many screening tools that are offered or and use the website's search facilities. (Note that VeriPlan has no relationship with Morningstar.com.)

[Find MORNINGSTAR RATING articles on The Skilled Investor website](#)

<https://www.theskilledinvestor.com/financial/mutual-fund-ratings.html>

If you use Morningstar.com, you may find that the site is a source of much potentially useful information. However, Morningstar also offers some aggregated and simplified information that you should understand better before using. In particular, Morningstar's five-star Ratings have become ubiquitous in the industry. The stars seem to have influenced heavily both individual investors and how the industry sells to them. For additional information, The Skilled Investor website has published numerous articles about Morningstar. These articles summarize published research which indicates that the Morningstar Rating system is of questionable value in making investment selection decisions. If the star system has any predictive value at all, it is likely that this is associated with the low investment cost factor leading to better returns. Seeking lower cost, fully diversified, passively managed index funds would likely be a more direct method of identifying investment prospects.

Investment costs of company profit sharing, ESOP, 401k, stock bonus, or money purchase pension plans

The first place to look for cost information related to these plans is to go directly to the internal company managers of the plan and ask for the written cost disclosures.

Finding information about the costs of employer-sponsored defined contribution plans can be difficult, because for years weak regulations have allowed the financial industry to obscure these costs and gouge millions of retirement plan participants. This has made it difficult for both employers and plan participants to understand the true costs of these retirement plans. Particularly at smaller companies where fewer people are paying attention, some of these retirement savings plans carry simply outrageous visible and hidden fees. US Department of Labor regulations requiring fee disclosures starting in 2012, have allowed a much better understanding of these fees.

Companies with over 100 employees enrolled in these plans have long been required to file a Form 5500 with the Department of Labor. For years until 2012, these 5500 forms just collected dust at the US DOL, until a firm named Brightscope.com put this form 5500 information online for over 55,000 firms. Unfortunately, following a series of acquisitions this information is no longer available directly to the public. This information is now only available to the financial services industry for a fee.

18.5: Paying less to get more

The paradox of investing is that trying harder tends not to pay off, because it costs too much to try to beat the market. The expected gross returns of active and passive investors are the same, but the passive investor's net, after-cost returns are superior. Trying harder means spending more money and more time without a rational expectation of a positive payoff. The scientific investment literature indicates that opposite is true. The scientific evidence demonstrates that passive, low cost investors obtain better net results, largely because their costs are lower. Our relatively efficient, real time securities markets are funded primarily by the high costs paid by a seemingly endless supply of active investors. Cost minimizing passive investors are economic "free riders" who benefit from the much higher costs of all these active investors. Furthermore, passive investors experience lower volatility or risk, because their results tend to cluster in a much narrower band around the market return.

Many individual investors hope that, if they pay higher investment fees, they will get higher investment returns. Unfortunately, for the average investor the opposite tends to be true -- particularly after investment costs and taxes are taken into account.

Over the long-term, very broadly diversified, passive investment strategies tend to yield gross portfolio returns equaling the gross return of the broad securities markets. In addition, if these strategies are also highly cost-effective and tax-conscious, then net long-term portfolio returns will only be slightly lower than gross market returns due to the minimal costs and taxes associated with passive market index strategies.

In contrast, the scientific investment literature has repeatedly demonstrated that active investment strategies most often lead to inferior rather than superior net risk-adjusted returns. The main reasons are fourfold.

First, the securities industry offers products to make a profit. If you are willing to pay more because you think superior past performance will persist, the industry is willing to accept your money. Since a very large part of the investing public naively chases historical performance, the industry has mastered this game. If they make more in fees now, they are happy. If past performance does not persist, they have no skin in your game. However, they always have another batch of funds, some of which happened to do better in the past. Would you like to try one of them now with your diminished assets?

Second, actively managed investment strategies require high cost professionals to develop and high trading costs to execute. The more you try to win the more it costs.

Third, the industry incurs very significant sales and marketing costs to convince investors to take a chance and commit their money. If you become a customer, you get the privilege of paying to be sold to, when you pay initial sales loads charges and annual sales fees.

Fourth, by targeting subsets of the overall securities market, on average active strategies will incur additional investment risks without additional compensation. The scientific investment literature has shown that markets pay risk premiums over the long-term, but they tend not to provide risk compensation for betting on subsets of available securities. In effect, active strategies take more risk without increased risk compensation compared to fully diversified passive investment strategies. In the short-term, some investors will be lucky, but others will not. Over the long-term, however, good and bad luck tends to even out, and active investors tend to fall behind. Over the long-term, costs and taxes. Meanwhile, they take a bumpier road in terms of portfolio price volatility or risk.

Incidentally, a very short, clearly-written, and excellent paper on active management written by William F. Sharpe is available. Its title is "The Arithmetic of Active Management." Dr. Sharpe is a Stanford University Professor Emeritus and co-recipient of the Nobel Prize in Economic Sciences (1990). His article was published in 1991 in *The Financial Analysts' Journal* (Vol. 47, No. 1, January/February 1991, pp. 7-9). Professor Sharpe convincingly argues that in any period mathematically the performance of the average actively-managed fund must trail the performance of the average passively-managed fund by the average difference in fund management costs. In January 2011, this article was available on Professor Sharpe's website.

Find the "The Arithmetic of Active Management"

<https://web.stanford.edu/~wfsarpe/art/active/active.htm>

The scientific investment literature provides pitifully little encouragement that individual investors can:

- * predict the future course of markets and individual securities prices
- * select a securities portfolio that will beat the market consistently, and/or
- * identify and hire investment managers who will deliver superior performance net of their added costs.

While there is very substantial variation in the returns achieved by one individual investor or professional investment manager, when compared to another, failure or success is

overwhelmingly due to luck rather than skill. Risk-adjusted securities market prices resulting from real-time competition among armies of high and low skill investors tends to make everyone mediocre over the long-term.

Luck dominates, when informed investors on both sides set market prices that continuously balance supply and demand and rapidly adjust as new positive and negative information becomes known. Sustained securities selection prowess is very, very scarce, and certainly it is not available for individual investors to hire at a reasonable price that leaves them a net profit.

Superior and sustained skill-based performance net of costs and taxes has been too elusive to find after hundreds of scientifically constructed securities market studies. While lucky past winners may tout their historical prowess, the scientific investment literature has repeatedly demonstrated that better past performance simply is not a predictor of future performance. The small print of the legally required, "protect-your-behind" securities disclosures is actually correct.

All the securities industry's promotional "We're Been Better Historically Than the Other Guy" marketing messages just draw your attention toward meaningless superior historical performance charts or stars that are predominantly accidental. Surprising to most investors, it turns out that only the very worst of past performance tends to be a very slight indicator of future performance. Relatively poor past investment performance slightly predicts relatively poor future investment performance. Again, excessive costs seem to be the main culprit associated with past poor performance leading to poor future performance.

The average active individual investor is clearly less knowledgeable and skilled than the average active professional investor. The scientific investment literature indicates that, on their own, the average active individual investor who self-assembles a portfolio composed of individually purchased stocks and bonds will continue to make systematic errors, which will cause him to trail the performance of the average professional manager. In doing somewhat better, it is likely that professionals do better partly at the expense of amateurs.

For example, individual investors tend to sell their winners quickly and hold on to their losers practically forever, and most professionals know to do just the opposite. Since very slight price trend persistence has been detected in securities some prices over time, professionals have tended to capture more value through this practice, and individuals have captured less.

Nevertheless, scientific studies have not shown that professionals or amateurs can pick securities

in the first place that will eventually demonstrate this price trend persistence. Professionals just seem to do a better job of harvesting returns from the winners that they have been lucky enough to pick.

The logical conclusion might seem that, as portfolio managers, individual investors should relegate themselves to the sidelines and hire active professionals to play for them. There is strong scientific evidence that the average investor does a very poor job of managing his personal portfolio of individual securities. In the process, he fails to adequately diversify and his returns badly trail a passive index fund strategy. Almost all individual investors should fire themselves as portfolio managers and buy funds instead.

To achieve diversification economically, individual investors are almost compelled to buy mutual funds and exchange traded funds. In doing so they must hire professionals. Nevertheless, individual investors still do not have to buy the higher cost actively managed funds, when numerous and much lower cost passively-managed funds are available.

The scientific investment literature has also shown that efforts to identify active managers who will consistently beat the market have been futile. Counting the number of years a fund manager has been with a fund, judging where she went to school, estimating the number of gray hairs on his balding head, or other such factors have not distinguished which active manager will do better or worse in the future.

While active professionals generally do better than amateurs overall, their added costs far exceed their value-added. Individual investors face a simple cost-benefit dilemma. The average actively managed professional fund prices its services well above its value-added in terms of increased returns. Since there is no reliable means to detect beforehand which professional or fund will actually deliver superior performance, the average individual investor inevitably will pay more and get less.

The only way escape this dilemma is to avoid playing this beat-the-markets game entirely. Instead, the more reliable, albeit still risky, road to higher expected long-term risk-adjusted returns involves targeting a passive market return, while aggressively driving down investment costs and avoiding unnecessary investment taxes. Relatively efficient securities markets allow passive market index investors to take a free ride on the higher costs paid by active investors.

Active investors pay the significant costs of making securities market prices relatively efficient and the market's return awfully hard to beat. Passive investors ride to the same

destination, but their lower priced tickets mean that they are more likely to have fatter wallets at the end of the journey. Chance will still be a significant factor. However, the range of variation in success or failure for the investors who targeted a passive, index return will tend to be much narrower than those who paid a lot extra again and again to keep swinging for the fences.

18.6: Where to direct the recurring gift of your excessive investment costs?

Excessive investment costs are very real, and they represent both current inefficiencies and future lost returns on 'phantom' asset that you no longer own. In effect, excessive investment costs are a gift that you give without a corresponding benefit. If you believe you might be giving such a current and future gift through excessive investment expenses, this section asks about your preferred beneficiary.

The cost-efficiency of your investment portfolio is one of the most important and controllable factors influencing your financial success or failure over your lifetime. Many individual investors are astonished when they learn just how much excessive investment costs could diminish their assets over their lives. The good news is that investment costs and, to a lesser extent, investment-related taxes are two of the personal investment management factors over which individual investors have the most control. Abundant evidence in the scientific investment literature demonstrates that aggressive control of investment costs and taxes can lead to significant long-term improvements in the welfare of investors.

This investment cost worksheet projects both the lost annual returns on your tangible portfolio and the lost returns on the "phantom" portfolio that you give away by paying investment costs that are too high. While your annual losses due to higher than necessary or reasonable investment costs can be very significant, it is the cumulative and compounded lost investment earnings on these inefficiencies year after year that would really undermine your personal assets. VeriPlan measures not just your annual losses, but the value of your cumulative real dollar asset losses over your lifecycle.

For its cost-efficiency and lost assets graphics and associated data worksheets, VeriPlan automatically calculates the potential annual earnings that you would lose on these cumulative lost assets. To project your lost returns, VeriPlan subtracts the reasonable investment cost percentages that you enter above from the corresponding long-term historical asset class return percentages and then multiplies your cumulative lost returns by these net return percentages.

These lost earnings on your cumulative lost returns are then added to your cumulative lost returns in the following year, and the process is repeated through age 100.

While you may have gradually and unwittingly transferred the cumulative value of these phantom assets to someone else, they still exist in the world. They are just not registered in your name. As the years go by, these inefficiencies or opportunity costs grow even after all your tangible retained cash, bond, and equity assets have been exhausted. Over a lifetime, what seems like just "a percent or two or so" can mean the difference between poverty in retirement and a substantial estate for many, many people.

To understand the personal importance of excessive investment costs, you might think of these excessive investment costs as a seemingly small annual percentage of your assets that you choose to transfer as a gift to someone else's account every year of your life. In turn, that recipient would accumulate those funds and make cost-efficient investments with them using the same asset allocation that you use.

Each year, he would earn a return equal to the gross returns of these asset classes minus your settings for maximum reasonable costs above, and he will reinvest those earnings into this phantom asset account. This is the true meaning of the personal opportunity costs associated with excessive investment costs. The real questions for the each individual investor should be: "to whom do I want to make this repeated gift of excess costs? -- to my family? -- to my favorite charities? -- to the financial services industry?"

To illustrate the potential long-term value of this annual investment asset "gift" that you might accumulate through a more cost-efficient investment strategy, we assume that the recipient would reinvest all returns and would not withdraw any earnings and/or principal for ordinary consumption. If your gift assets caused an increase in the recipient's consumption and funds were withdrawn solely for ordinary living expenses, then the asset growth demonstrated in VeriPlan's cost-effectiveness graphics would be diminished. Some of your gift would pass to the providers of these consumption goods and services.

Alternatively, the recipient of your assets could make withdrawals to fund activities that would truly be investment-oriented. For example, in comparison to the education that they might otherwise have received, your gift funds might provide more education and/or education of a higher quality for your grand-children and great-grandchildren. In this situation, the diminished

gift assets could be offset partially or fully by the higher lifetime earning potential of these children.

Furthermore, your gift assets could be given to charities of your choosing, which might alter the world in a manner that met your approval. Therefore, the asset value illustrated by VeriPlan's cost-effectiveness graphics might become manifest in many different forms. The central theme is that these gift assets could be held for purposes about which you are more likely to approve, rather than simply be ceded to strangers through excessive investment charges.

18.7: Why do investment cost-inefficiencies seem so large? (Because they are!)

Investment costs may seem very large to many investors, because they are very large. In naïve pursuit of superior returns, the average investor pays far too much without achieving his objective. In fact, excessive costs related to this pursuit are very damaging. Investment costs are not "just a few percent." Instead, excessive investment costs represent a substantial portion of annual portfolio returns. Year after year excessive, 'percent-of-assets' investment fees erode the portfolios of millions of unwitting individual investors. VeriPlan can help individual investors to wake up to the seriousness of this problem.

Average investment costs for the average investor are a very significant and largely unproductive portion of annual asset returns. A typical investor's projected lifecycle cost-inefficiencies seem to be very large, because they would be very large, if current cost-inefficiencies are allowed to continue. The higher your costs relative to costs that you think are reasonable, the more VeriPlan's graphics will show large cost-inefficiencies. Moreover, younger users of VeriPlan will see more decades of escalating cost-inefficiencies, because they have more time remaining in their lifetime projections for these cost-inefficiencies to compound.

Investment fees and costs are provided to investors in bits and pieces, which makes it difficult to understand their overall lifetime costs. VeriPlan's various cost-inefficiency graphics pull the entire investment cost story together into just a few graphics based upon your projected financial picture.

The section above entitled "To whom would you like to direct the recurring gift of your excessive investment costs?" summarized how VeriPlan calculates and projects cumulative investment losses due to excessive and unreasonable investment costs over your full lifecycle. It explained how these cumulative lost assets effectively are transferred to someone else and are no

longer within your reach. In effect, VeriPlan projects that their lost value would grow in perpetuity and in trust without any asset withdrawals.

Because these cumulative losses become phantom assets, and they no longer exist in any asset account to which you hold title, you cannot make any withdrawals. However, this is not true of the financial assets that you have retained. In any year in which your expenses exceed your current income and you have an expense shortfall, you must withdraw assets from these existing accounts. By removing assets for your personal needs, you will also remove all potential future appreciation on those assets. Obviously, in retirement, the typical family will experience year after year where expenses exceed current income and assets must be withdrawn.

This is a significant reason why the phantom assets lost to excessive investment costs on VeriPlan's cost-inefficiency graphics will continue to accelerate in value, while your tangible, retained assets on these graphs will grow at slower rates, decline, or even become totally depleted. Your retained financial assets are the only assets off which you can live. The phantom assets you gave away through excessive investment costs may help to pay the living expenses of others, but not for you and not for your family.

In relative terms, your retained assets must fall further and further behind your phantom assets, to the extent that you must pay expenses out of your financial assets rather than add to them. This is why VeriPlan's graphs show an increasing divergence between retained assets and lost assets as one moves through retirement. Furthermore, for those VeriPlan users whose projections indicate that their financial assets will be exhausted prior to age 100, their total asset projection graphics will still show that returns will continue to accrue to on these phantom assets -- even after their tangible assets are exhausted! In effect, these graphs project the lost annual pre-tax returns that a person could have lived on had he not paid these higher and excessive investment costs.

Of course, if you did reduce your investment cost significantly and retained more of your investment assets in accounts over which you held title, then you would give yourself more choices. You could fully restrain any additional consumption and let these assets grow and compound without withdrawals, or you could increase your consumption. By choosing to control your investment expenses across your lifecycle, you could increase the latitude that you have to make other choices, since these lost assets would no longer be lost.

The illusion of inflationary returns and how percent of asset fees erode your real dollar assets

Investors tend not to adjust their returns for inflation, which allows investment numbers to seem to grow more, when asset values actually are growing at lower real dollar rates and might not be growing at all in real dollar terms. Furthermore, though the industry's percent of assets charges, your assets actually immunize the industry from inflation, while you pay in real dollars to provide this inflation immunization.

VeriPlan's projections remove the illusion of asset value growth caused by inflation, which has averaged very close to 3% over the past 80 years. All of VeriPlan's asset valuation and investment return graphics and corresponding data worksheets provide constant purchasing power dollar projections. In relative pricing terms, a projected expense for an item in fifty years would be the same as a current expense for the same item now. Similarly, one dollar of your projected assets would have similar purchasing power in fifty years, as now.

While your investment portfolio is not inflation-proof to you, many the financial industry's costs and fees are for them. Any industry fee that is charged as a percent of your assets makes the industry's revenue from you immune to the impact of inflation on your portfolio. Reductions in your real assets pay for this inflation immunity.

For example, if you have some multiple of \$1,000 invested in assets that are held in custody by a broker or advisor, and you pay 1% of your assets every year for investment advice, here is what would happen under two different inflation scenarios. (For simplicity of presentation, industry fees in these examples will be assessed on end-of-year assets rather than on average assets. This difference does not affect any of the conclusions below, but it simplifies the math.)

If there is zero inflation and a 5% gross real asset return during one year, then at the end of that year, you would have gross assets of \$1,050. You would pay 1% on \$1,050 or \$10.50 per each \$1,000 of initial assets. After this fee, you would net \$1,039.50 per \$1,000 of initial assets or a 3.95% real annual return. For each \$1,000 under advisory custody at the beginning of the year, multiply \$10.50 to arrive at your total advisory/custody billing. The industry keeps 1% of your assets.

If there is 5% inflation plus a 5% gross real asset return during one year, then at the end of that year, you would have gross assets of \$1,100. You would pay 1% on \$1,100 or \$11.00 per each \$1,000 of initial assets. After subtracting 5% inflation, your gross real dollar assets before

this industry fee would be \$1050. After this higher \$11.00 industry fee, you would net \$1,039.00 per \$1,000 of initial assets or a 3.90% real annual return. The industry keeps 1% of your assets, however your real asset return is actually lower, when there is 5% inflation versus when there is no inflation Your net real dollar return is 3.90% versus 3.95%.

You have immunized the industry from inflation, by paying higher dollar fees through these percent of asset charges assessed against your nominal assets. The industry gets paid higher nominal dollars, while you only have real dollars left to reinvest or to spend. The industry takes these fees from your assets with no guarantee that your results will improve. In fact, across all investors, improvement on the market's return is impossible. Because of these percent of assets costs, lower net returns are inevitable for all investors who pay these fees. Inflation makes the situation worse.

A dozen other reasons why you might be surprised at the size of your total lifecycle investment cost-inefficiencies:

- 1) Before now, you probably did not have a cost-conscious, automated lifecycle projection facility like VeriPlan that permits to you compare your actual costs with costs that are reasonable to you.
- 2) The financial industry puts its hands into many of your pockets simultaneously. While you are paying attention to one cost, you may neglect to focus on several others. There are so many fees and costs that it is not possible to understand the total impact without an automated tool, like VeriPlan, which is designed to do so.
- 3) While some investment costs are disclosed, others such as trading costs, are obscured or hidden. VeriPlan makes hidden costs visible through its projection estimation methods.
- 4) For investment costs that are disclosed, the type of information provided to you results from regulatory mandates. Industry regulations result from a negotiation process between the industry and the U.S. Securities and Exchange Commission. Obviously, in these negotiations the industry pushes for less rather than more disclosure and greater rather than less obfuscation. The result is highly fragmentary disclosure and greater rather than less obfuscation.

- 5) At most, your visible disclosed costs will be presented over a ten-year period using average return assumptions. Ten-year periods do little to educate the public about the compounded, multi-decade investment returns that are lost to cost-inefficient investment strategies.
- 6) Recurring investment costs are expressed as a 'small' annual percentage of your assets rather than as the much larger percentage of your annual returns that investment costs really are.
- 7) Industry representatives are trained to tell you that these costs are not very high and certainly are well worth paying. While overall there is no reason to expect that paying more in costs will improve performance, the industry's subtle and not so subtle marketing messages say that paying more improves performance, when the opposite has been proven to be true on average. When an individual investor understands the magnitude of the investment costs that he pays over their lifecycle and the fact that the average investor is likely to under-perform the gross return of the market to the extent of his investment costs, he may have second thoughts.
- 8) Non-recurring charges like sales loads take some of your assets off the table at the outset. Only if you remember, will these lost assets and your returns on these lost assets ever be accounted for in your investment performance evaluations.
- 9) Most individual investors do not benchmark the performance of their investment portfolio. They have no idea whether they are getting what they thought they were paying for.
- 10) The industry's investment costs are set so that they tend to remain well below nominal market returns. Therefore, on average, investors will usually see net growth in their nominal investment numbers. Few will calculate the opportunity cost compared to a more cost-efficient strategy.
- 11) Numerous high quality and low-cost investments are available, and historically they have delivered better returns than higher cost investments. However, individual investors must be proactive and look for them. Higher cost investments have higher costs, in part, because these higher costs pay for hundreds of thousands of directly and indirectly commissioned brokers and advisors to find you and to sell to you these

higher cost investments. These brokers and advisors have no incentive to sell low-cost investments to you, because that is not what they get paid to do.

- 12) Brokers and advisors will not have to live off of your personal portfolio in the future, but you will. Industry representatives must live off of your portfolio now, so that they can build their own personal investment portfolios and serve the profit-seeking demands of their financial industry employers. For the average investor, investment costs must be huge, because the financial services industry itself is huge. The industry has to make money off of someone. In spite of the industry's advertising, it is surprising that any individual investor would really think that there could be any genuine partnership with the industry, because the relationship is largely a zero sum game. When you make more, the industry makes less and vice versa.

Many investors are already wary of investment costs, and they work hard to control their costs. After using this investment cost effectiveness tool, there probably will be many more individual investors who will strive much harder to lower their investment costs.

There is no reason to be subtle about this. Most investors are simply naïve about the insidious and corrosive nature of investment costs. While most investors do not focus on investment costs, investment costs are the only substantial investment strategy factor over which they have some control that will affect their net long-term investment returns. Investment costs seem like a relatively minor factor to many people, largely because investment costs are stated as a percentage of overall assets and not gross returns.

Yet, when investment costs are compared to average gross annual investment returns rather than total assets (which is the proper comparison), then the average investor pays between 1/4 to 1/3 of their gross annual returns in investment costs. When inflation is considered, then the average investor pays investment costs amounting to almost 50% of annual gross real dollar (after inflation) investment returns.

The financial industry is a parasite on the assets of investors and overall it delivers a "negative value-added" with respect to its investment costs. On average, the more an investor pays, the less they keep in the long-term. The academic research literature clearly demonstrates that cost reduction is highly beneficial to investors. The investment research literature also demonstrates that individual investors have no reliable mechanisms to pick investments beforehand that will yield superior investment returns -- except lower costs.

Historical investment returns normalized for investment costs tell investors absolutely nothing of value in choosing one investments over another. On the other hand, choosing low-cost investments has been demonstrated to be a reliable means to achieve superior returns averaged across the investor population. Nevertheless, if you look at search engine statistics about the phrases that people are searching for related to investments, there is roughly a 100 to 1 ratio between search terms that are associated with superior historical returns compared to investment costs. Like sheep to slaughter, this will continue indefinitely unless individuals wake up and start taking steps to cut their investment costs to the bone.

Chapter 19: Graphical Output worksheets

19.1: VeriPlan's graphics and data worksheets

19.2: VeriPlan uses real, constant purchasing power dollars with inflation removed

19.3: Description of VeriPlan's graphics

[19.3.1: INCOME graphic](#)

[19.3.2: EXPENSES graphic](#)

[19.3.3: DEBT PAYMENTS graphic](#)

[19.3.4: PERSONAL TAXES graphic](#)

[19.3.5: RENTALS+PROPERTY graphic](#)

[19.3.6: CASH FLOW graphic](#)

[19.3.7: SAVINGS RATES graphic](#)

[19.3.8: HUMAN CAPITAL graphic](#)

[19.3.9: ALLOCATION graphic](#)

[19.3.10: TOTAL ASSETS graphic](#)

[19.3.11: ASSET FLOWS graphic](#)

[19.3.12: DEBT OWED graphic](#)

[19.3.13: ASSET TAXABILITY graphic](#)

[19.3.14: TRANSACTIONS graphic](#)

[19.3.15: RETIREMENT INCOME graphic](#)

[19.3.16: WITHDRAWALS graphic](#)

[19.3.17: RETIREMENT SHORTFALLS graphic](#)

[19.3.18: SAFETY MARGIN graphic](#)

[19.3.19: VALUE OF TIME graphic](#)

[19.3.20: COST-EFFICIENCY % graphic](#)

[19.3.21: COST-EFFICIENCY \\$ graphic](#)

[19.3.22: SALES LOADS graphic](#)

[19.3.23: LIFE EXPECTANCY graphic](#)

[19.3.24: HISTORICAL RETURNS graphic](#)

[19.3.25: ROLLING RETURNS graphic](#)

19.1: VeriPlan's graphics and data worksheets

VeriPlan projects your individual or family financial affairs over a lifetime, as if you were a business using cash flow planning methods. VeriPlan puts you in the position of general manager, and it provides graphics and data worksheets that a general manager might need to understand long-range financial projections regarding your personal financial planning.

VeriPlan presents your projections in graphics, which are described below. Whenever you make any change, VeriPlan will automatically and instantly revise these graphics. In addition, the data worksheet will be updated automatically, as well.

You can find all the data for all the projection series that VeriPlan uses to draw these graphics on the green-tabbed "GRAPHICS DATA" worksheet which is the right most spreadsheet tab within VeriPlan. The Graphics Data worksheet lists the data for all graphics in the order that the graphics tabs appear within VeriPlan.

The unit of time on the horizontal axis of every graphic is one year, and all graphics potentially cover from age 18 to 100. Your particular projection graphics will begin with the initial age of Earner #1.

35 << This is the initial age of Earner #1, and all graphics will begin at this age.
This can only be changed on the yellow-tabbed Income worksheet.

VeriPlan automatically develops projections through age 100. If for some reason you would like VeriPlan's graphics to stop before age 100, you can do so here. This will not affect your projections or your output data. It only restricts the age range of the graphics.

100 << Enter the maximum age for graphics to display up to 100 (default is 100)

VeriPlan's automated graphics provide an integrated projection of your lifetime finances. Summaries of each are provided below.

INCOME: Operating income -- earned, pension, annuity, Social Security & other income

EXPENSES: Ordinary living expenses with other planned & adjusted expenses

DEBT PAYMENTS: Personal residence, investment, and consumption debt payments

PERSONAL TAXES: Personal tax payments

RENTALS+PROPERTY: Net cash flow from rental real estate and other investment properties (excluding residential real estate)

CASH FLOW: Operating cash flow

SAVINGS RATES: Pre-retirement savings rates with investment-oriented debt repayments

HUMAN CAPITAL: Expected income and savings before retirement

ALLOCATION: Lifetime financial asset allocation

TOTAL ASSETS: Cash, bond, stock, property, and debts with cumulative assets lost to excessive investment costs

ASSET FLOWS: Net asset flows. Including income, expenses, debts, taxes, plus investment returns and transactions

DEBT OWED: Personal, real estate, and business debt principal owed

ASSET TAXABILITY: Taxable, traditional & Roth tax-advantaged account assets with Required Minimum Distributions (RMDs)

TRANSACTIONS: Taxable & tax-advantaged deposit & withdrawal transactions

RETIREMENT INCOME: Retirement income sources and pre-tax Required Minimum Distributions (RMDs) after Earner #1 retires

WITHDRAWALS: Withdrawal Rates from Cash, Bond & Stock Financial Assets

RETIREMENT SHORTFALLS: Cash flow shortfalls after Earner #1 retires including RMDs

SAFETY MARGIN: Adjusted cash, bond, and stock coverage of necessary expenses without income

VALUE OF TIME: Hourly value of income, expenses, and financial assets

COST-EFFICIENCY %: Cash, bond & stock asset % returns net of losses due to excessive investment costs

COST-EFFICIENCY \$: Cash, bond & stock \$ asset returns net of losses due to excessive investment costs

SALES LOADS: Lost returns on past and future financial asset sales load purchase fees

LIFE EXPECTANCY: Average U.S. male and female total life expectancy and remaining life expectancy by current age

HISTORICAL RETURNS: U.S. real dollar asset class returns from 1928 to the most recent full year

ROLLING RETURNS: Annualized rolling 5-year real dollar asset class returns from 1928 to the most recent full year

19.2: VeriPlan uses real, constant purchasing power dollars with inflation removed

All dollar based numbers in VeriPlan are "real" in the sense that they assume constant purchasing power for currency over time. To understand more about the 90+ year history of US inflation and major financial asset class returns and variability, inspect the Historical Returns graphic and read the Risk & Returns worksheet.



Inflation (and sometimes deflation) are facts of financial life, but they are not systematically predictable. Making dollar projections that include an inflationary component adds little value to projection modeling. To the contrary, nominal dollar projections that include inflation assumptions tend more often to confuse decision-making. Projections with inflation may create an illusion of growth, when the opposite might be true. Your nominal assets could increase by five times, but the price of a loaf of bread could increase by ten times. Projection modeling using real, constant purchasing dollars reduces this problem.

The impact of inflation on various investments needs to be considered when making investment choices. Inflation's unpredictability limits your strategic investing options. Generally, a fully diversified asset strategy will reduce the variability associated with inflationary differences between sectors, while leaving an exposure to the general rate of inflation. Your asset allocation can be used to adjust investment exposure to asset classes that historically have exceeded inflation by a lesser or greater amount.

19.3: Description of VeriPlan's graphics

Note that the sample graphics presented below were developed at various times. Those with a gray background and an x-axis ranging from age 18 through age 100 are earlier graphics. Those with a lighter background and an x-axis age that begins with the sample age of Earner #1 were developed after VeriPlan had implemented “dynamic” x-axis ranges.

19.3.1: INCOME graphic

INCOME: Operating Income -- Earned, Pension, Annuity, Social Security & Other

(Real \$/year by age; Excludes reinvested asset returns and asset withdrawals)

This INCOME graphic projects the income associated directly or indirectly with earned income sources (excluding income from your asset portfolio), including:

- * Earned employment and actively-managed business income with your real dollar growth rates for Earners #1 and #2 that you entered on the income worksheet
- * Note that earned income for Earners #1 and #2 will also reflect any year-by-year income adjustments that you have made on the income worksheet.
- * Pension, annuity, deferred compensation, and Social Security income from the retirement worksheet
- * Other income with adjustments from the income worksheet

These income sources summarize your earned income sources and that non-asset related retirement income that is generally associated with your earned income. Annuities are the exception in the sense that they sometimes represent assets that you have transformed into contractual income sources. Other annuities may be acquired without asset financial transformation through a regular, contractual purchase plan. Some other income sources may

also be passive sources that do not require your active work to be received. These passive other income sources are included primarily because they listed as other income on your tax returns, are taxed at ordinary income tax rates, and are grouped with your other more actively-managed income sources.

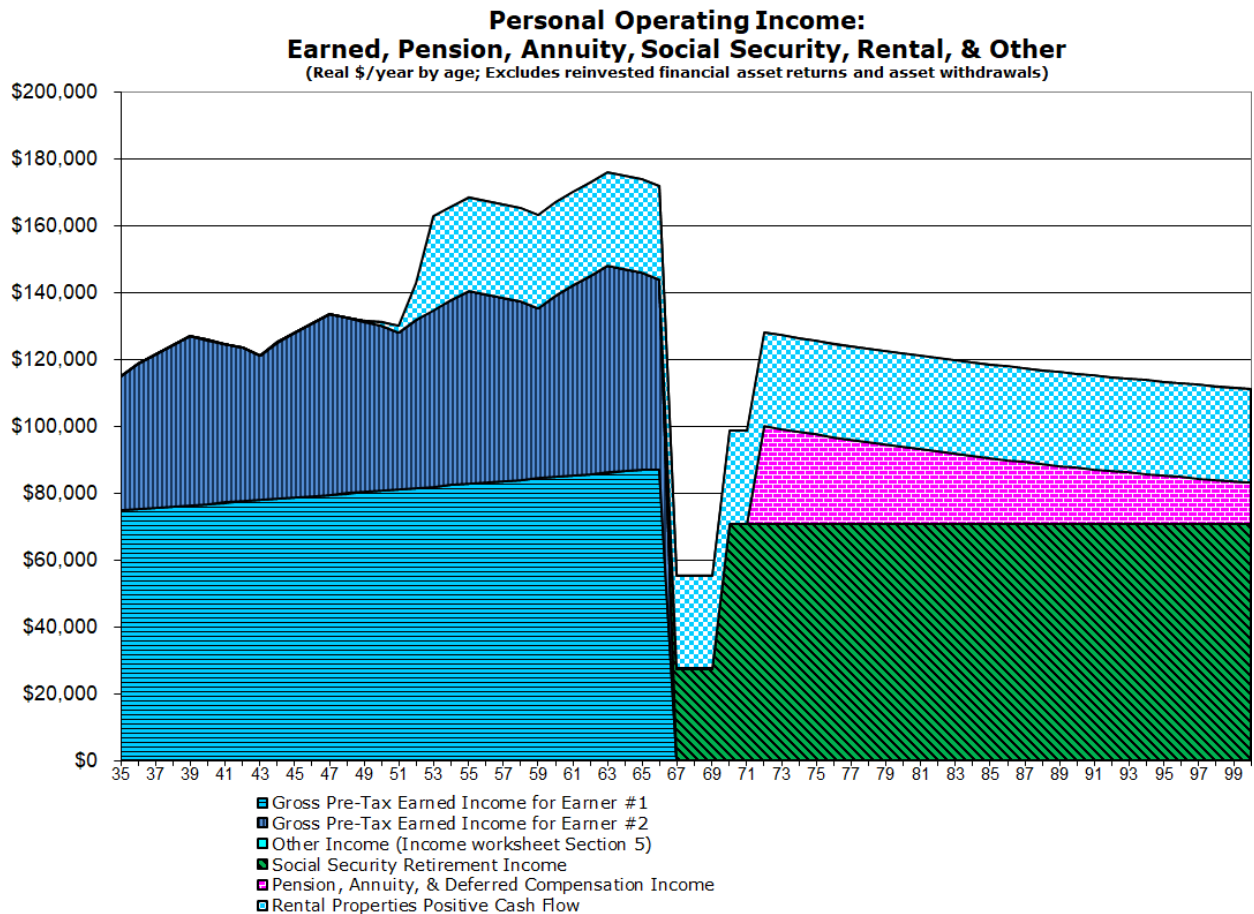
No income from assets nor any capital appreciation is represented on this graphic. Asset income is assumed to be taxed and reinvested. Assets would be withdrawn only in years when you are projected to have a cash expense-to-earned income shortfall.

INCOME graphic example

In this sample income graphic below, Earner #1 is projected to have moderately increasing real dollar wage and salary income reflecting a .5% annual income increase relative to consumer price inflation. Earner #2 is self-employed and earns less, but projects a slightly steeper increase in annual income at 1% above inflation. In addition, Earner #2 has used VeriPlan's year-by-year positive and negative income adjustments facility to model that the vicissitudes of four primary business cycles in the future. Because both of these earners are relatively young, motivated, and intent upon career advancement, they have developed income projections that exceed inflation, which is atypical of most workers.

This graphic also demonstrates VeriPlan's ability to project other sources of income. First, they own a small rental property that they expect will produce modest but steady income, and this is reflected in the cross-hatched and light-blue colored bar that extends across their projections. While they currently own this rental property, the debt is being paid down and is not yet cash flow positive. At about age fifty, this rental property is expected to begin to be cash flow positive and the taxable net income will flow into the family's overall income picture.

Second, in retirement, they both expect to have Social Security retirement income, that one person will first accept at age 67, while the other will wait until age of 70 to maximize these Social Security cost of living adjusted retirement income sources.. These Social Security retirement income payments are projected to maintain their purchasing power due to cost of living increases in retirement.



Finally, Earner #1 is among the lucky and relatively few young workers with a funded, albeit modest, traditional retirement pension. This pension is projected using VeriPlan's pensions, deferred compensation, and annuities features. This particular pension projection assumes that the retirement pension will keep pace with inflation up until retirement, but once pension payments begin at age 70, they will not be subject to cost of living increases and will decline annually by close to 3% due to expected inflation. This accounts for the declining slope of the solid pink bar from age 70 to 100.

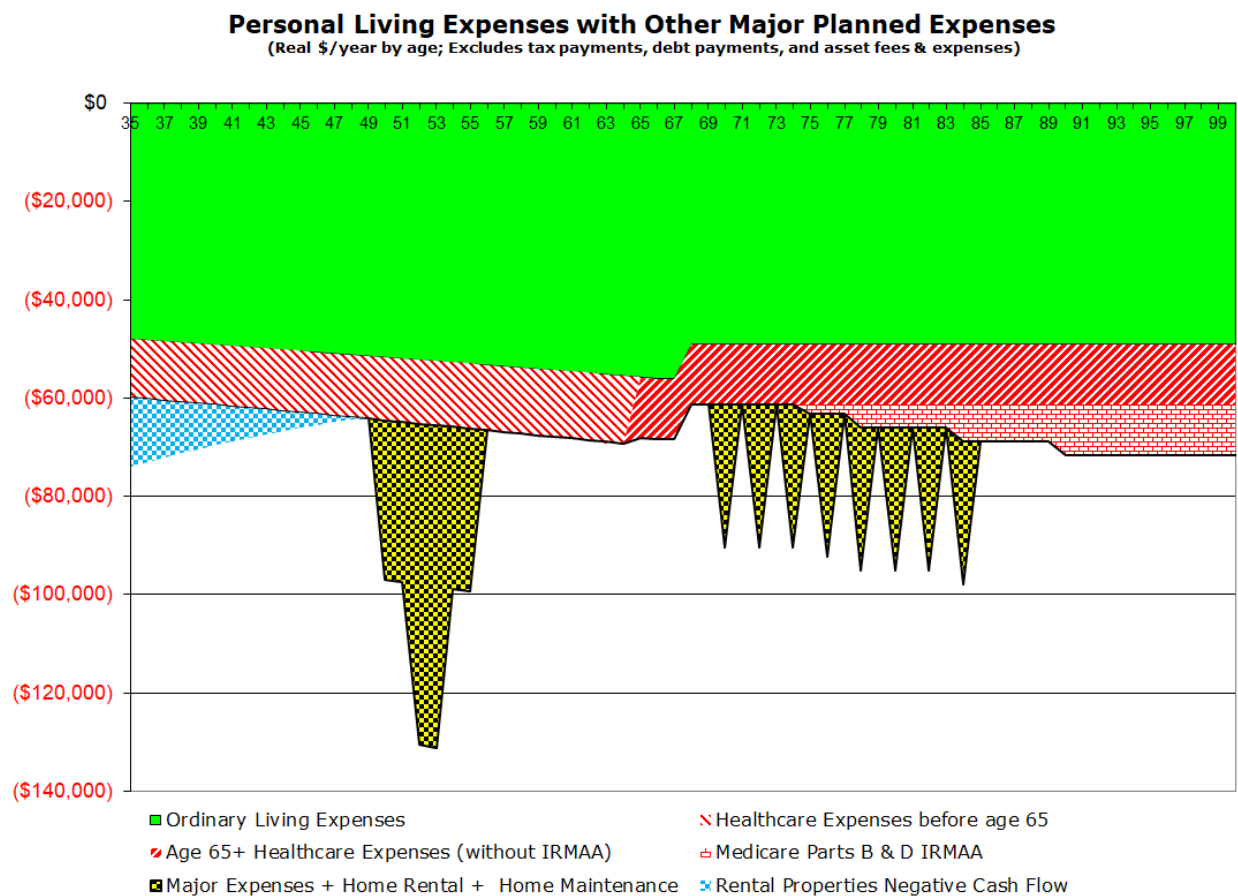
19.3.2: EXPENSES graphic

EXPENSES: Ordinary Living Expenses with Other Planned & Adjusted Expenses

(Real \$/year by age; Excludes tax payments, debt payments, and asset fees & expenses)

This EXPENSES graphic projects your expenses related to living, but not the cash outflows related your debts or taxes or any current additions to savings or investments. This graphic includes your ordinary living expenses and major planned expenses with year-by-year adjustments and any real dollar growth rate adjustments relative to general CPI inflation that you might set on the Expenses worksheet.

EXPENSES graphic example



Similar to their assumptions about real dollar earnings growth, this couple has assumed that their ordinary living expenses, will increase by .5% above the prevailing rate of consumer price inflation. Then, VeriPlan allows them to adjust their ordinary living downward somewhat when Earner #1 retires at age 67. After that, their ordinary expenses are expected to track the average level of CPI inflation.

In retirement, they expect that their ordinary expenses will be 90% of their expenses immediately prior to retirement and then will remain constant with respect to inflation. However, just after retirement and every three years thereafter through age 85, they have also used VeriPlan's year-by-year expense adjustments features to add \$25,000 in expenses to fund a cruise or similarly expensive vacation. These expenses are represented by the expense spikes with the yellow and black cross hatched area during retirement.

They also have two young children, separated in age by two years. The yellow and black cross hatched area from ages 50 to 56 projects the expected net cash cost (after scholarships) of sending both children to four-year colleges in consecutive years with two years of overlap, when both are in college. They have used VeriPlan's year-by-year expense adjustments features to model annual college costs of \$30,000.

This graphic also shows a light blue wedge that declines from age 36 to 48. This represents the negative cash flow related to the rental property that they own and that must be funded. As the rental real estate debt is paid down, they begin to breakeven and thereafter have positive cash flow.

Finally, this couple has used VeriPlan's Medicare cost features to project their healthcare costs in retirement, as well as their out of pocket healthcare costs prior to retirement. The various red layers below the green ordinary expense amounts represent these healthcare cost projections.

VeriPlan explains the Medicare retirement healthcare system and provides Medicare expense defaults that users can change to project their retirement healthcare costs. In addition, VeriPlan will automatically track your total retirement income and calculate when you might have high enough retirement income that would make you subject to IRMAA Medicare insurance premium subsidy reductions. Knowing in advance that you could be subject to IRMAA reductions allows you to use other VeriPlan features, such as VeriPlan's Roth year by year conversion analysis features that could reduce your IRMAA liabilities later on.

19.3.3: DEBT PAYMENTS graphic

DEBT PAYMENTS: Personal residence, investment, and consumption debt payments

(Real \$/year by age; Nominal dollar debt payments are converted to real dollars with historical inflation or user adjustment.

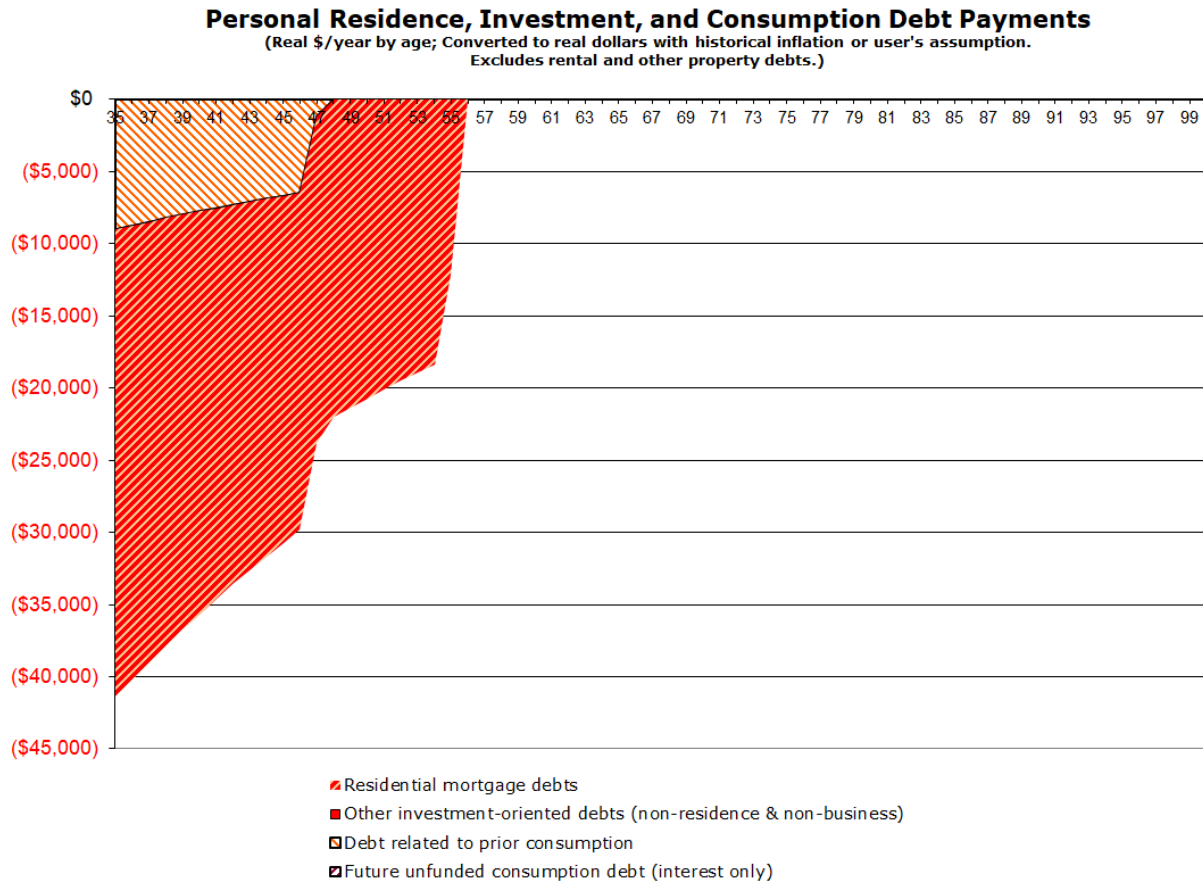
This DEBT PAYMENTS graphic projects your annual debt repayment obligations according to your settings on the debts worksheet. On the debts worksheet, you can classify your debts as consumption-oriented or investment-oriented. Consumption-oriented debts represent past consumption that you have financed. Investment-oriented debts are those you take on with a rational expectation that they will increase the value of your human capital and/or portfolio assets.

Because VeriPlan uses real or constant purchasing power dollars with inflation extracted throughout your projections, your future debt payments related to your current debts will be discounted. If at any point in the future, your expenses would exceed your net income and would fully deplete your accumulated cash, bond, and equity financial assets, then VeriPlan automatically would begin to accumulate an "unfunded consumption debt" loan for you. On the debts worksheet, you can set a projected loan interest rate for any such unfunded consumption debt. Were this undesirable situation to occur in the future, then the required interest-only annual payment on this accumulated unfunded debt would display automatically on this DEBTS PAYMENTS graphic.

DEBTS graphic example

The sample Debts graphic below reflects two different. The first thing to note is that debt payments decline significantly over time. This decline in annual real dollar payments is due the fact that VeriPlan's projections are presented in real, constant purchasing power dollars. In life, when you pay off debts, debts that require a fixed nominal dollar amount to be paid per period are actually paid with cheaper and cheaper dollars as time goes on. General inflation undercuts the value of the dollar over time, and thus your future debt payment cost less in real dollar terms. are repaid in nominal dollars that inflate with time.

The lighter red cross-hatched area represents higher interest rate credit card debt that they intend to pay off over ten years. The bulk of the debt represented in this graphic with red diagonal lines is due to a 30 year fixed rate mortgage on a home that this couple owns, which is expected to be paid off by age 58.



19.3.4: PERSONAL TAXES graphic

PERSONAL TAXES: Personal Tax Payments

(Real \$/year by age; Includes all federal, state, and local earned income taxes, employment taxes, property taxes, and realized asset-related federal, state, and local short-term & long-term capital gains taxes and penalties.)

This PERSONAL TAXES graphic lists all projected tax payments across your lifecycle, and reflects your settings on the tax worksheet and your tax-related entries on the tax-advantaged plans and financial assets worksheets.

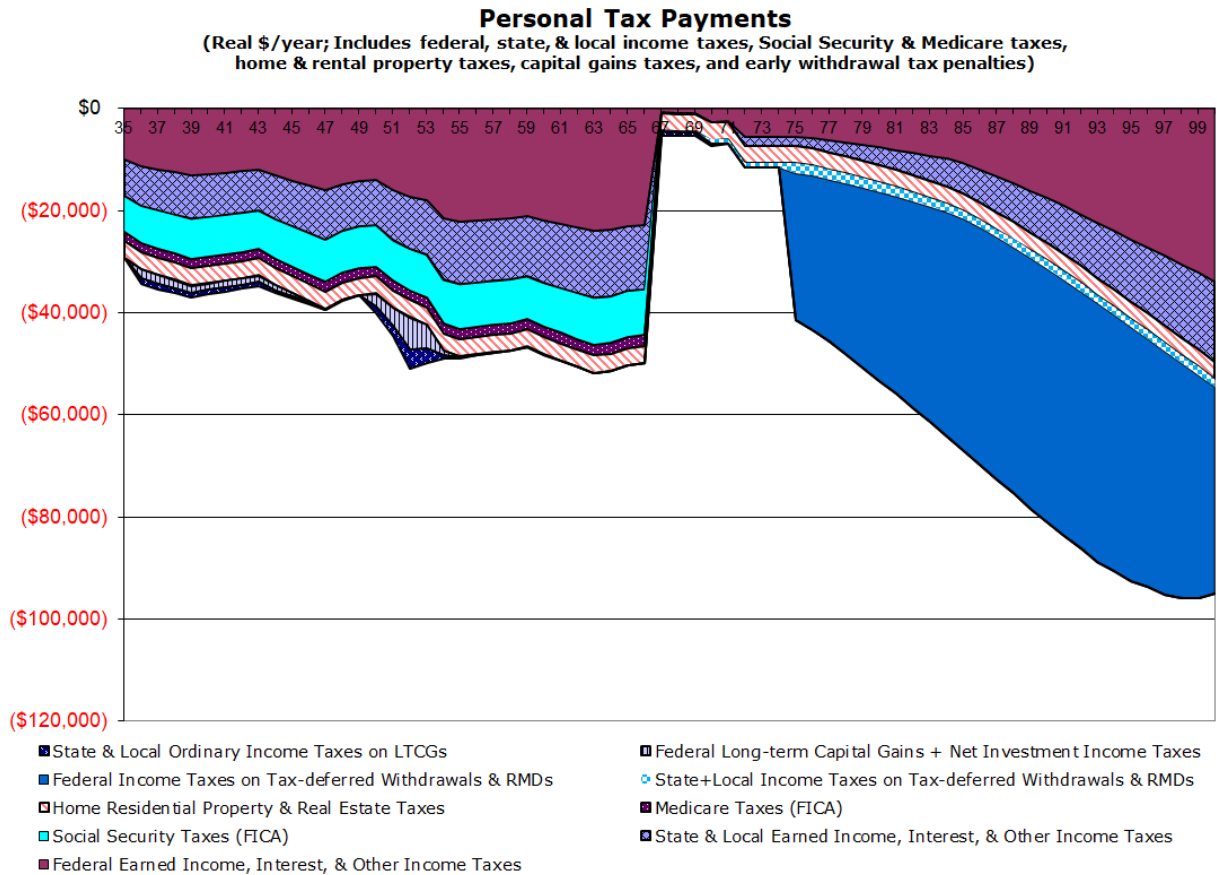
This PERSONAL TAXES graphic includes your projected taxes related to:

- * Federal, State and Local ordinary income taxes on earned, interest, retirement and other income calculated with the marginal or flat rate taxes that apply to single or married taxpayers filing jointly
- * FICA/Social Security and Medicare taxes for both salaried and self-employed workers
- * Property and real estate taxes
- * Ordinary Federal, State, & Local taxes on mandatory and needed tax-deferred account withdrawals
- * Federal long-term capital gains taxes
- * State and Local ordinary income taxes on long-term capital gains

Note that this taxes graphic also reports "realized" asset taxes related to asset withdrawals, ordinary income, and capital gains distributions, including early withdrawal penalties. Long-term capital gains are calculated at the federal tax level and assessed at ordinary rates at the state and local income tax levels. Federal, state, and local ordinary income taxes on reinvested interest are also assessed automatically.

The information that you enter on the financial assets worksheet related to taxation, including that tax basis in your various accounts, will affect your tax projections. Ordinary earned income and ordinary short-term capital gains asset income tax treatments are similar, and therefore VeriPlan combines both earned income and asset income sources here for taxation purposes. Generally, most asset income taxes will be from current interest and dividend payments on cash and bond/fixed income assets.

PERSONAL TAXES graphic example



For the sample graphic above, note several things about this couple's projected taxes. This projection assumes that this couple lives in Connecticut and works in New York City, subjecting them to New York City local income taxes, which are also supplied by VeriPlan. Additionally, this couple pays substantial Social Security payroll taxes throughout their working years. They pay more than two wage and salary employees would, because Earner #2 is self-employed and pays both the employer and employee portions of these Social Security payroll taxes, which VeriPlan assesses automatically.

In the middle of their working years you will notice spikes related to the withdrawal of assets from traditional retirement accounts to fund some of their children's educational expenses. When this couple gets closer to paying their children's education there are steps that they could take to lower taxes related to education funding.. VeriPlan acts as an early warning system, so that they can understand the short-term risk of depleting assets in taxable accounts that would not be subject to early withdrawal penalties.

Finally, note that in retirement, this couple would pay increasing taxes on withdrawals from tax-advantaged retirement plans to cover retirement living expenses and to satisfy requirements for Required Minimum distributions which also are automatically projected by VeriPlan. They can use VeriPlan's automated Roth contribution limitation tool to test whether lower or higher Roth contribution percentages could be more optimal while they work. Furthermore, they can use VeriPlan's Roth conversion tools to see whether a series of annual conversions following retirement might be a more tax cost effective way to acquire Roth retirement investment account assets.

19.3.5: RENTALS+PROPERTY graphic

RENTALS+PROPERTY: Net Cash Flow from Rental Real Estate and Other Investment Properties (Excludes residential real estate; Real \$/year by age)

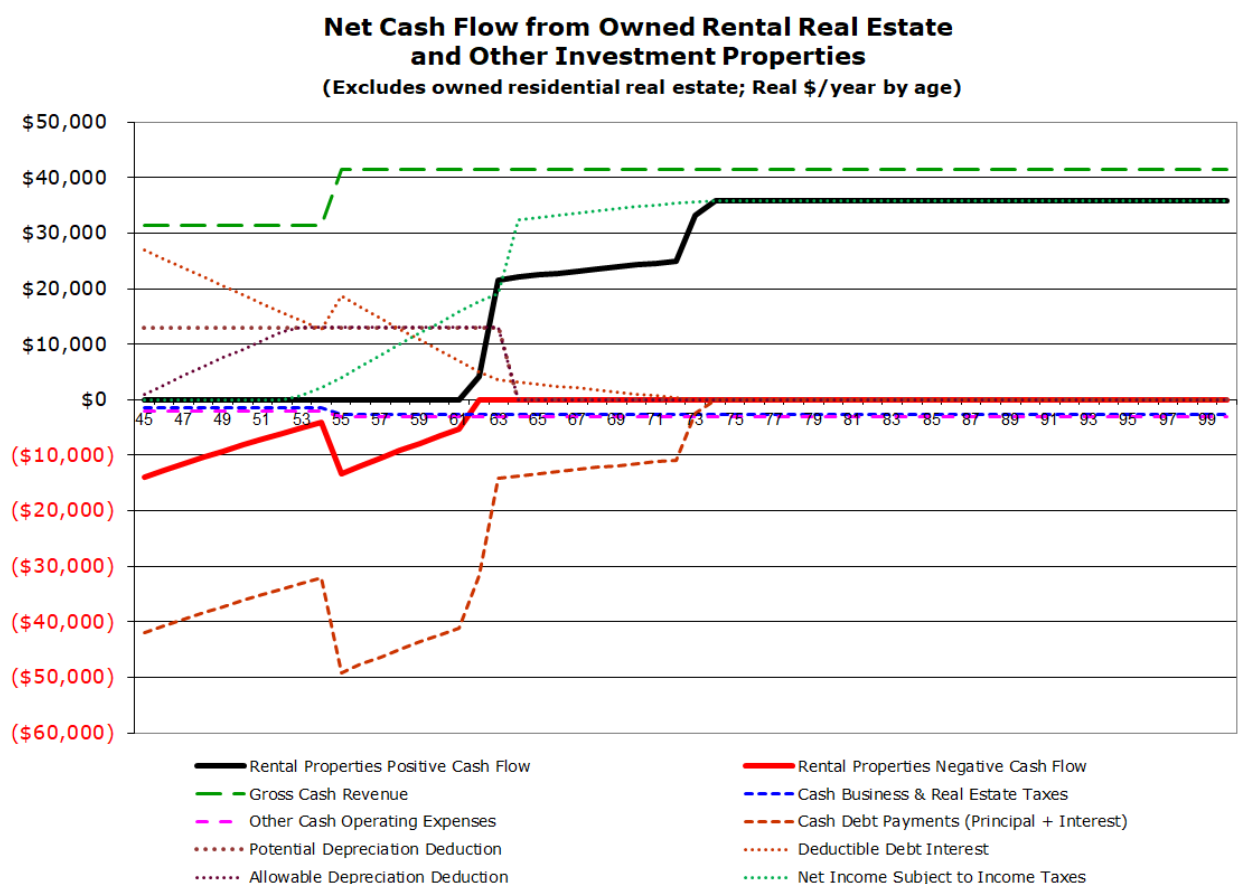
VeriPlan's yellow-tabbed Property+Debts worksheet allows you to enter information concerning up to 10 rental properties and up to 10 other investment properties, including information about asset values, income, operating expenses, taxes, depreciation, and debt payments. In addition, it allows you to plan the future purchase and sale of rental real estate and other property assets. This graphic shows aggregate cash flows across all these assets including gross income, operating expenses, real estate taxes, and debt payments. The solid black and red lines show the annual positive and negative cash flows respectively for all of these property assets.

In addition to cash flow information, this graphic also presents some additional information used to project net positive or negative cash flow from rentals and other properties. Positive net cash flow less depreciation would also flow onto the personal tax return. This additional information is the interest only portion of debt payments which would be deductible and the depreciation allowance for rental real estate properties. For depreciation, two columns are provided: A) total potential depreciation and B) the amount of depreciation projected to be deductible in a particular year. Then, total taxable rental and other property income is projected for each year, as well. This taxable total income equals A) gross revenue minus the combination of B) business and real estate taxes + other expenses + the interest only portion of debt payments + deductible depreciation.

RENTALS+PROPERTY graphic example

This graphic combines all projection factors for a rental real estate property that is owned currently and has a debt that is being paid down. Income, operating expenses, real estate taxes, and depreciation are all taken into account automatically. The net cash flow, when positive, would flow onto the personal tax return and be subject to automatic projection income taxation by VeriPlan taxation processes.

In the tenth year, a non-real estate property with accompanying debt, income, expenses, and associated property taxes is planned for purchase. VeriPlan will handles everything automatically, including the purchase economics. This purchase accounts for the cash flow trend reversing and turning more negative in the tenth year. As the debts on both of these investments are paid down, net combined cash flow turns positive at about age 62. Cash flow becomes increasingly positive after that, until it levels off at about age76, when all debts would be retired.

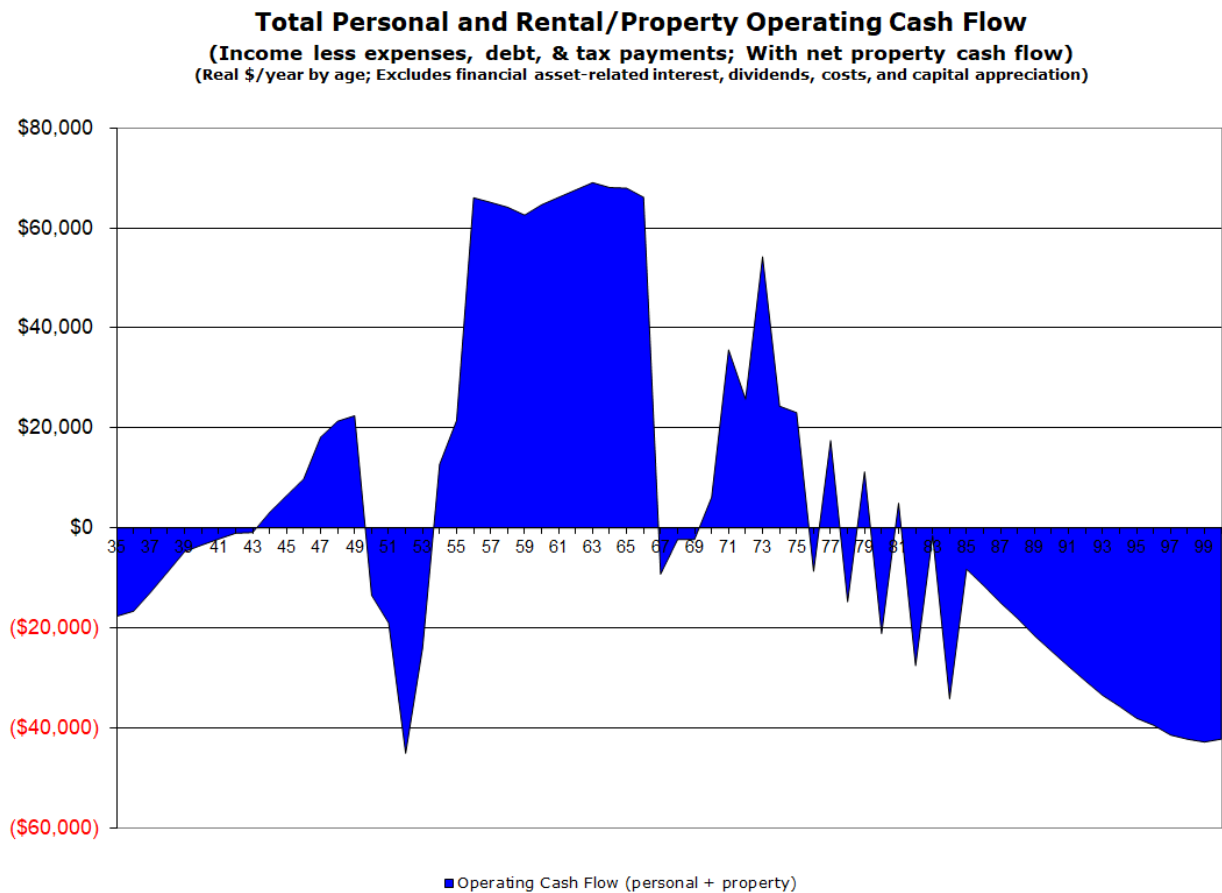


19.3.6: CASH FLOW graphic

CASH FLOW: Non-Asset Operating Cash Flow (Non-Asset Income less Expenses, Debt, & Tax Payments) (Real \$/year by age; Excludes asset-related interest, dividends, costs, and capital appreciation)

This CASH FLOW graphic projects your net earned and other non-asset income -- reduced by all expenses, taxes, and debt payments. The graphic is a summary of all projected financial activity, but without any asset-related returns or appreciation net of investment costs. However, it does include the projected impact of required taxes related to assets.

CASH FLOW graphic example



For this couple, they are projected to be net savers during the earlier and later working years. For part of the period when their two children are in college, they are projected to have negative cash flow. In retirement, their projection shows an increasing cash flow gap between retirement

expenses and retirement income sources, such as Social Security and pensions as they age.. Therefore, they will need to draw upon investment assets to make up the difference.

This gap is primarily driven by increasing taxes related RMDs as they get older. This Operating Cash flow graphic does not include the financial asset side of overall cash flow and assets would be required to make up any negative cash flow in retirement. Note that VeriPlan adds investment asset projection information to this Cash Flow information in the “Asset Flows” graphic. (For more information, see the Asset Flows graphic section below.)

19.3.7: SAVINGS RATES graphic

Pre-Retirement Savings Rates with Investment-Oriented Debt Repayments

(%/year by age; % of non-asset income in years when non-asset cash flow is positive.)

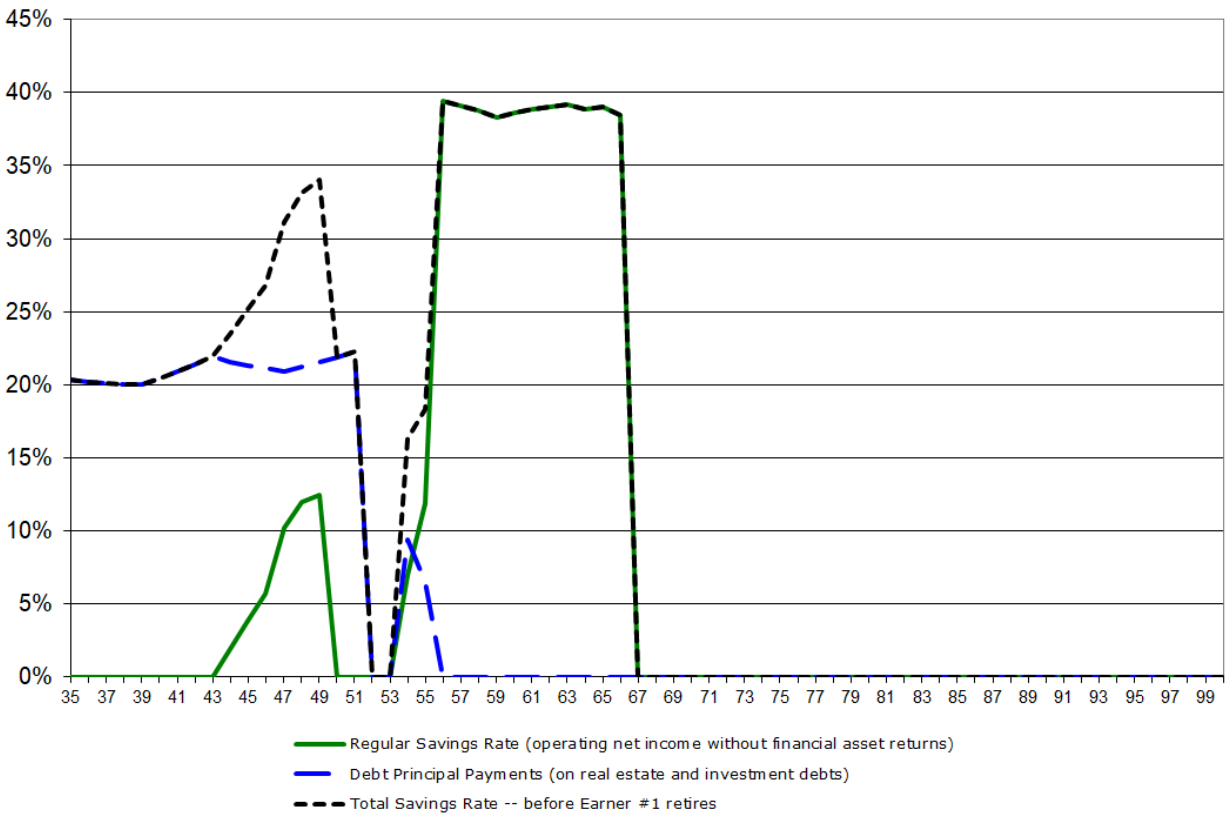
This SAVINGS graphic projects your annual savings rates up to the planned retirement age of Earner #1. Up until retirement, saving rates will be zero for any projection year when expenses, taxes, and debt payments exceed non-asset income.

The graphic does not show savings rates in retirement, even if non-asset income is projected to exceed expenses, taxes, and debt payments in some retirement years. Because non-asset income in retirement is usually much less than pre-retirement income, this would distort pre-retirement versus post-retirement savings rates. Therefore, to understand potential savings situations during retirement, instead, you should refer to the asset flows graphic.

This graphic projects your savings rates with and without your investment-oriented debt payments. Particularly early in many people's lifetimes, it can seem difficult to save. Savings is always important, and it is useful to recognize that investment-oriented debt payments are a form of savings. When such debt has been retired, then your "normal" savings rates usually need to increase substantially to ensure that adequate assets will be accumulated prior to retirement.

SAVINGS RATES graphic example

**Pre-Retirement Cash Flow Savings Rates, including
Principal Repayments on Real Estate and Investment Debts**
(% of non-asset income in years when operating cash flow is positive; limited to 100%)



For this couple in the sample graphic above, they are projected to have very high personal savings rates. In addition, to living within their means, and saving normally from their earned income, VeriPlan also includes the payoff of the principal on their on their mortgage as additional “investment oriented debt savings.”

19.3.8: HUMAN CAPITAL graphic

HUMAN CAPITAL: Expected Income and Savings Before Retirement

(Real \$ beginning balances by age; Depletion of expected future gross and net pre-retirement earned & other non-asset income)

This HUMAN CAPITAL graphic projects the cumulative remaining gross and net human capital for Earners #1 and #2 up until the retirement age of Earner #1.

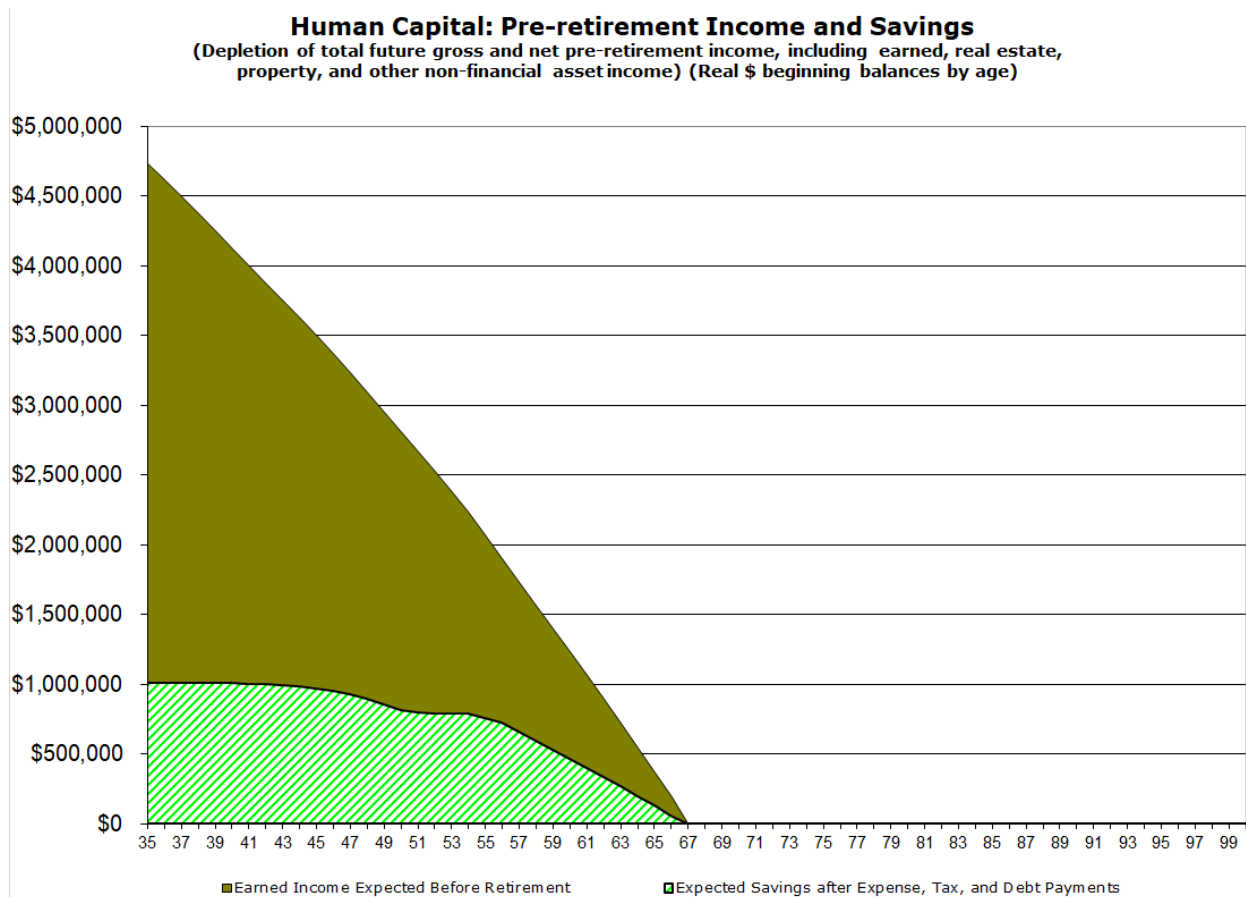
Human capital is a depletable personal asset. Without substantial inherited assets, gifts, or lottery winnings, human capital is the only asset one has. It must be converted into earned income to pay ongoing expenses. Some of it must also be saved and converted into valuable assets, if one is to have assets to live on after human capital is gone.

VeriPlan measures your gross human capital as your cumulative yet-to-be-earned real dollar income prior to retirement. Your gross human capital depends upon your entries and growth rates on the income worksheet. These entries are related to your: A) wage and salary income, B) actively-managed business income, and C) other income sources, which may or may not be associated with active income generating efforts on your part.

You can spend and/or save your gross human capital. To the extent that you save it rather than spend it, you will have projected net human capital. Your projected net human capital is your cumulative yet-to-be-saved real dollar net earned income or savings after expenses prior to retirement. Your net human capital can be converted into other assets, which can increase in value and be withdrawn in the future to fund expense shortfalls.

On other asset related graphics, VeriPlan will display your net human capital to illustrate the projected depletion of your human resources. As you move toward retirement and as you convert net income into other assets via savings and new investment deposits, net human capital must fall. The current balance of your net human capital is not a bankable or spendable asset, but you can increase or shrink it through your projected savings rate. Both your gross and net human capital illustrate the aggregate future value of your labor related earned income stream. Human capital is another way to measure future income that could also be at risk due to other factors such as unemployment, underemployment, early disability, and/or premature death.

HUMAN CAPITAL graphic example



This couple's lifetime cumulative gross earnings are expected to exceed \$4,500,000 and they are projected to spend about \$3,500,000 of that for ongoing expenses, debt payments, and taxes during their working years. The good news is that this couple is projected cumulatively to save about \$1,000,000 of their gross projected income, which they will put toward their investment program.

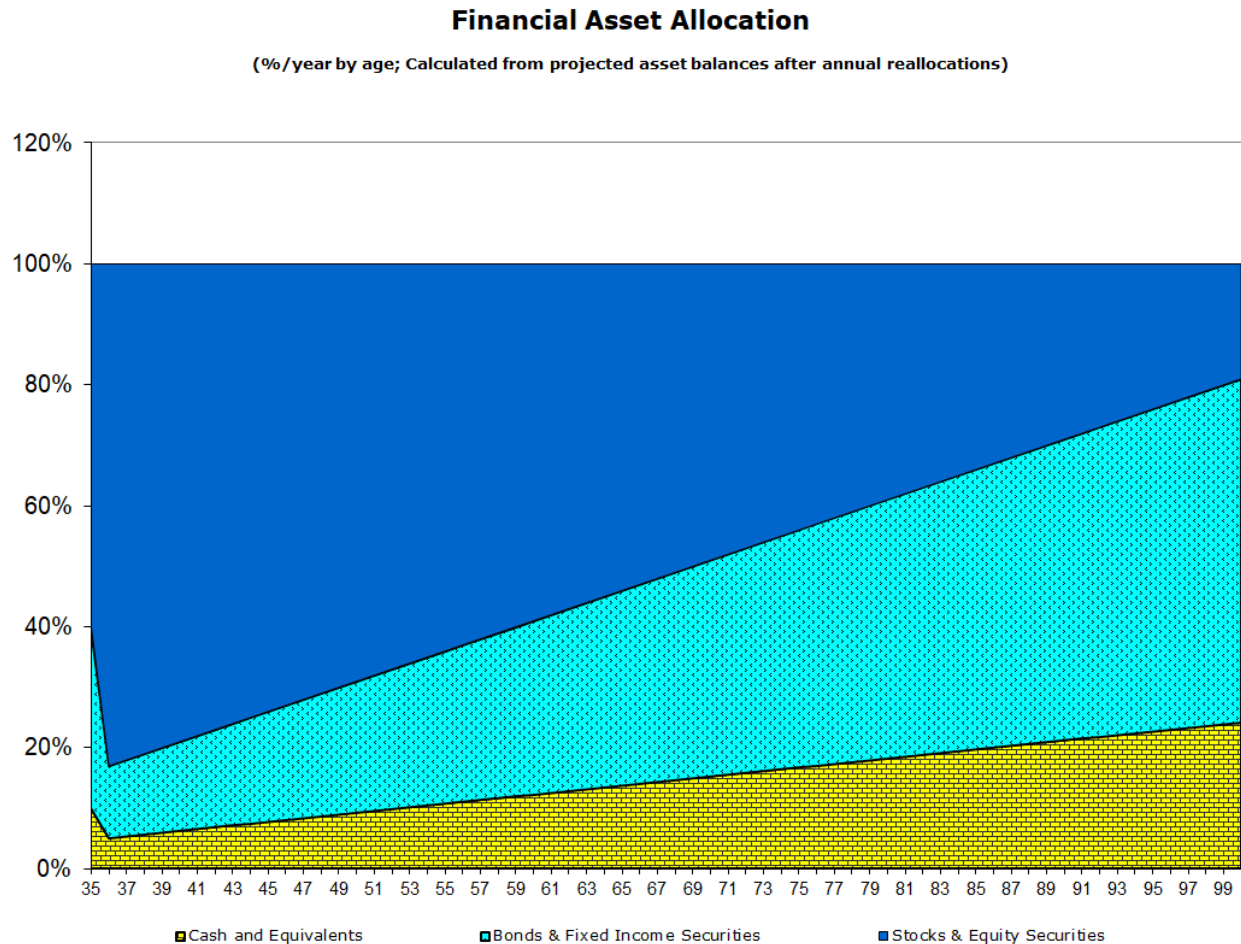
On the Human Capital graphic their cumulative expected net savings are represented by the area with the diagonal green lines. On all of VeriPlan's other area graphs that project this couple's lifetime investment assets, you will notice that his Net Human Capital will also be included. This is done to illustrate the conversion over time of their valuable labor into valuable investment assets.

19.3.9: ALLOCATION graphic

Financial Asset Allocation (%/year by age; Calculated from projected asset balances after annual reallocations)

This Asset Allocation graphic shows your projected annual financial asset allocation across your lifetime. This graphic depends upon your settings on the allocation worksheet. VeriPlan provides five asset allocation methods with flexible user adjustments.

ALLOCATION graphic example



In this sample graphic, this couple has chosen to adopt an asset allocation strategy more weighted toward equities while they are younger. Over time, they will steadily increase their allocation to bonds and cash and decrease their allocation to equities. In this particular projection, this couple has chosen the VeriPlan asset allocation method that set a fixed ratio between bond and cash.

19.3.10: TOTAL ASSETS graphic

Financial Assets, Property, and Debts with Cumulative Assets Lost to Excessive Investment Costs (Real \$/year by age; Beginning balances with reallocations; Debt causes assets to display below 0)

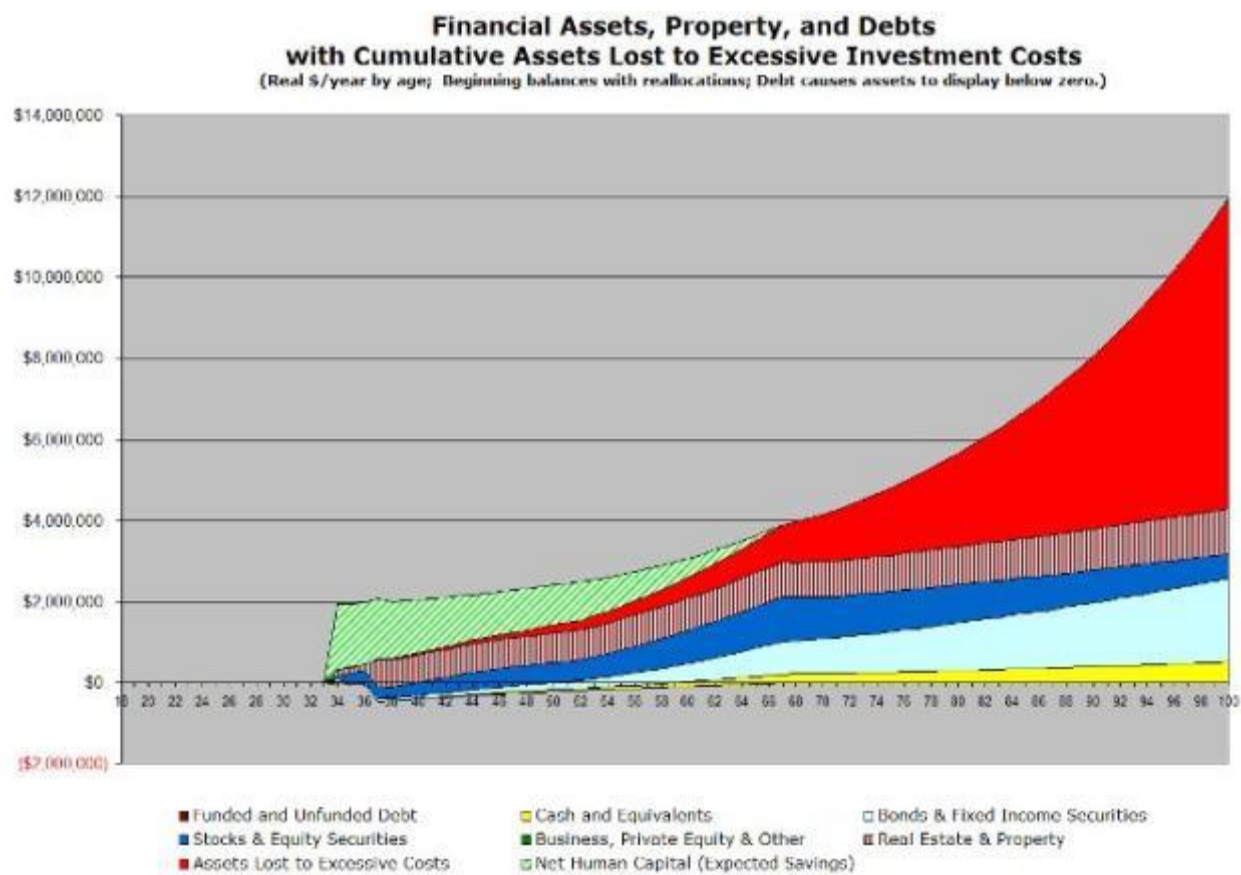
This TOTAL ASSETS graphic shows your projected cash, bond/fixed income, and stock/equity financial assets and property. Your net human capital is also shown to illustrate the conversion of your net earned income into financial assets through your savings. Cash, bond/fixed income, and stock/equity financial assets and property assets are graphed in layers. On top of your financial assets, this graphic also displays the projected values of your property and other assets that you entered on the property worksheet.

Debts display differently. This graphic includes the value of your current debts, as they are paid down, plus any future debts that you accrue. Because of how the graphics drawing facilities of the underlying spreadsheet engine work, your debts will not display directly when you have other positively valued assets. However, your current and future debts will affect how your positively valued assets are displayed.

The presence of your current or future debts can be detected easily on these graphics. Whenever the lower edge of any positively valued asset falls below zero, your outstanding debts are the cause. How much your positively valued assets will be pulled downward depends upon the total principal amount of your debts with any accrued interest.

TOTAL ASSETS graphic example

(This is the older style of this VeriPlan graphic. Because it represents the projection scenario with investment costs that is described in the accompanying text below, this older graphic has been retained.)



Graphing investment cost inefficiencies in the Total Assets graphic

In this sample total assets graphic, this couple's lifetime asset projection indicates that they would have increasing amounts of cash, bond, and stock financial assets and real estate property over their lives. However, due to the various costs of their investment portfolio, they would spend their lives paying unnecessarily high investment expenses. In effect, they would throw away almost as much in total assets by age 100 than they would have retained.

VeriPlan provides easy to use investment cost analysis facilities that help users understand the lifetime impact of the investment fees they pay. The sad thing is that this couple's lifetime projection graphic reflects the average investment costs paid by the average investor. Like other average investors, if they do not slash their investment costs, they will significantly stunt the growth of their retirement portfolio by paying excessive fees to the financial services industry.

In addition to projecting your cumulative cash, bond, and stock financial assets and property assets, this TOTAL ASSETS graphic also projects your cumulative assets lost to excessive

investment costs associated with your financial assets and your settings on the investment costs worksheet.

Your property and other assets are graphed with your financial assets and cost-inefficiencies and have been arranged on these charts to demonstrate how long your total assets are projected to last. If you are projected to have expense shortfalls that will reduce your assets in the future, then your more liquid financial cash, bond/fixed income, and stock/equity assets will be depleted first. After they are exhausted, VeriPlan assumes you will deplete your other assets (business interests, private equity, etc.) followed thereafter by your real estate property assets.

Interpretation examples

If your projection indicates that you would still have financial assets at age 100, then this is a projection of the real dollar size of your estate at age 100. (Obviously, you can also use this Total Assets chart and/or the corresponding data table to find your projected estate at an earlier age of demise. By making reference to age 100, we will be optimistic about your longevity.)

On this graphic, your projected property and other assets are displayed in between your financial assets below and your projected assets lost to excessive costs above. If you have property and other assets, then these could be liquidated as your financial assets are running out. In the same manner described just below, you could estimate how long your property and other assets would fund any expense shortfall, until they too are exhausted. If some property and other assets remain at any age of projected demise, then those assets would be part of your estate. In this situation, any projected assets lost to excessive costs could further increase the size of your estate to the extent that you eliminated your investment cost-inefficiencies.

If this Total Assets graphic shows that your financial assets will be exhausted before age 100 and shows that you have some level of assets lost to excessive costs, then the red bar representing these lost assets will begin to dip below the zero assets level measured from the Y axis -- if you have no real estate, business, or other property assets than can be liquidated to meet your living expenses.. This graphical projection can help you to understand how much longer your financial assets could last, if you eliminated cost-inefficiencies in you financial asset portfolio that are in excessive of your reasonable maximum assumptions.

For example, if your financial assets were exhausted by age 90, then reducing your cost-inefficiencies could help your assets to last longer. If the trailing edge of the red area

representing your Lost Assets dips below zero at age 97, then eliminating your investment portfolio's inefficiencies could help your financial assets to last an additional seven years. If the red area of Assets Lost to Excessive Costs still remains above zero at age 100, then eliminating your cost-inefficiencies could fund an additional 10 years of retirement and leave some positive estate at age 100.

You should note, however, that these charts may overstate the number of years that assets lost to excessive investment fees might sustain your living expenses, because these phantom assets have not been subjected to your projected asset tax rates. If you want to project the potential value to you of these lost assets after taxes have been extracted, then just set the selector on the investment costs worksheet to use your "Reasonable Investment Costs" in VeriPlan's centerline projections. Then, these phantom assets will be returned to your tangible portfolio projections and asset taxes will be assessed automatically.

For most users, this would modestly shorten the number of years of expense coverage provided by these recovered phantom assets that are not lost to excessive costs. Again, remember that you would need to maintain and not increase your current living expense assumptions, and you would need to bring down the investment costs of your current investment portfolio to be in line with your reasonable investment cost assumptions.

19.3.11: ASSET FLOWS graphic

Non-Asset Cash Flow with Cash, Bond, and Stock Financial Asset Returns

(Includes Required Minimum Distributions, & Unfunded Consumption) (Real \$/year by age)

The graphic provides several summary financial projections. First, it graphs both annual financial asset returns net of current year investment expenses. Second it graphs your total annual cash flow from non-asset related activities, including all earned and other income, living expenses, debt payments and taxes -- including investment taxes. (This line is equivalent to the CASH FLOW graphic.) Then, it graphs the combination of your projected non-asset cash flow and current year net asset appreciation.

This ASSET FLOWS graphic also indicates total projections annual Required Minimum Distributions (RMDs) from traditional tax-advantaged retirement accounts. Finally, it graphs

unfunded consumption expenses, if and when projected cash, bond, and stock financial assets are exhausted. These unfunded consumption expenses would need to be paid through borrowing or the sale of property and other assets or they would be entirely unfunded.

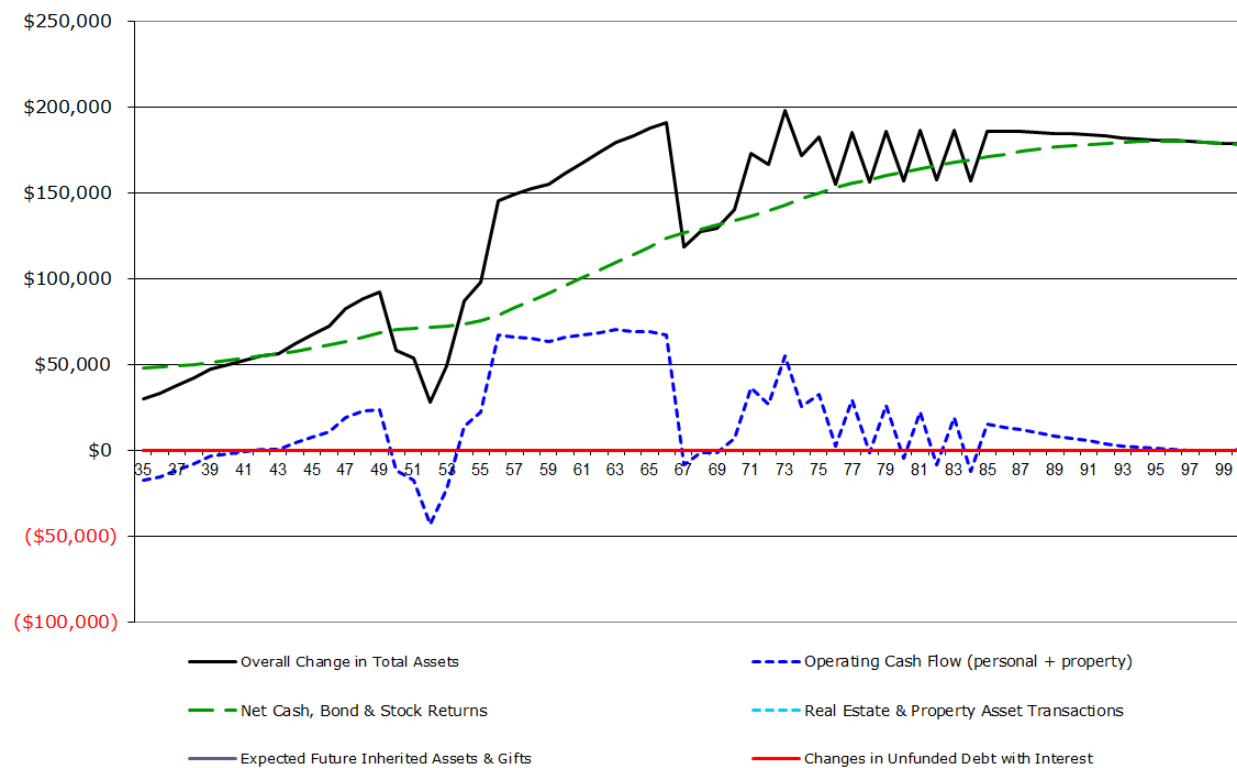
ASSET FLOWS graphic example

Some VeriPlan users find the Asset Flows graphic to be very useful, because it combines the effects of lifetime cash flow from earnings, expenses, debts, and taxes with the effects of lifetime appreciation of their cash, bond, and stock financial asset portfolio. In this sample graphic, this couple's projection data from their Cash Flow graphic is drawn as the blue line. The projected annual return on their investment portfolio is graphed as the green line, which steadily increases during their working years. During their retirement years, the projected annual return on their investment portfolio levels off but still grows moderately, as they utilize some of their investment returns to fund their negative cash flow in retirement.

The black line on the Asset Flows graphic combines this couple's cash flow from earnings, expenses, debts, and taxes with the appreciation of their cash, bond, and stock financial asset portfolio. Whenever that black line is above zero, then their total family assets are projected to increase by that annual amount. Correspondingly, when the black line falls below zero, this would mean that their cash flow gap exceeds the projected investment return of their financial asset portfolio.

(This is the older style of this VeriPlan graphic. Because it represents the projection described in the accompanying text, it has been retained.)

Net Asset Flows, including Income, Expenses, Debts, Taxes; Plus Property and Investment Returns and Transactions (Real \$/year by age)



Required Minimum Distributions from tax-advantaged retirement accounts

After age 73, tax laws specify that a portion of the assets held in traditional tax-advantaged IRAs and employer sponsored retirement plans must be withdrawn as Required Minimum Distributions (RMDs). The initial age for RMDs used to be 70.5. This was increased to 72 by the SECURE Act of 2019. Then, the SECURE Act (“2.0”) of 2022 increased the initial age for RMDs to 73 and to 75 starting in 2033. Thus, currently the initial age for RMDs depends upon your age now.

Calculated according to actuarial tables, RMDs force assets out of traditional tax-advantaged accounts and into taxable accounts solely to assess income taxes on the taxable proceeds (above any tax basis that these retirement account assets might have, which is usually quite small or zero). For user convenience, this graphic also lists this couple’s projected Required Minimum Distributions from traditional tax-advantaged retirement accounts. However, users should understand that RMDs are not retirement “income,” but are simply legally mandated withdrawals from tax-advantaged accounts to create “income taxable” events and corresponding income tax

payments. RMDs occur whether or not the retiree(s) need the after-tax funds to live on in retirement. If they do, then RMDs can fund negative cash flow. If they do not, then the after-tax funds are simply reinvested in taxable accounts. The Withdrawals graphic, immediately following, discusses RMDs in greater detail.

19.3.12: DEBT OWED graphic

DEBT OWED: Personal, real estate, and business debt principal owed (Beginning balances; Real \$/year by age)

DEBT OWED graphic example

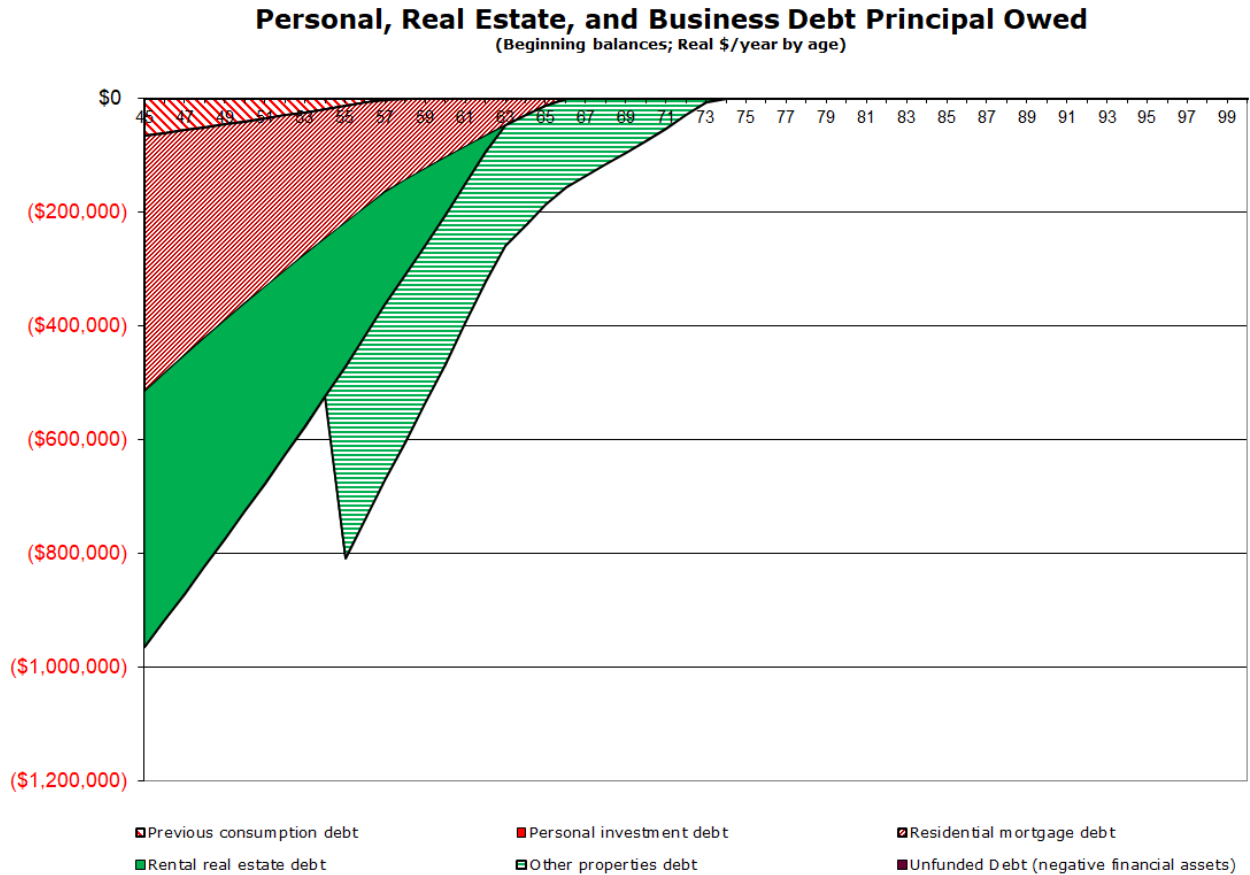
This Debt Owed provides projected annual beginning principal balances for all personal and business debts. Debts are categorized as:

- a) previous consumption debt,
- b) personal investment debt,
- c) residential mortgage debt,
- d) rental real estate debt,
- e) other properties debt, and
- f) unfunded debt.

Unfunded debt is equal to cumulative negative financial assets, if financial assets are projected to be depleted.

In the graphic example below, there are three current debts that are all projected to be paid off by age 66.. The smaller wedge at the top is credit card debt related to prior consumption, The light red area is the mortgage on the personal residence. The dark green wedge is the mortgage debt on the rental real estate property that is currently held.

The fourth debt represented by the lighter green area with horizontal lines has not yet been incurred. In ten years, they plan to purchase a small business property, which will involve taking on more debt. VeriPlan handles all the financial parameters of future purchase and/or sale of any business property, as well, as for residential real estate and rental real estate.

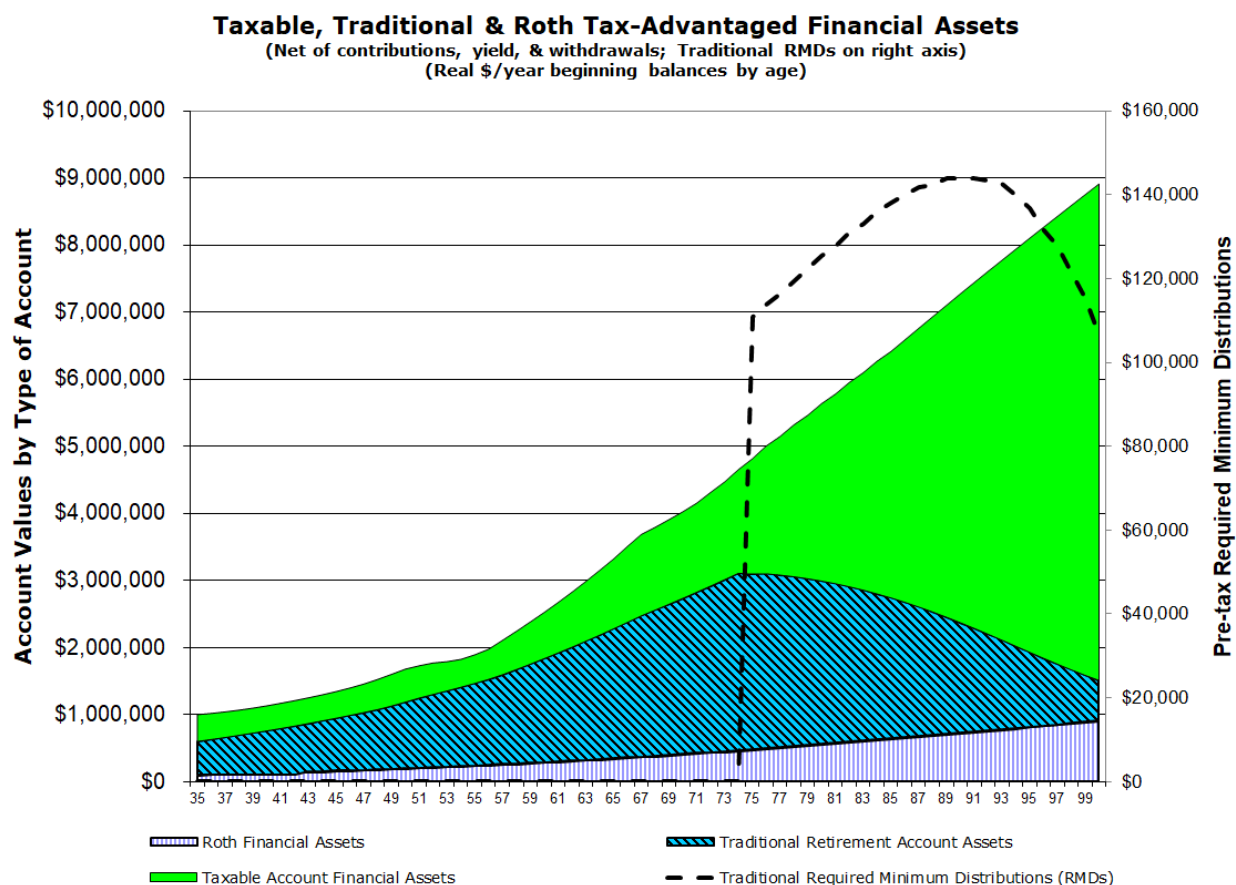


19.3.13: ASSET TAXABILITY graphic

ASSET TAXABILITY: Taxable, Traditional & Roth Tax-Advantaged Financial Assets with RMDs (Real \$/year beginning balances by age; Net of new investments, yields, transfers, and withdrawals)

This ASSET TAXABILITY graphic projects your holdings of financial assets between your taxable and tax-deferred accounts. These assets depend upon the tax characteristics your current holdings, which you entered on the financial assets worksheet. This graphic also depends upon your settings on the tax-advantaged plans worksheet regarding your future contributions into tax-advantaged retirement plans.

ASSET TAXABILITY graphic example



The Asset Taxability graphic for this couple indicates that their modest contributions to Roth retirement accounts would grow steadily. Concerning their traditional tax-advantaged accounts those assets would grow and then decline in retirement with RMDs. Throughout their working years this couple plans to take maximum advantage of tax-advantaged retirement investing. This means that they need to keep an eye on their ongoing contributions to deal with years where assets in taxable accounts would not fund near term expense needs.

19.3.14: TRANSACTIONS graphic

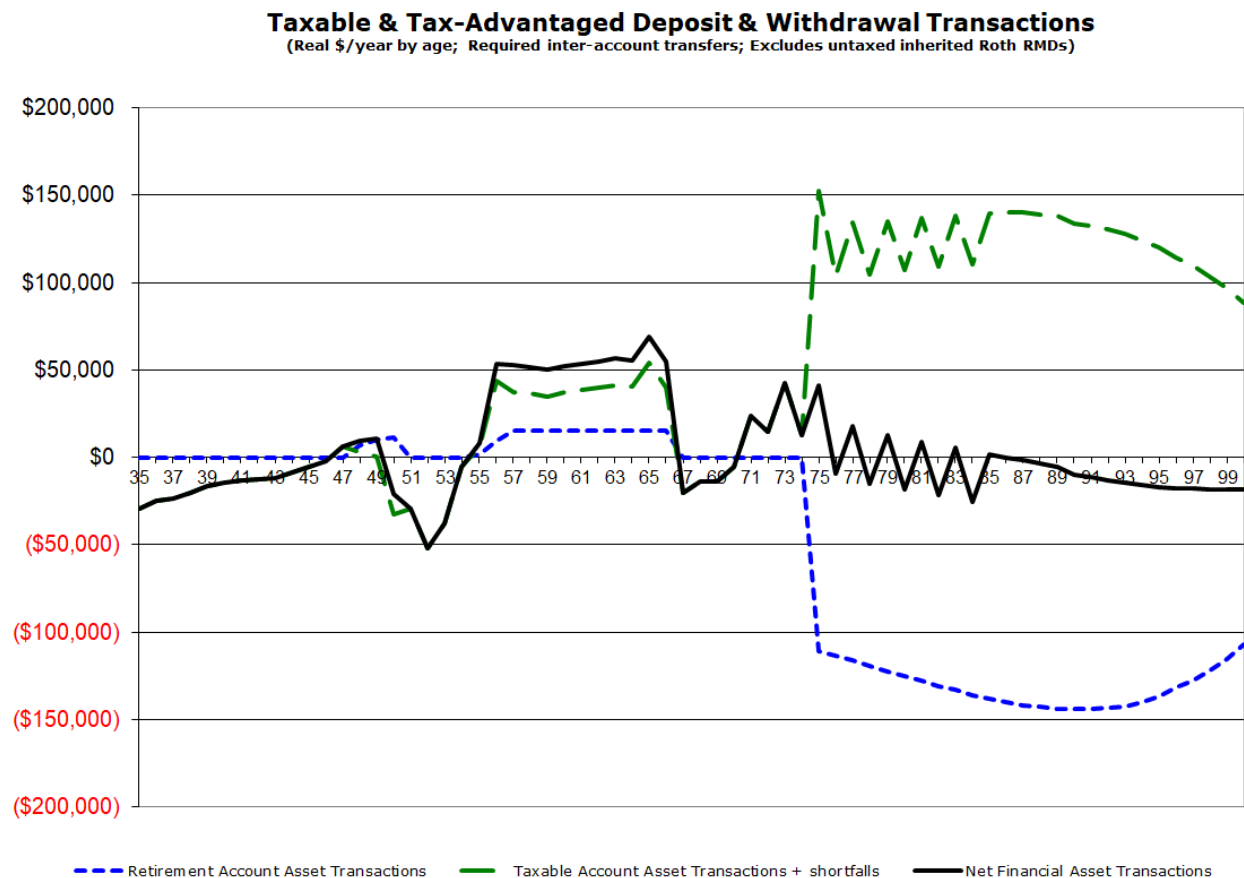
Taxable & Tax-Advantaged Deposit & Withdrawal Transactions

(Real \$/year by age; Required inter-account transfers)

This TRANSACTIONS graphic shows your projected annual net financial asset cash flows into and out of both your taxable and tax-advantaged accounts. It also shows your net overall financial asset transactions, which is a combination of your taxable and tax-advantaged accounts

transactions. This combined annual transaction line indicates whether you are adding to or withdrawing from your financial asset accounts to meet your expense, debt, and tax obligations. Annual costs without interest that cannot be funded with financial assets are also included in the taxable and net asset categories.

TRANSACTIONS graphic example



This graphic is helpful when you wish to assess whether withdrawals from tax-advantaged accounts are being made to cover necessary expenses and/or to meet mandatory tax recognition and taxation requirements for RMDs. If tax-advantaged account withdrawals are indicated simultaneously with deposits into taxable accounts, then some or all of your tax-advantaged account withdrawals are being made to satisfy mandatory withdrawal rules. This graphic focuses on transactional cash flows only. It does not show your overall projected net financial asset yields. All your financial asset deposits, distributions, and other withdrawals are included.

However, capital appreciation that is not recognized for tax purposes is not. Instead, capital appreciation that does not involve taxation is simply reinvested and is reflected in your financial asset balances on VeriPlan's various financial assets graphics.

19.3.15: RETIREMENT INCOME graphic

RETIREMENT INCOME: Retirement income sources and pre-tax RMDs after Earner #1 retires (Real \$/year by age)

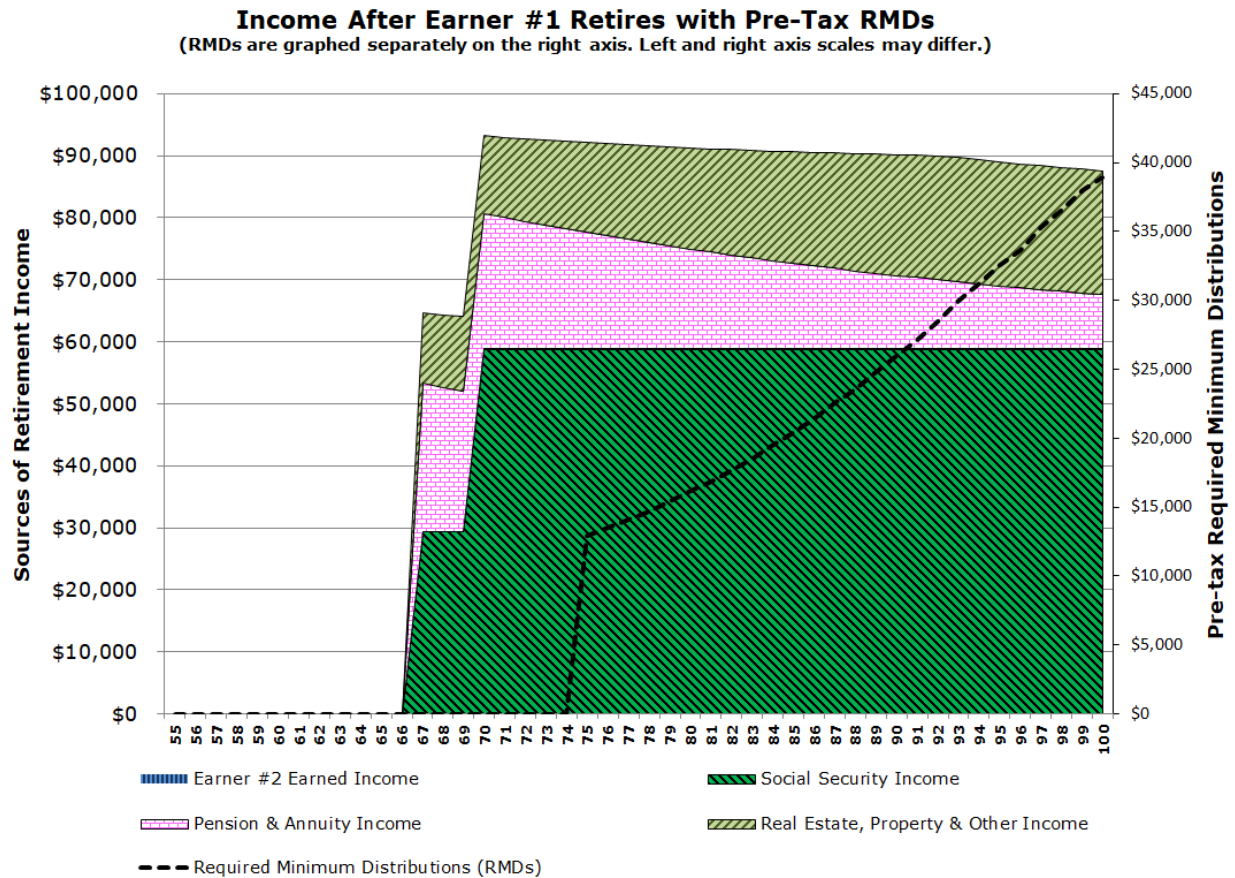
This graphic projects various income sources in retirement after Earner #1 plans to retire. Retirement income sources may include continuing earned income from Earner #1, Social Security retirement income, and pension and annuity income..

This graphic also includes Pre-Tax Required Minimum Distributions (RMDs). RMDs are not strictly an income source. Instead, they are required distributions of invested assets from retirement accounts that force taxation in the process. If you would need some or all of the after-tax RMD proceeds to pay your bills, then you can think of them as income. Whatever might be left of these RMDs after taxes and after expenses would then be deposited into taxable asset accounts.

Pre-tax RMDs from traditional retirement accounts are projected as a dashed overlay line measured by the right vertical axis. Note the retirement income sources on the left vertical axis and RMDs on the right vertical axes are usually not the same numerical scale. Also, note that if any RMDs are indicated before age 70, these would be associated with inherited traditional retirement accounts.

RMDs are not strictly an income source. Instead, they are required distributions of invested asset from retirement accounts that force taxation in the process. If you would need some or all of the after-tax RMD proceeds to pay your bills, then you can think of them as income. Whatever might be left of these RMDs after taxes and after expenses would then be deposited into taxable asset accounts.

Sample RETIREMENT INCOME graphic



In this sample graphic, this two-earner couple have substantial Social Security retirement benefits that would be inflation protected. They also have purchased a monthly annuity displayed in the pink “brick” wedge. However this annuity does not have any inflation protection and its purchasing power gets eroded over time. The good news is that their rental real estate property is expected to offset much of the purchasing power decline of their annuity. This is not because their rental property will produce at a rate above general inflation. Instead, it is due to the fact that the debt associated with their rental property has fixed nominal dollar payments, which get less expensive in real dollar, constant purchasing power terms over time.

19.3.16: WITHDRAWALS graphic

**Withdrawal Rates from Cash, Bond & Stock Financial Assets (%/year by age;
Withdrawals for net cash flow shortfalls, RMDs, & associated taxes)**

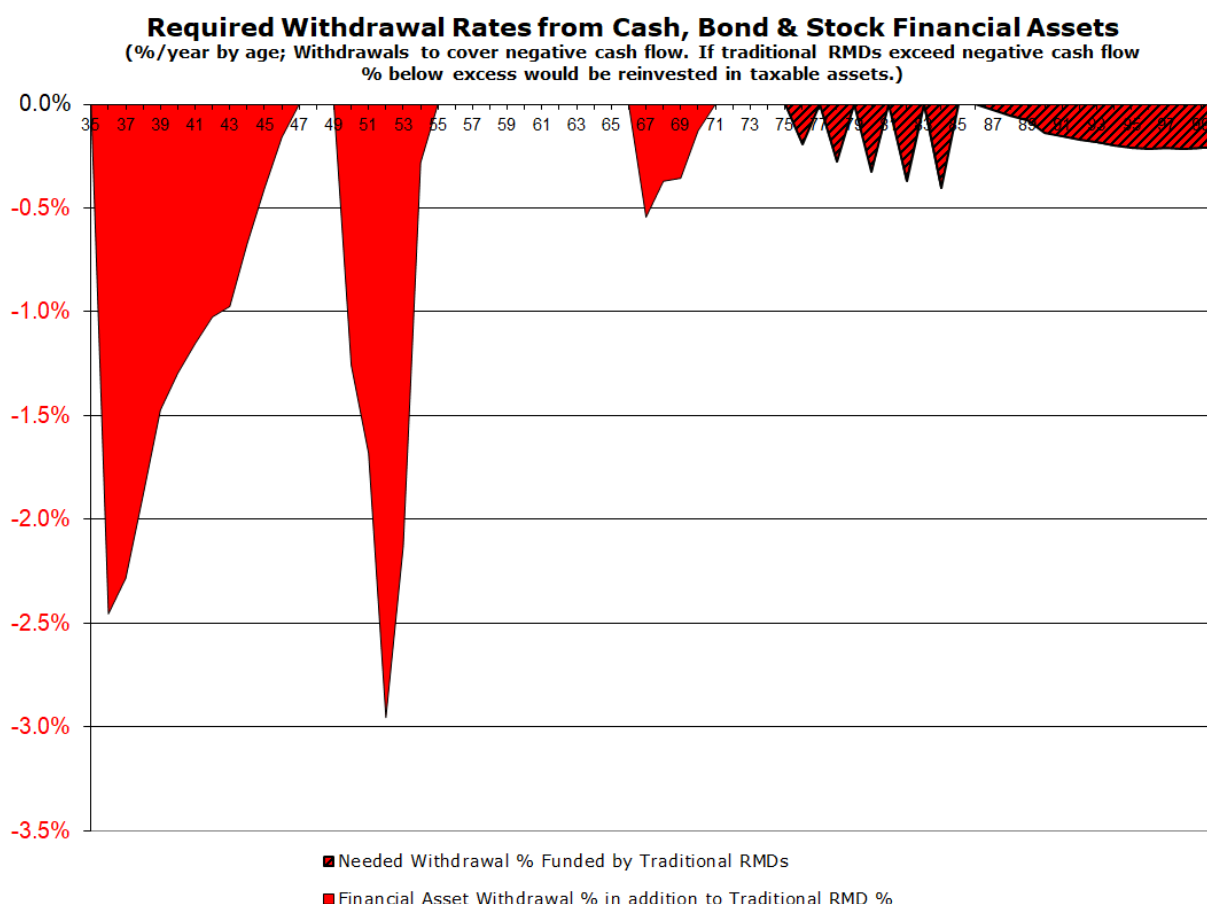
This WITHDRAWALS graphic presents your net overall annual financial asset withdrawal rates as a percentage of the beginning balances of your then current financial asset holdings. An

asset withdrawal rate can only be shown, when your total cash, fixed income, and equity financial assets are positive.

This graphic also indicates how much of withdrawals are attributable to annual Required Minimum Distributions (RMDs) from traditional tax-advantaged retirement accounts. In any projection year when negative cash flow requirements exceed RMDs, additional withdrawals will be indicated. In years when RMDs exceed cash flow requirements, then any excess RMD withdrawal beyond cash flow requirements will not be shown here. Instead, that RMD excess will be deposited automatically in taxable financial asset accounts.

WITHDRAWALS graphic example

While those planning retirement seek rules of thumb about asset withdrawal rates, the future unfolds unpredictably and withdrawals over a lifetime will depend upon the net effects of a myriad of financial factors. Retirement withdrawal studies that discuss methods of gauging and planning safe withdrawals of 3%, 4%, or even higher percentages from retirement portfolios have utility and are very important to consider.



For this couple, their withdrawals graphic provides information about a variety of projected events over their lives that would involve withdrawals of assets from their cash, bond, and stock financial asset portfolio – exceeding the projected yield of their financial portfolio at that point in time. The first percentage drawdown occurs early in their projection, when their portfolio is the most modest and when they need to cover negative cash flow from financial assets that they were fortunate enough to have inherited.. The second drawdown occurs during some of the consecutive years when their two children are in college. The third drawdown occurs in their early retirement years when that have a larger cash flow gap, because they have chosen to increase their Social Security retirement payments by delaying acceptance of their first payment until they are age 70.

Finally, the fourth and longest drawdown event begins around age 75 for Earner #1, which illustrates the projected amount they need to withdraw to fund negative cash flow once they have begun to receive Social Security retirement payments and are also subject to Required Minimum Distributions. The good news for them is that VeriPlan projects their withdrawal rates would be

less than half of one percent in late retirement. This is fortunate, because their shift to a bond and cash heavy investment portfolio as they age would mean both lower expected risk but also lower expected rates of return.

Graphing Required Minimum Distributions (RMDs)

After age 73 or 75 (depending upon one's current age) current tax laws specify that a portion of the assets held in traditional tax-advantaged IRAs and employer sponsored retirement plans must be withdrawn as Required Minimum Distributions (RMDs). (For more information see the RMD section of the yellow-tabbed Taxes worksheet.

Calculated according to actuarial tables, RMDs force assets out of traditional tax-advantaged accounts and into taxable accounts solely to assess income taxes on the taxable proceeds (above any tax basis that these retirement account assets might have).

This occurs annually after RMDs begin whether or not one needs these RMDs for living expenses, tax payments, etc. RMDs are not really retirement income, but are just a forced taxable asset transaction that would also provide cash flow for projected expenses, if needed. If some portion or all of the RMD was not needed to cover negative cash flow due to expenses and taxes, then those RMD funds would be reinvested in a taxable financial asset account.

In VeriPlan, projected annual real dollar asset balances in traditional tax-advantaged accounts are found on the ASSET TAXABILITY graphic and corresponding data table worksheet. Total annual RMD real dollar withdrawals are found on the ASSET FLOWS graphic and corresponding data table worksheet.

In long-term financial planning, sustainability of withdrawal rates is sometimes associated with supposedly "safe" withdrawal percentage rules of thumb, based upon historical studies. Thus, VeriPlan provides this WITHDRAWALS graphic. To provide more information about RMDs related to your projected withdrawals, VeriPlan breaks out the proportion of your net annual financial asset withdrawals that are accounted for by RMDs.

For this WITHDRAWALS worksheet, the denominator of these withdrawal portions is the "Non-Asset Cash Flow (Income, Expenses, Debt & Taxes)" line of the ASSET FLOWS graphic. This is the total amount needed to be withdrawn annually from assets -- whether from current asset returns, asset principal, or even from non-financial assets such as real estate or other property. Then, to calculate the percentage withdrawal rates for this WITHDRAWALS graphic,

these net annual withdrawals are divided by total projected cash, bond, and stock financial asset balances to derive the withdrawal rate.

More specifically regarding RMDs and these withdrawal rates, when your total projected annual withdrawals would exceed your projected annual RMD, you would see both yellow and red withdrawal areas on this graphic. This means that your entire RMD would be used for current cash flow requirements, and it also means that additional taxable assets would need to be withdrawn to meet total cash flow needs for that year. If instead, you see only yellow in a particular year on this graphic, this means that your RMD is projected to cover your entire annual shortfall -- and perhaps would exceed your projected cash flow shortfall.

Note that you can also refer to the TRANSACTIONS graphic to understand the flows between taxable and traditional tax-advantaged retirement accounts related to RMDs.

19.3.17: RETIREMENT SHORTFALLS graphic

RETIREMENT SHORTFALLS: Cash Flow Shortfalls after Earner #1 Retires including RMDs (If shortfall exceeds Net RMDs, other assets would be needed to cover the remainder)

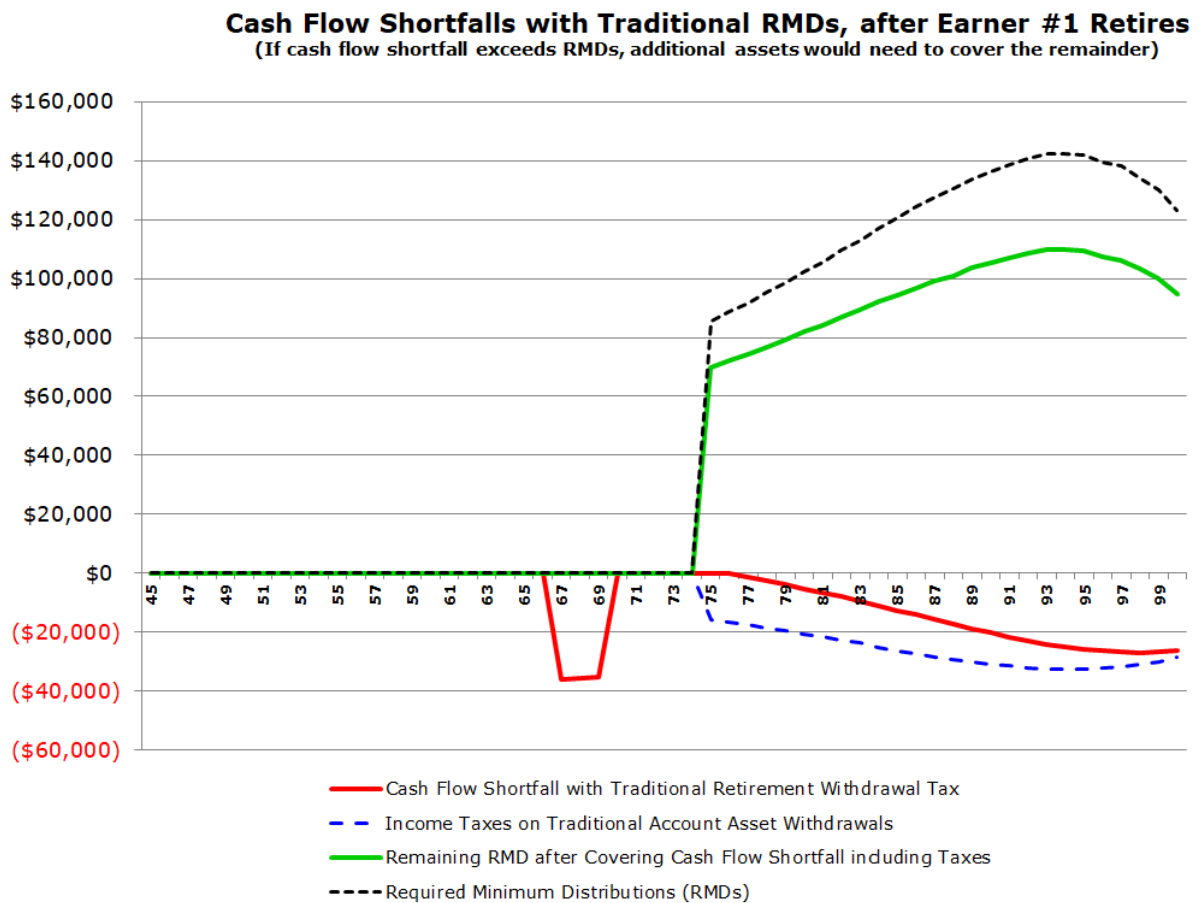
This graphic projects any yearly cash flow shortfalls after Earner #1 retires. These cash flow shortfalls have already taken into account the retirement income sources projected on the previous RETIREMENT INCOME graphic. However, the cash flow shortfall line does not include the impact of your projected RMDs from traditional retirement accounts.

RETIREMENT SHORTFALLS demonstrates whether your RMDs are projected to be sufficient to make up for any cash flow shortfall that you might experience during various retirement years. If the cash flow shortfall in any projection year, which includes income taxes on traditional account asset withdrawals, were to exceed your projected RMDs, then other assets would be needed to cover the remaining shortfall.

To provide a better understanding of traditional retirement account RMDs and taxes, this graphic also includes a dashed line indicating total federal, state, and local ordinary income taxes on withdrawals from traditional retirement accounts to cover RMDs and for income taxes on any additional withdrawals needed in excess of RMDs.

This graphic displays a continuous green line that indicates any net RMD remaining after RMD income taxes and cash flow shortfalls have been covered. When this line is positive, this

means that these excess RMD assets would be automatically reinvested in your taxable accounts as financial assets.



19.3.18: SAFETY MARGIN graphic

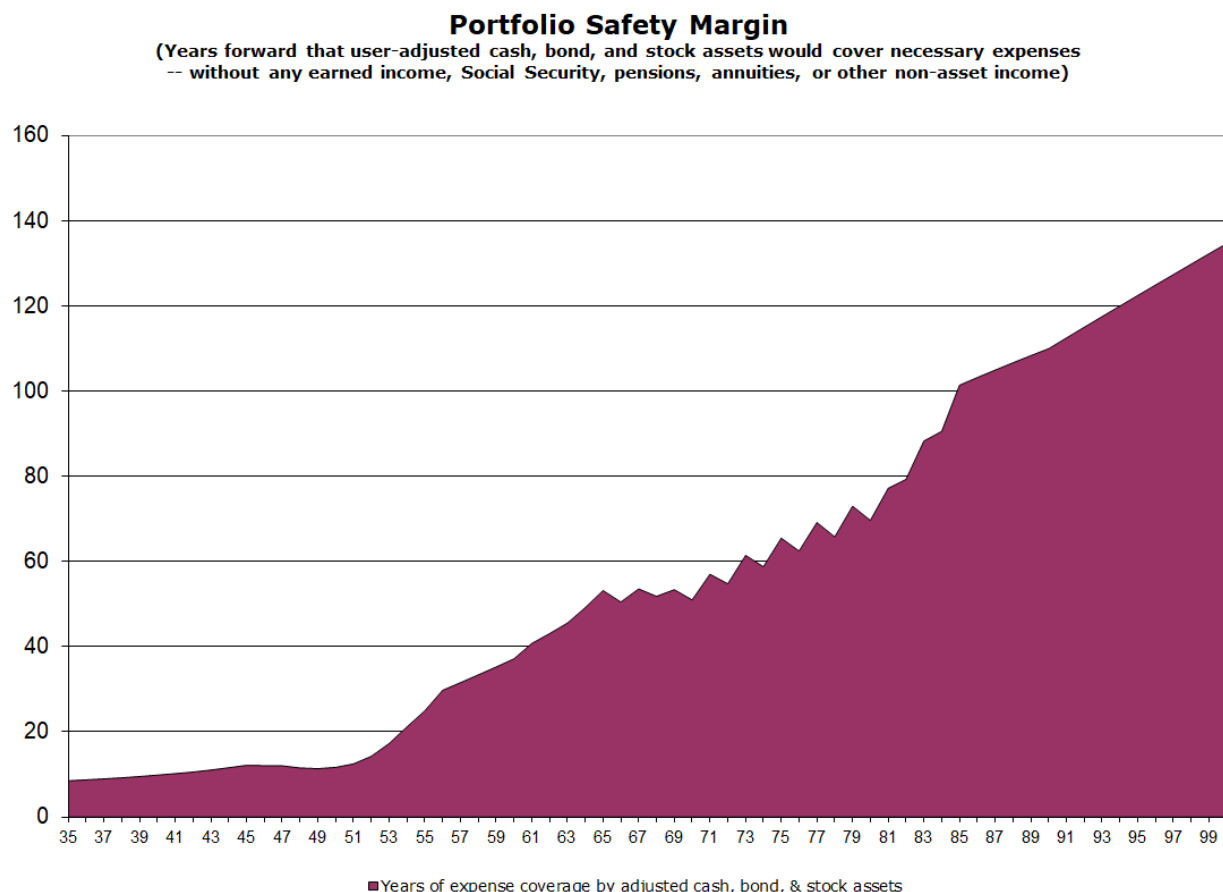
Emergency asset coverage of expenses without other income

(Number of years forward from any projection year that financial assets would cover necessary expenses -- without the receipt of other expected earned income, Social Security, pensions, annuities, or other non-asset income)

This SAFETY MARGIN graphic provides a measure of how long, measured in years going forward, that your projected financial assets would cover your projected necessary expenses, if you lost all your expected sources of income. In effect, this is a stress test of the unusual situation

where all personal income sources ceased, and you needed to fund needed living expenses solely from your financial investment assets.

SAFETY MARGIN graphic example



Particularly after this couple puts their two children through college (by the time that Earner #1 is in his or her early 50's), their portfolio safety margin keeps increasing. Some of this is due to aggregate long-term portfolio appreciation, and some of this is due to the fact that they have chosen an asset allocation strategy that increasingly shifts toward bonds and cash over time.

19.3.19: VALUE OF TIME graphic

VALUE OF TIME: Hourly Value of Income, Expenses, and Financial Assets (Number of years forward that cash, bond, and stock portfolio financial assets would cover necessary

expenses -- without any expected earned income, Social Security, pensions, annuities, or other non-asset income)

Given all the uncertainties in personal financial planning, it can be very difficult to make major life decisions, such as the choice of when to retire. Viewing finances on an hourly basis can be helpful, and this is another way to think about how one must or would like to spend one's time. Regarding the retirement decision, the trade-offs between working longer versus retiring can be aided by understanding income, expenses, and financial assets on a standard hourly basis.

When they are sufficient in retirement, your financial assets act as a replacement worker for yourself. Financial assets can replace earned income and close the gap between Social Security, pension, and annuity income and expenses in retirement.

While other VeriPlan graphics project financial resources assuming that the primary Earner/User(s) will live to age 100, that very conservative planning assumption clearly exceeds the average life expectancies that you can see on VeriPlan's Life Expectancy graphic. To help you think about the differential impact of an earlier demise, this graphic provides three lines measuring financial assets on an hourly basis, if death were to occur at 80, 90, or 100 years of age.

All the lines on this graphic present information on an hourly basis assuming a 2,000 full-time work year, since 8 hours per day times 5 days per week times 50 weeks per year equals 2,000 hours per year.

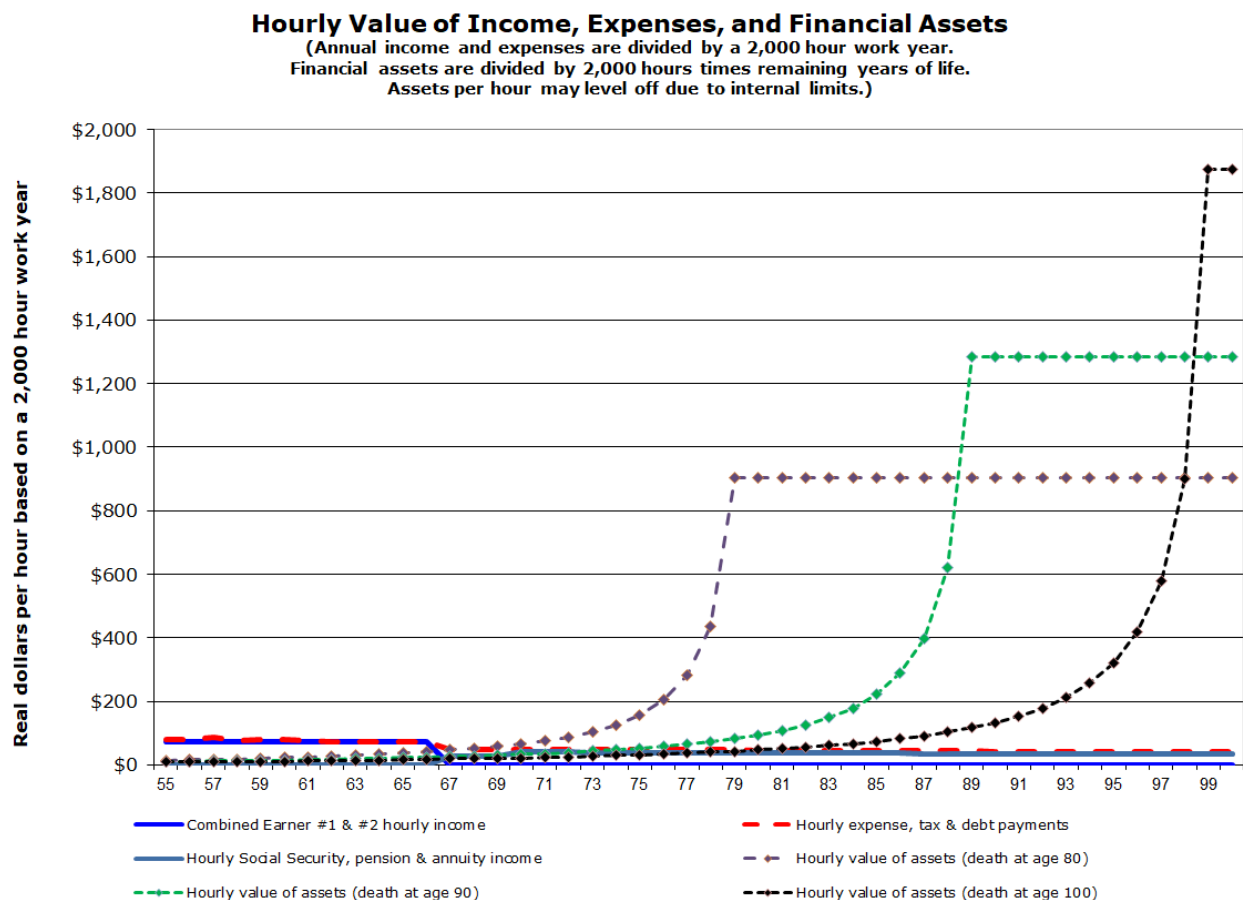
Because the earned income, retirement income, and expenses lines measure a single year, this is how they are calculated:

- Combined Earner #1 & #2 full-time equivalent income: Combined earned income is calculated as if that income was obtained by a single worker working 2,000 hours per year. If your total household earnings are obtained with more or less than 2,000 hours of work, make a mental adjustment, but keep in mind that it is necessary to standardize the hours per year for comparisons across the various lines.
- Social Security, pension, and annuity income: All retirement income sources are combined and then divided by 2,000 hours.
- Total expense, tax, & debt payments: All cash outflows are combined and then divided by 2,000 hours.

The three "Hourly value of assets" lines with projected death at age 80, 90, or 100 measure the hourly remaining lifetime value of total financial assets through those three ages. The hourly amounts are calculated by dividing the total financial assets at the beginning of each projection year by 2,000 hours per year times the number of years of life remaining.

Note that each of these age 80, 90 and 100 asset lines may level off due to internal limits for some projections, if total projected total assets are very large. Without such a limitation in some projections, remaining asset values can be very high with only a few years remaining. In these situations, the hourly financial asset value could become very large and would far exceed hourly living costs.

Sample VALUE OF TIME graphic



19.3.20: COST-EFFICIENCY % graphic

Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs (Real \$/year by age)

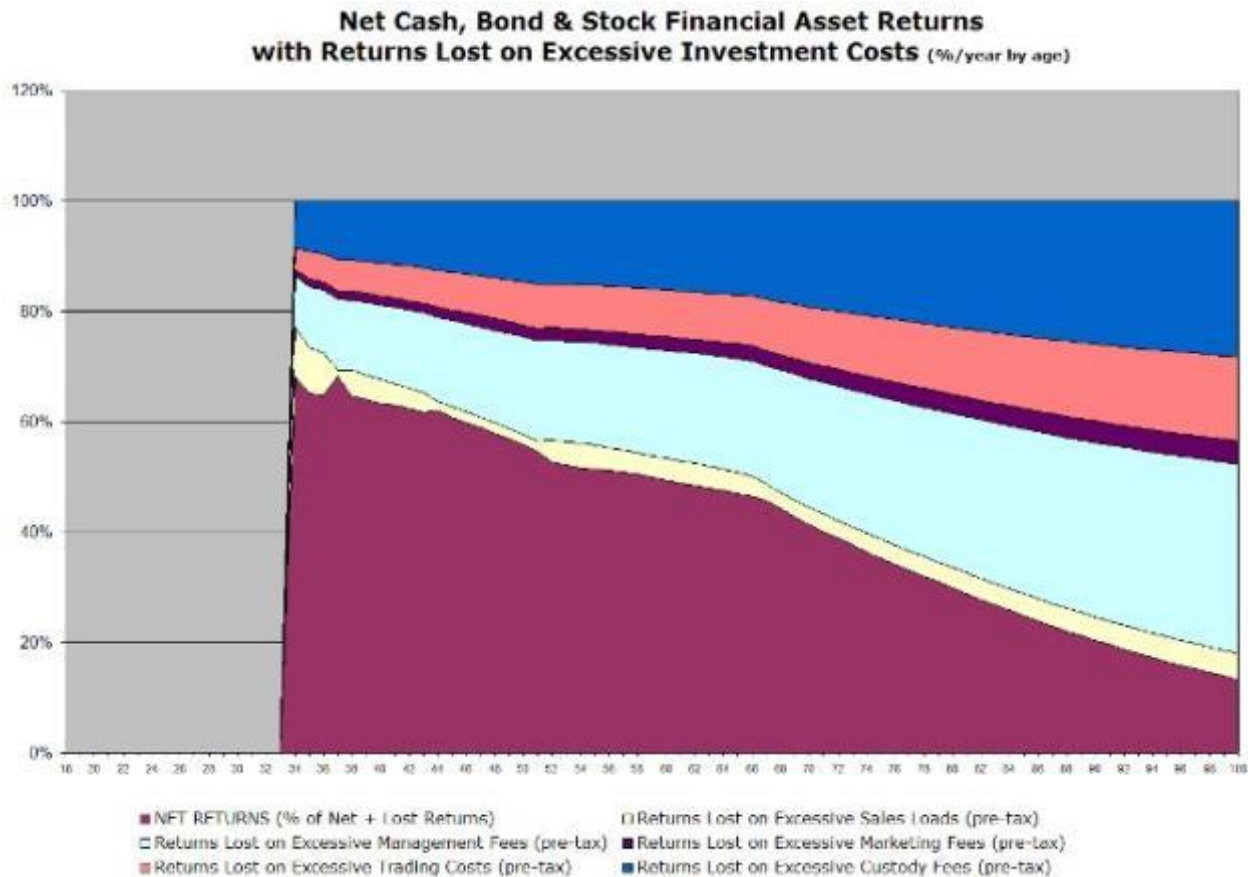
By comparing your current portfolio's investment costs to the investment costs that you believe are reasonable to pay, this and the next graphics illustrate your potential returns with a more cost-efficient strategy versus your projected asset returns and portfolio values with your current costs.

The COST-EFFICIENCY % graphic presents the same information as the following COST-EFFICIENCY \$ graphic, but in percentage terms. For people who must draw down their financial assets at various points in their lives to make up for expense shortfalls, the percentage of returns lost to cost-inefficiencies will increase. Of course, almost everyone will have to draw down their assets at various points, because their earned income will not exceed their expenses during all years of their lives.

Because investors only can pay expenses from their tangible retained assets, expense shortfalls will only eat into these assets. In contrast, because the assets that they gave away to cost-inefficiencies are phantom assets or opportunity costs that cannot be used, then those lost assets will grow increasingly faster than your tangible and depletable retained assets.

COST-EFFICIENCY % graphic example

(This is the older style of this VeriPlan graphic. Because it represents the projection scenario described in the accompanying text, this older graphic has been retained.)



The couple depicted in these sample VeriPlan graphics pay investment costs that are typical of the average investor. While surprising to most investors, the lifetime costs of excessive investment costs for the average investor are simply huge. Most investors think that the investment costs that they pay are small, but the compounded and accumulated lifetime value of assets lost to the financial services industry are anything but small.

For this couple, they are losing to fees and taxes about one third of their potential investment returns on their retained assets each year. However, the situation deteriorates thereafter. Keep in mind that all VeriPlan graphics are based upon “real or constant purchasing power” dollars and all these graphics have removed inflation. Investment costs are assessed on nominal or inflationary dollars, but the investor has to live with what remains.

Investors absorb 100% of the negative impacts of inflation. Therefore, when percentages are calculated with real dollars, investment costs take a larger piece of the pie. Net returns after expenses and taxes are what count to the individual investor. As a visual analogy, think of each individual investor who pays unnecessarily high fees as an unfortunate fisherman. Moreover,

think of the average investor as Santiago, the fisherman in Ernest Hemingway's "*The Old Man and the Sea*."

Santiago takes the risks of going to sea and finally hooks a big marlin (his gross return). However at age 85, he does not have the strength to pull the marlin into his boat. By the time Santiago returns to shore, the sharks have reduced his marlin to only the skeleton, which equals his net return. The sharks of the financial world are nicer in the sense that they usually take less than half of the flesh through excessive fees and unnecessary taxes, before you make it to shore. Unfortunately, these financial sharks circle every investor's boat year in and year out feeding off your catch.

In the short-term, what remains for the couple in this graphic are significantly diminished net percentage returns after excessive investment fees and after unnecessary investment taxes. Then, these investors need to live on those assets through years of negative cash flow related to their income after expenses, taxes, and debt payments. However, phantom investment assets lost or given away through excessive fees and taxes are not similarly drawn down to cover negative cash flow. Thus, these "phantom" assets compound in the future much more rapidly than the assets that this couple would retain and draw upon, as needed. Thus the proportion of lost assets grows across their lives and comes to dominate their financial projection – particularly as the time horizon increases into multiple decades.

19.3.21: COST-EFFICIENCY \$ graphic

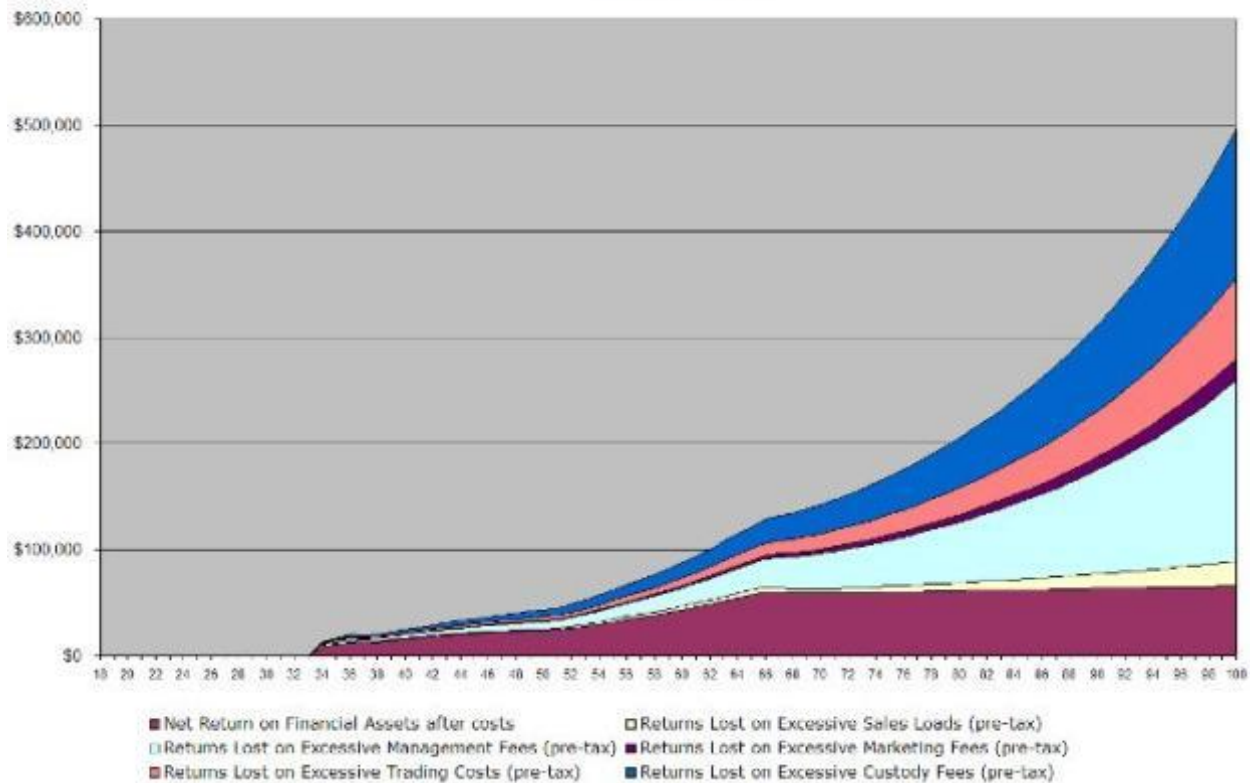
Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs (Real \$/year by age)

Rather than being presented in percentage terms, the graphic below is a projection of annual real dollar net returns and of returns lost to various types of investment cost inefficiencies.

COST-EFFICIENCY \$ graphic example

(This is the older style of this VeriPlan graphic. Because it represents the projection scenario described in the accompanying text, this older graphic has been retained.)

Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs (Real \$/year by age)



The COST-EFFICIENCY \$ graphic projects the net real dollar returns your portfolio will earn each year. In addition, it projects each of the five investment cost-efficiencies that your portfolio may have. If your current investment portfolio is as efficient as the maximum reasonable costs that you have set above on this worksheet, then your portfolio projections will show no cost-inefficiencies. If this graphic projects inefficiencies, then you may have opportunities to make improvements by reducing your investment costs.

If you have cost-inefficiencies, you should also note that they will continue to grow, even if all your retained financial assets have all been depleted to cover expense shortfalls. The foregone value of these annual costs will continue to increase even after your actual owned assets are gone. These assets still exist and still grow, but they do not in your accounts, since in effect you gave them away.

VeriPlan projects the rate of increase of these lost assets to be equal to the long-term historical weighted average gross (pre-tax) real returns using your chosen asset allocation model, less your reasonable maximum costs assumptions. These lost assets may compound rapidly

compared to your retained assets. You retained assets may be depleted by your negative cash flow for living expenses, debts, and taxes, while these lost assets are not subject to these burdens.

19.3.22: SALES LOADS graphic

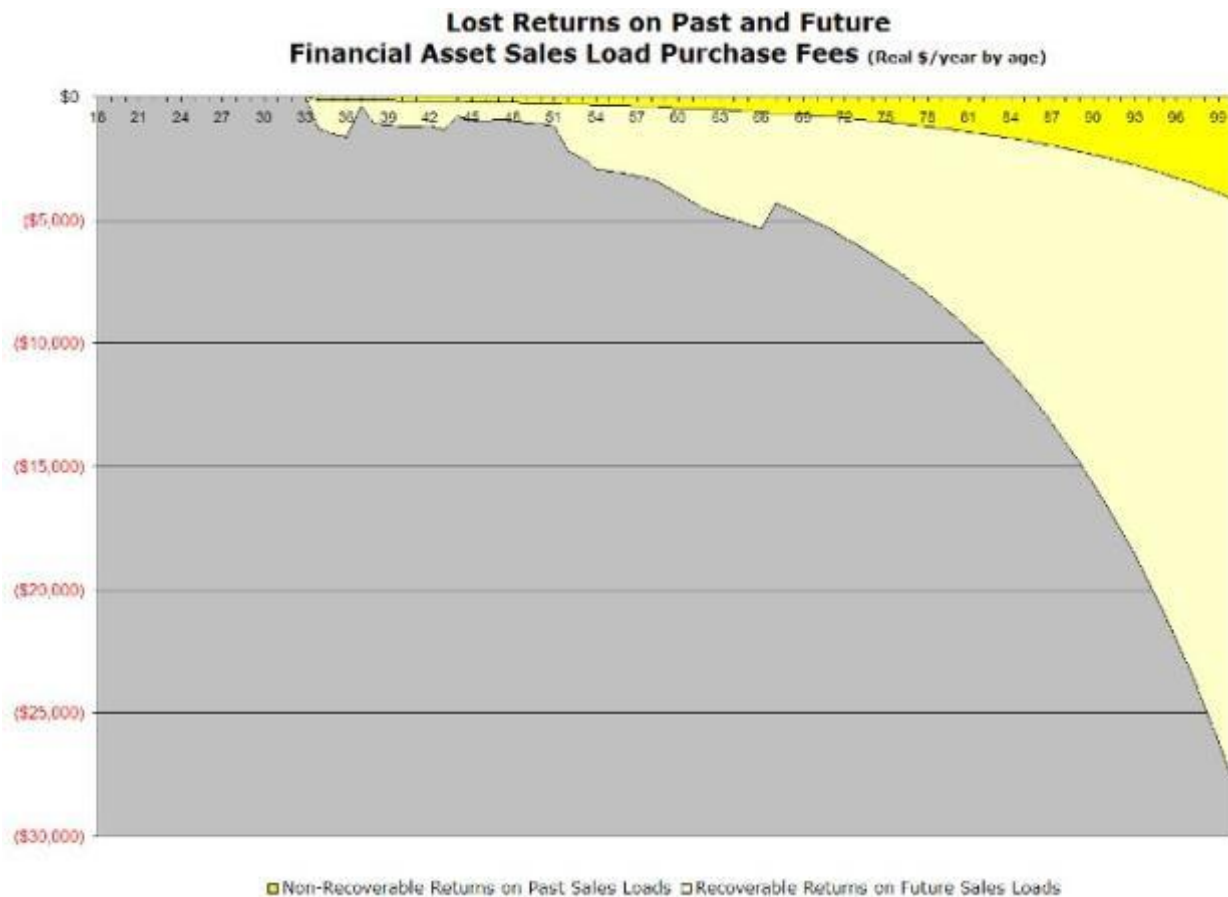
Lost Returns on Past and Future Financial Asset Sales Load Purchase Fees

(Real \$/year by age)

VeriPlan presents information about annual returns lost to both your past and future sales load payments on this SALES LOADS graphic. To quantify the financial impact of loads that you have paid in the past to acquire your current portfolio, VeriPlan uses both the tax basis that you report for each of your assets and the sales load percentages that you report that you paid on the financial assets worksheet. Then, it projects future lost returns related to these past load payments.

SALES LOADS graphic example

(This is the older style of this VeriPlan graphic. Because it represents the projection scenario described in the accompanying text, this older graphic has been retained.)



While you cannot recover sales loads that you have paid in the past, VeriPlan can help you to understand their potentially very substantial impact on your lifetime projections. In the sample graphic above, this couple cannot avoid the lost returns on investment sales purchase loads that they have paid in the past. However, they can stop paying sales loads in the future and eliminate the much larger beige area of the graph below. If you seek out diversified, low cost investments proactively, you will find vendors willing to supply them without middleman charges.

19.3.23: LIFE EXPECTANCY graphic

LIFE EXPECTANCY: U.S. Male and Female Average Life Expectancy Given One's Current Age on the X-axis (Bold lines are total expected male and female lifespans given current age. Dashed lines are expected average remaining lifespan for those who have attained an x-axis age. Source: Social Security Administration, Period Life Table)

IMPORTANT: VeriPlan makes no assumptions about the mortality of Earner/User #1 or #2. This mortality chart is just here for your information. As a lifetime cash flow model, VeriPlan

projects total cash flows through age 100 without making any assumption about death prior to age 100. For example, if your projection model with whatever assumptions you have chosen projects that your assets would last through age 100 as it automatically covers all of your costs, then your demise in any year prior to age 100 would simply represent the projected gross value of the estate at death.

Four life expectancy lines are graphed on this chart:

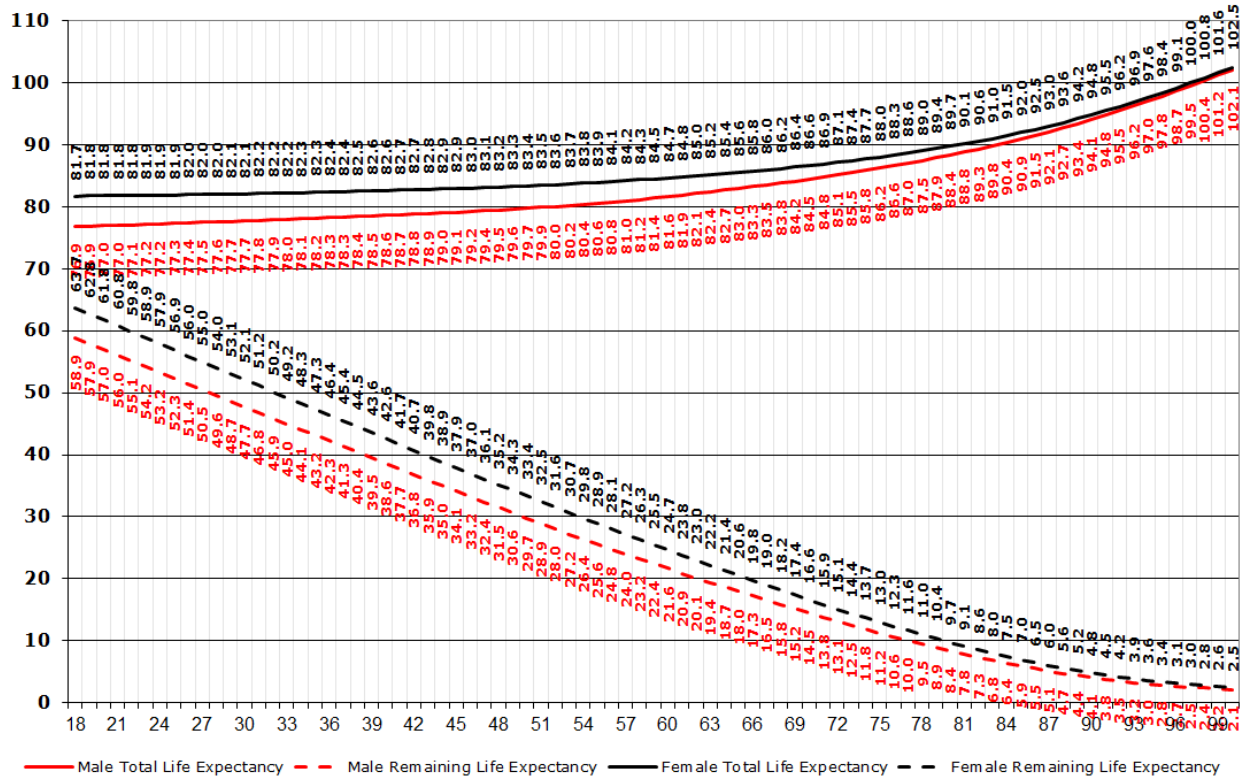
- Total life expectancy of a female given one's current age on the X-axis (bold black line)
- Total life expectancy of a male given one's current age on the X-axis (bold blue line)
- Remaining life expectancy of a female given one's current age on the X-axis (dashed black line)
- Remaining life expectancy of a male given one's current age on the X-axis (dashed blue line)

It is helpful to understand this U.S. life expectancy data for men and women at birth and for those who live to be 65. Particularly, in the context of political discussions about the viability of the Social Security retirement system given the stresses caused by the baby-boom generation cohorts moving through the system, people can be careless or selective in their interpretation of life expectancy statistics. Sometimes you hear that when the Social Security system was founded, life expectancy beyond traditional retirement ages was only a few years, and now retirees are living a couple of decades beyond retirement. Therefore, the system is fundamentally flawed. Unintentionally or otherwise, this is a misinterpretation of life expectancy data. Life expectancies have certainly increased, a proper comparison should be across age cohorts for those who have reached retirement age. At birth life expectancies have risen dramatically, but much of that is due to a significant reduction in child mortality. Those who died before working age neither contributed to the Social Security system nor made retirement demands upon it. When trying to understand the Social Security system, changes in mortality and many other factors are in motion, so it is very helpful to read the annual Trustee's Report, which can be downloaded from the Social Security Administration website.

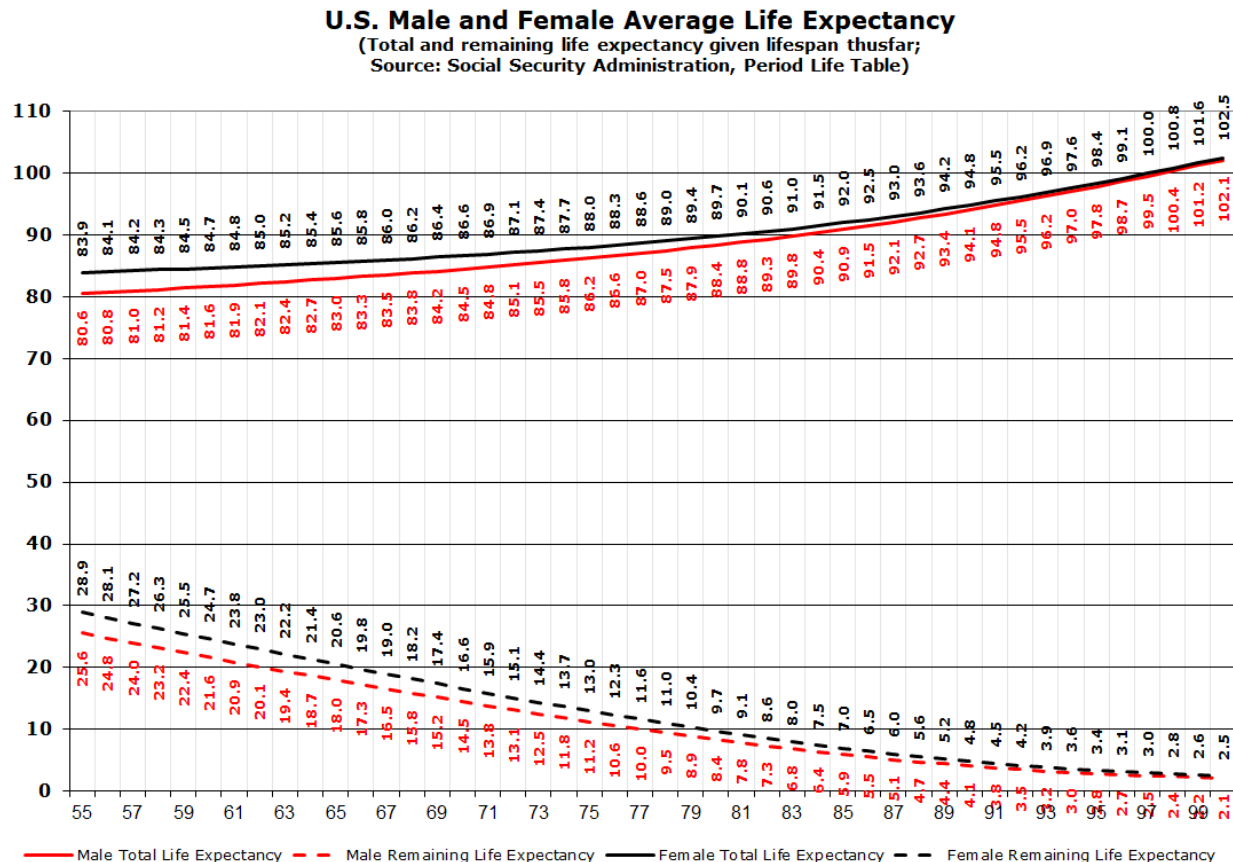
<http://www.ssa.gov/>

This is the full age 18 to 100 Life Expectancy graphic.

U.S. Male and Female Average Life Expectancy (Total and remaining life expectancy given lifespan thusfar; Source: Social Security Administration, Period Life Table)



This Life Expectancy graphic begins with the age set for Earner #1, which is 55 in this case. Data for age 18 to 100 can always be found on the Graphics Data worksheet.



19.3.24: HISTORICAL RETURNS graphic

U.S. Financial Asset Class Returns for 1928 to the most recent full year (Real dollar return percentages -- Annual asset class rates of return have been adjusted for the CPI inflation/deflation rate.)

These historical US asset class total investment returns are provided for reference. These total returns are calendar year returns, including both interest or dividends and capital appreciation. These data sources have been transformed for their use within VeriPlan. In particular, the US 3-Month Treasury Bill, US 10-Year Treasury Bond, and S&P 500 Stock Indexes have been transformed from "nominal dollar" percentage returns to "real dollar" percentage returns. This means that the percentage Annual Inflation Rate (CPI) figures on the chart have already been subtracted from the investment asset class returns that are graphed.

These historical asset class returns series are used to calculate A) the historical real dollar "compounded or geometric average" asset class returns measures and B) the historical statistical

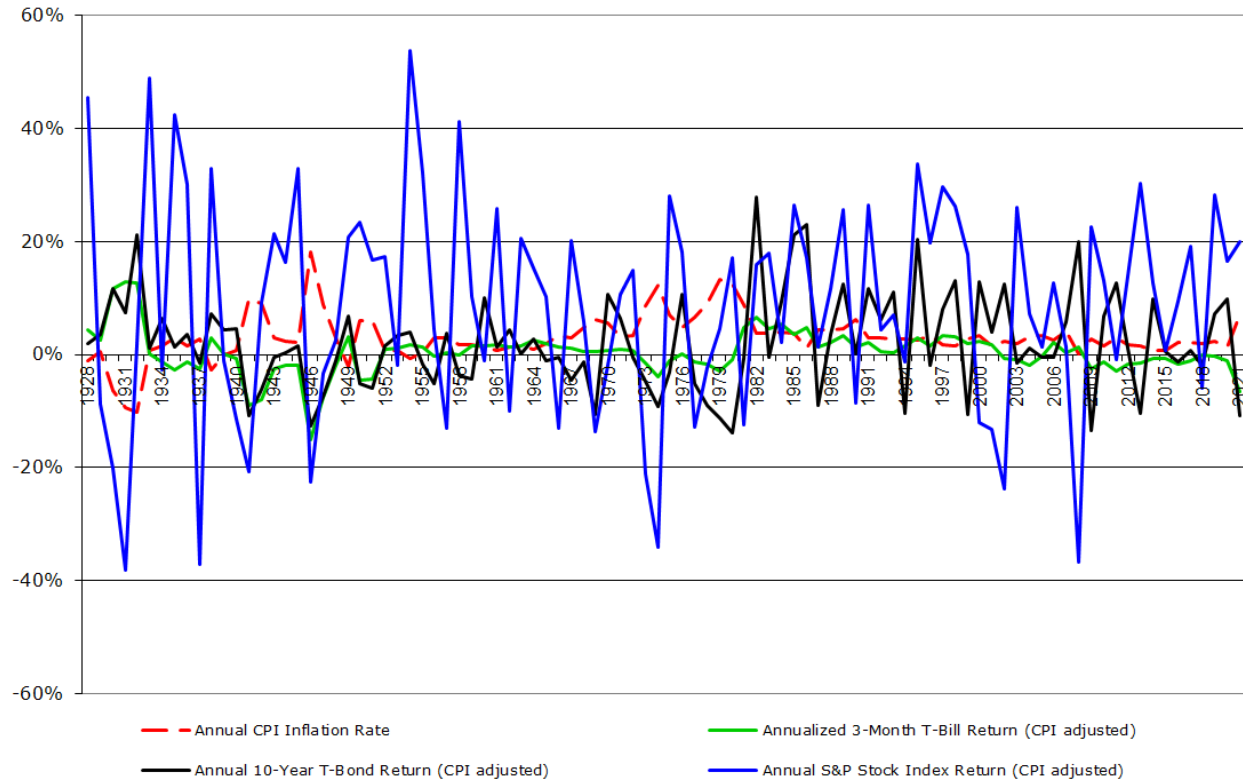
standard deviation asset class volatility measures, which are used in VeriPlan's default projections. These compounded asset class returns parameters can be changed downward or upward by the user in the risk and returns worksheet, either arbitrarily or systematically with respect to asset class volatility.

When interpreting these historical asset class returns, note the asymmetric nature of percentage change data relative to absolute dollar returns data. For example, when an asset begins at a particular dollar value and then increases in value by 100%, it only needs to fall by 50% from that increased dollar value to return to the original dollar value. Conversely, when an asset begins at a particular dollar value and then falls in value by 50%, it must increase in value by 100% from that decreased dollar value to return to the original dollar value.

The HISTORICAL RETURNS graphic

This is one of the VeriPlan graphics that remains fixed across all projections. This graphic is updated with each annual release. This graphic provides a visual history of the annual asset class percentage changes that underlie the compound annualized baseline asset class growth assumptions of VeriPlan's asset projection logic. With the risk and returns worksheet, a VeriPlan user has several mechanisms to change these asset class growth rate assumptions going forward - either systematically with respect to volatility or judgmentally/arbitrarily. However, of course, those user adjustment would not affect this graphic, since it is historical in nature.

U.S. Financial Asset Class Returns for 1928 to 2021
 (Real dollar return percentages -- Annual asset class rates of return have been adjusted for the CPI inflation/deflation rate to reflect purchasing power.)



These historical US asset class total investment returns are provided for reference. Note that they are calendar year returns, including both interest or dividends and capital appreciation. The sources of these data are:

Bureau of Labor Statistics -- Consumer Price Index

<https://www.bls.gov/>

Economic Research -- Federal Reserve Bank of St. Louis

<http://research.stlouisfed.org/fred2/>

Standard and Poors

<http://us.spindices.com/>

19.3.25: ROLLING RETURNS graphic

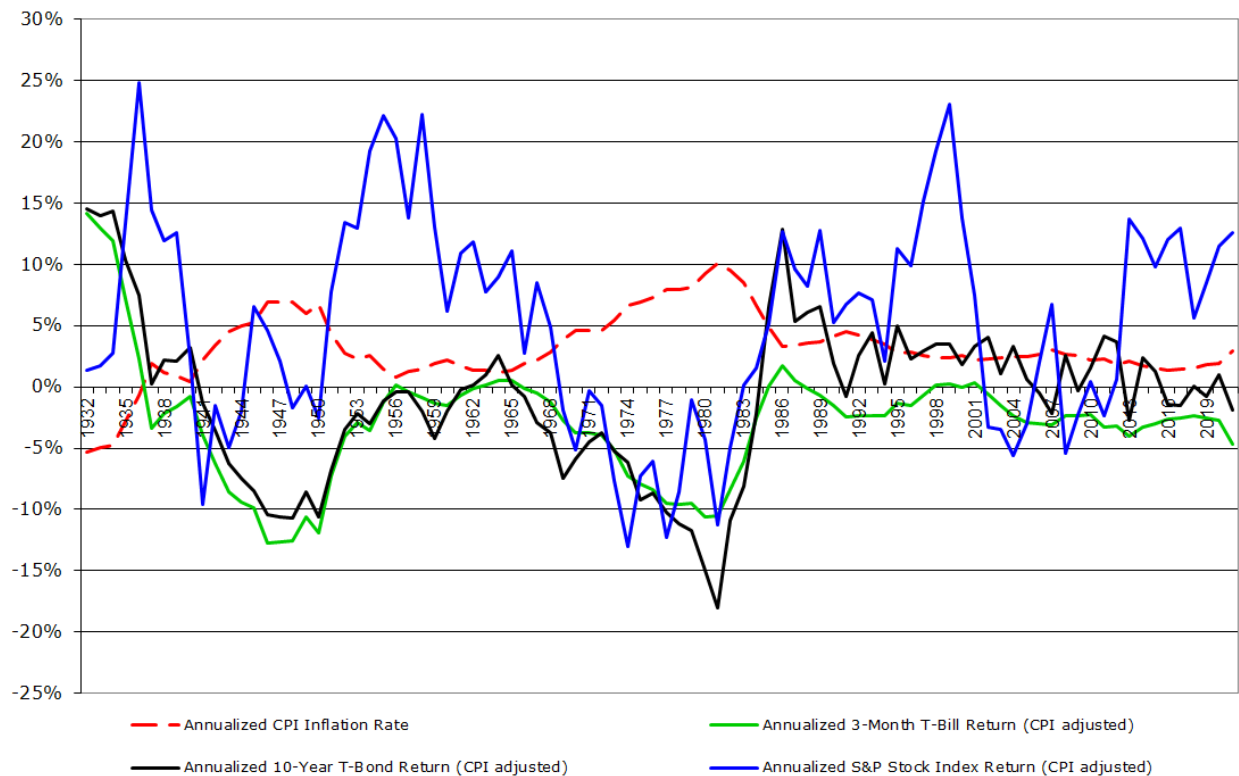
ROLLING RETURNS: U.S. Financial Asset Class Returns for 1928 to the most recent full year (5-year annualized returns ending the year on the X-axis. Asset returns have been adjusted for the CPI to reflect purchasing power.)

This chart uses the annual data from the HISTORICAL RETURNS chart above to develop the annualized real dollar returns for rolling five-year periods that end on the year indicated on the X-axis.

Annualized rolling averages, such as these five-year rolling averages can be easier to interpret visually. Just keep in mind that any rolling average will provide an understanding of cumulative returns for the period of the rolling average, but also may smooth out the variability of returns when both negative and positive returns have occurred for a particular asset class over that same period. Therefore, it is useful to inspect both annual returns and rolling period returns.

**Annualized Real Dollar Rolling 5-Year U.S. Asset Class Returns
1928 to 2021**

(5-year annualized returns ending the year on the X-axis.
Asset returns have been adjusted for the CPI to reflect purchasing power.)



Chapter 20: Data Output worksheet

You can find all the data for all the projection series that VeriPlan uses to draw these graphics on the green-tabbed "GRAPHICS DATA" worksheet which is the right most spreadsheet tab within VeriPlan. The Graphics Data worksheet lists the data for all graphics in the order that the graphics tabs appear within VeriPlan.

VeriPlan™ - Lifetime Financial Planning Software™						Data for All Graphics				
<<< Scroll horizontally for the projection data used to draw all the graphics >>> and ^^ Scroll vertically by age v v v										
Name of Graphic	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME		EXPENSES
Age	Gross Earned Income (Earner #1)	Gross Earned Income (Earner #2)	Other Income (Income worksheet Section 5)	Social Security Retirement Income	Pension, Annuity, & Deferred Compensation Income	Rental Properties Positive Cash Flow	Other Properties Income	Gross Earned, Retirement, Rental, & Other Income		Ordinary Living Expenses
55	\$80,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$145,000		(\$75,000)
56	\$80,000	\$65,000	\$0	\$0	\$0	\$5,588	\$0	\$150,588		(\$75,000)
57	\$80,000	\$65,000	\$0	\$0	\$0	\$6,161	\$0	\$151,161		(\$75,000)
58	\$80,000	\$65,000	\$0	\$0	\$0	\$6,720	\$0	\$151,720		(\$75,000)
59	\$80,000	\$65,000	\$0	\$0	\$0	\$7,265	\$0	\$152,265		(\$75,000)
60	\$80,000	\$65,000	\$0	\$0	\$0	\$7,798	\$0	\$152,798		(\$75,000)
61	\$80,000	\$65,000	\$0	\$0	\$0	\$8,317	\$0	\$153,317		(\$75,000)
62	\$80,000	\$65,000	\$0	\$0	\$0	\$8,825	\$0	\$153,825		(\$75,000)
63	\$80,000	\$65,000	\$0	\$0	\$0	\$9,320	\$0	\$154,320		(\$75,000)
64	\$80,000	\$65,000	\$0	\$0	\$0	\$9,804	\$0	\$154,804		(\$75,000)
65	\$80,000	\$65,000	\$0	\$0	\$0	\$10,277	\$0	\$155,277		(\$75,000)
66	\$80,000	\$65,000	\$0	\$0	\$0	\$10,740	\$0	\$155,740		(\$75,000)
67	\$0	\$0	\$0	\$29,400	\$24,000	\$11,192	\$0	\$64,592		(\$75,000)
68	\$0	\$0	\$0	\$29,400	\$23,280	\$11,634	\$0	\$64,314		(\$75,000)
69	\$0	\$0	\$0	\$29,400	\$22,582	\$12,067	\$0	\$64,048		(\$75,000)
70	\$0	\$0	\$0	\$58,800	\$21,904	\$12,490	\$0	\$93,194		(\$75,000)
71	\$0	\$0	\$0	\$58,800	\$21,247	\$12,905	\$0	\$92,952		(\$75,000)
72	\$0	\$0	\$0	\$58,800	\$20,610	\$13,311	\$0	\$92,720		(\$75,000)
73	\$0	\$0	\$0	\$58,800	\$19,991	\$13,700	\$0	\$92,500		(\$75,000)

Chapter 21: Comparison Tool worksheets

21.1: Carefully follow these Comparison Tool instructions

21.2: Interpreting differences between projection models

Overview of the Plan Comparison Tool

VeriPlan is built on the Microsoft Excel spreadsheet engine. As with any other spreadsheet, a change you make to one cell in VeriPlan will change the results of all other cells that are connected by the underlying logic. Spreadsheets do not "save the state" of the model that existed before the most recent change. Nevertheless, automated model comparisons are possible in VeriPlan, if you can manually "save the state" of a model, before making revisions.

This VeriPlan Comparison Tool allows you to make comparisons between your projection models.

- A) First, you develop a relatively complete initial baseline model with all of your data and assumptions.
 - * Note that it is generally a waste of your time to do premature comparisons between preliminary models, until you have entered ALL of your available material financial data and assumptions. Incomplete information can lead to erroneous comparison conclusions.
- B) Next, you will manually copy all of the data that VeriPlan outputs from your baseline model, and you will use Excel's "Paste Special" function to paste only the output data values from your initial model into a separate spreadsheet within VeriPlan. Using this "Copy" and then "Paste Special -- values only" method severs the connection between the underlying VeriPlan spreadsheet formula logic and the data that is output by VeriPlan. Doing this will lock the "state" of the data values from your prior baseline model.
- C) Then, you continue to revise one or more assumptions and/or data inputs within VeriPlan to reflect any alternative personal financial strategy.
- D) VeriPlan will automatically subtract the "live" data being output from the revised model from the "locked" data values of the prior baseline model. This allows you to

review and evaluate the data output differences between two lifetime projection models.

If you want to understand how this VeriPlan Comparison Tool works without developing a full model, do this with a fresh copy of VeriPlan without data:

- * Enter \$100,000 for Earner #1's earned income on the yellow-tabbed INCOME worksheet.
- * Enter \$60,000 as annual ordinary living expenses on the yellow-tabbed EXPENSES worksheet.
- * Follow the instructions below on this HOW TO COMPARE worksheet to "copy and paste special values" for this "\$100k income + \$60k expenses" model.
- * Then, change the \$60,000 in annual ordinary living expenses on the yellow-tabbed EXPENSES worksheet up or down to \$70,000 or \$50,000.
- * Evaluate the differences between the two models on the orange-tabbed PLANS COMPARED worksheet.

21.1: Carefully follow these Comparison Tool instructions:

Once you understand how to do this, it will take less than a minute to implement Steps 2 through 8.

- 1) Make any personal reminder comments about your model in the gray "<CLICK HERE to add a comment >" cells to the right >>>> and then SAVE your relatively complete VeriPlan model with a unique file name, so that you will have a backup copy.
 - * Note: After you complete Steps 2 through 8, you should resave your model with a DIFFERENT file name. Resaving with a different file name ensures that Excels' auto-save feature will not over-write your previously saved file.
- 2) Start with the orange-tabbed "COPY FROM" worksheet that is to the immediate right of this worksheet.
 - * Note that every cell on the COPY FROM worksheet is the same as the green-tabbed "GRAPHICS DATA" worksheet to the left. The only difference is that all the cells on the "COPY FROM" worksheet are use selectable, whereas all the cells on the GRAPHICS DATA worksheet are locked.)

- * If you need to copy any VeriPlan output data to an external custom spreadsheet, this is where you can access the data, but do so carefully.

3) Select EVERY cell on the orange-tabbed "COPY FROM" worksheet. This can be done two ways:

- 3.1) Either click the small box to the upper left of the numbered row and alphabetical headers. The box is above the "1" row and to the left of the "A" column headers.
OR
 - 3.2) Select any cell on the spreadsheet. Then, hold down the Control key while you press the letter "A" on the keyboard TWO TIMES. (Not once, but twice.) With either method, all the cells on the "COPY FROM" worksheet should turn light blue to indicate that they have been selected.
- 4) While all cells on the "COPY FROM" worksheet are selected, either:
 - 4.1) Right Click your Mouse button and select COPY OR
 - 4.2) Hold down the Control Key and press the C on the keyboard.
 - 5) Now the entire contents of the "COPY FROM" worksheet will have been copied to the Excel's Clipboard.
 - 6) Go to the orange-tabbed "PASTE VALUES TO" worksheet.
 - 7) Use the same selection procedure as in Step C) above to select EVERY cell on the orange-tabbed "PASTE VALUES TO" worksheet.
 - 8) While remaining on the "PASTE VALUES TO" worksheet, right click your mouse button and select "PASTE SPECIAL". A Paste Special pop-up menu will appear. Choose either "Values" or "Values and number formats" and then click the "OK" button.
 - * Through this action all values on the "COPY FROM" worksheet will be transferred to the "PASTE VALUES TO" worksheet. Ignore what the cells on the "PASTE VALUES TO" worksheet look like after you have completed this Paste Special (values) procedure. Formatting does not matter.
 - * (Note: This is the point at which you should resave your current model with a different file name to ensure that AutoSave does not overwrite your original file.
 - 9) Go to the orange-tabbed "PLANS COMPARED" worksheet to evaluate the numerical differences between your two projection models.

- * Cell values on the "PLANS COMPARED" worksheet are the numerical differences between the "COPY FROM" worksheet values and the "PASTE VALUES TO" worksheet.
- * The red text above the column headers explains how to interpret positive and negative numbers within groups of columns associated with a particular output graphic. In general, when your subsequent changes to your projection model cause the numbers in a particular column to increase, those numbers will be expressed as positive numbers in black text. Decreases will be expressed as negative numbers in red text with parentheses.
- * You should be careful when interpreting these numbers and think about how changes to your data and to your assumptions should affect your model. For example, increased income and increased expenses have the opposite effect on cash flow.
- * You should also be aware that just because the model difference comparison numbers in a particular column might increase or decrease in earlier projection years, that does not mean that those numbers will continue to increase or decrease in subsequent projection years. Other factors in the model can cause the differences to narrow and sometimes even reverse from positive to negative or negative to positive , as projection years increase into the future.

21.2: Interpreting differences between projection models

You should be careful when interpreting these PLANS COMPARED numbers and think about how changes to your data and to your assumptions should have affected your model.

For example, increased income and increased expenses have the opposite effect on overall cash flow. When evaluating the differences between your two models, you should think:

- 1) I changed two assumptions in my model. I increased my income assumptions, and I see that the income column difference numbers are black indicating that income increased over the prior projection.
- 2) I also increased my ordinary living expenses assumption, and I see that the black expense column numbers show that the expense difference increased over the prior projection.

- 3) I also note that some of the income tax columns are also black, which indicates that higher income taxes would be paid on higher income.
- 4) Then, I note that the projected cash flow and financial asset column difference numbers are red, which indicates a negative difference. This means that my projected annual cash flow would decline, and my accumulated financial assets would not grow as fast or perhaps might even decline in the future. I can evaluate whether the effects are significant by looking at the cash flow and total assets graphics.
- 5) Therefore, on net, the positive effect of increased income would be overwhelmed the effects of increased consumption expenses and increased income taxes.

You should also be aware that just because the model difference comparison numbers in a particular column might initially increase or decrease in earlier projection years, that does not mean that those numbers necessarily will continue to increase or decrease in subsequent projection years. Other factors in the model can cause the model differences to narrow and sometimes even reverse from positive to negative or negative to positive in the same column.

By scanning across all of the columns on the PLANS COMPARED worksheet you can better understand the interactions between various factors. Often “single assumption change” comparisons are easier to understand, so it is often helpful to change one setting or assumption and then change it back to the original number or setting and then to change something else to understand the impact of doing something different.

You can make as many of these “one-off” changes as you want without having to recopy the whole model, as long as you change the number back to what it was before, before making another one-off change. After getting experience with this comparison tool, you should develop a mental discipline about what changes you are comparing. Taking notes on a sheet of paper can be helpful to avoid the situation where you evaluate model differences and then realize that you lost track of the changes that you had made.

With other model comparisons you do need to make multiple changes before evaluating the impact of those collective changes. One such example would be the future purchase or sale of real estate. You would first want to set up all appropriate assumptions on the yellow-tabbed “PROPERTY+DEBT worksheet, before looking at the differences on the PLANS COMPARED worksheet.

For many comparisons, the projection with a significantly higher projected dollar amount at some future age(s) would often be the preferred strategy. Choose one or more future ages as your comparison benchmark age(s). However, you need to judge the magnitude of the projected financial advantage to decide whether the advantage warrants the effort in real-life required to achieve that advantage.

Note, however, that the highest projection value is not always the best answer when choosing between strategies. In particular, when you are evaluating a greater level of consumption, then projected future asset values may be lower rather than higher. Financial planning is not simply about running up your personal balance sheet until death. Instead, it is about your finances serving the needs of your family.

For example, you might be comparing your current housing situation with an alternative wherein you acquire a larger home. Various projected expense, tax, and investment factors will determine the cost and/or value of owning a larger home. If your family's projected aggregate future assets increase in relative terms, then you understand better the investment value of owning a larger home.

However, if projected aggregate future assets decline in relative terms, then you have a better understanding of the projected cost of consuming more housing over the years. Just because projected future assets might be lower due to higher housing consumption, you might prefer this alternative, because it means you expect to be happier with a larger and better home. Or, perhaps, the home is no better, but the public school district is superior and the benefit is a better education for your children, etc.

Comparison Tool: Sample of FIRST MODEL

VeriPlan™ - Lifetime Financial Planning So UNLOCKED Copyable Data for All Graphics -- Fol

Carefully follow directions on the "HOW TO COMPARE" worksheet to Copy **ALL CELLS** on this worksheet and then Paste Sp

Name of Graphic	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	EXPENSES
Age	Gross Earned Income (Earner #1)	Gross Earned Income (Earner #2)	Other Income (Income worksheet Section 5)	Social Security Retirement Income	Pension, Annuity, & Deferred Compensation Income	Rental Properties Positive Cash Flow	Other Properties Income	Gross Earned, Retirement, Rental, & Other Income	Ordinary Living Expenses
18	\$80,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$145,000	(\$75,000)
19	\$80,000	\$65,000	\$0	\$0	\$0	\$5,588	\$0	\$150,588	(\$75,000)
20	\$80,000	\$65,000	\$0	\$0	\$0	\$6,161	\$0	\$151,161	(\$75,000)
21	\$80,000	\$65,000	\$0	\$0	\$0	\$6,720	\$0	\$151,720	(\$75,000)
22	\$80,000	\$65,000	\$0	\$0	\$0	\$7,265	\$0	\$152,265	(\$75,000)
23	\$80,000	\$65,000	\$0	\$0	\$0	\$7,798	\$0	\$152,798	(\$75,000)
24	\$80,000	\$65,000	\$0	\$0	\$0	\$8,317	\$0	\$153,317	(\$75,000)
25	\$80,000	\$65,000	\$0	\$0	\$0	\$8,825	\$0	\$153,825	(\$75,000)
26	\$80,000	\$65,000	\$0	\$0	\$0	\$9,320	\$0	\$154,320	(\$75,000)
27	\$80,000	\$65,000	\$0	\$0	\$0	\$9,804	\$0	\$154,804	(\$75,000)
28	\$80,000	\$65,000	\$0	\$0	\$0	\$10,277	\$0	\$155,277	(\$75,000)
29	\$80,000	\$65,000	\$0	\$0	\$0	\$10,740	\$0	\$155,740	(\$75,000)
30	\$80,000	\$65,000	\$0	\$0	\$0	\$11,192	\$0	\$156,192	(\$75,000)
31	\$80,000	\$65,000	\$0	\$0	\$0	\$11,634	\$0	\$156,634	(\$75,000)
32	\$80,000	\$65,000	\$0	\$0	\$0	\$12,067	\$0	\$157,067	(\$75,000)
33	\$80,000	\$65,000	\$0	\$0	\$0	\$12,490	\$0	\$157,490	(\$75,000)
34	\$80,000	\$65,000	\$0	\$0	\$0	\$12,905	\$0	\$157,905	(\$75,000)
35	\$80,000	\$65,000	\$0	\$0	\$0	\$13,311	\$0	\$158,311	(\$75,000)
36	\$80,000	\$65,000	\$0	\$0	\$0	\$13,709	\$0	\$158,709	(\$75,000)
37	\$80,000	\$65,000	\$0	\$0	\$0	\$14,099	\$0	\$159,099	(\$75,000)
38	\$80,000	\$65,000	\$0	\$0	\$0	\$14,481	\$0	\$159,481	(\$75,000)
39	\$80,000	\$65,000	\$0	\$0	\$0	\$14,856	\$0	\$159,856	(\$75,000)
40	\$80,000	\$65,000	\$0	\$0	\$0	\$15,224	\$0	\$160,224	(\$75,000)

Comparison Tool: Sample of MODEL DIFFERENCES after earnings and expense changes

VeriPlan™ - Lifetime Financial Planning Software™ Plan Comparison Tool -- Differences Between th

	Positive Numbers Mean Higher \$ Income	<<< AND >>>	<<< AND >>>	<<< AND >>>	<<< AND >>>	<<< AND >>>	<<< AND >>>	Negative Numbers Mean Lower \$ Income	Positive Numbers Mean Higher \$ Expenses	
Name of Graphic	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	EXPENSES	
Age	Gross Earned Income (Earner #1)	Gross Earned Income (Earner #2)	Other Income (Income worksheet Section 5)	Social Security Retirement Income	Pension, Annuity, & Deferred Compensati on Income	Rental Properties Positive Cash Flow	Other Properties Income	Gross Earned, Retirement, Rental, & Other Income	Ordinary Living Expenses	Es
18	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
19	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
20	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
21	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
22	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
23	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
24	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
25	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
26	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
27	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
28	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
29	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
30	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
31	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
32	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
33	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
34	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
35	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
36	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
37	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
38	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
39	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	
40	(\$6,000)	\$8,000	\$0	\$0	\$0	\$0	\$0	\$2,000	(\$2,500)	

Appendix: Who is behind the curtain? Biography of VeriPlan's designer



Before (at age 50)

The chief designer and developer of VeriPlan is Larry Russell, an experienced financial planner, investment adviser, business executive, and software manager. Through studies at MIT (BS-1975), Brandeis (MA-1979), and Stanford (MBA-1982), I developed an understanding of economics, accounting, financial management, and investments.

For most of my 20+ year business career, prior to becoming a financial planner and registered investment adviser, I lead strategic initiatives at Hewlett-Packard and Sun Microsystems. Subsequently, I provided executive leadership to early stage Internet software companies focused on securities information and telecommunications.

After graduating from MIT in 1975, I conducted statistical research on employee benefit programs at the National Manpower Institute in Washington, D.C. In 1978, I moved to beautiful California and joined the Institute for the Future, a think tank in Menlo Park, California.

Using sophisticated computer projection methods for Fortune 100 clients, we developed long-range planning scenarios incorporating demographic, econometric, financial, and technological factors. My experience at the Institute for the Future was helpful in the design of VeriPlan, since VeriPlan functions as a fully integrated and automated lifetime scenario projection engine and financial planning decision support tool.

Completing his MBA at Stanford in 1982, I joined Hewlett-Packard's computer systems division and led business development and marketing initiatives. At Sun Microsystems from

1991, I acquired product lines from technology companies via negotiated licensing arrangements. As Director of Corporate Development, during my last four years at Sun Microsystems, I directed mergers and acquisitions projects, evaluated investment proposals made to Sun's senior executives, and managed the corporation's external investments in private firms.

In 1999, I co-founded Codexa Corporation in Altadena, California with an MIT undergraduate roommate, Dr. David J. Leinweber, an expert on computationally driven institutional investing. As Codexa's EVP and CFO, I directly managed the finance, accounting, business development, human resources, and legal functions. I developed Codexa's information service provider business plan, hired the executive team, and helped to raise an \$8M Series A venture round.

Codexa developed an advanced and automated systems service that provided Internet information filtering services to Wall Street securities industry professionals. Our service architecture is described in detail Chapter 6 of "*J2EE Technology in Practice: Building Business Applications with the Java 2 Platform, Enterprise Edition*" by Rick Catell and Jim Inscore.

Our company's early stage clients included numerous major Wall Street firms. Despite having developed working technology, Codexa was still a development stage company with an unsustainable negative cash burn rate. In 2001 the securities, technology, and telecommunications industries fell off the cliff and needed Series B financing was not available, as the dot bomb bubble imploded.

In 2001, I established Lawrence Russell and Company, initially as a consulting firm. As a consultant during its formation in 2001, I served as Interim President of VRVS Global Corporation, a Caltech rich media telecommunications startup. I developed the company's business plan and helped the board to recruit a permanent and experienced CEO. I also developed a financial model to help the new CEO secure a \$1M strategic partner investment and a \$3M Series A venture capital round.

With the technology and securities industries on their backs in 2001 with all four legs in the air, there were few long-term career opportunities for a person with my background. I decided I was not going to hunt for nonexistent positions along with the haystack of other unemployed professionals in the wake of the dot com crash. Soon, I reached the conclusion that, however unwillingly, I must be retired at the ripe old age of 51. As a self-directed investor during my corporate career, I saved my pennies and invested them according to the principles that I had

learned at the Stanford Business School, Therefore, retiring at 51 was feasible, while not desirable to me. Since I was too old for basketball and did not care for golf, I began to catch up on the investment and personal finance research literature to see what was new, since I had been at Stanford in the early 1980s.

In 2002, I began an in-depth and systematic reading of the scientific finance literature. I read finance and investment journals, visited finance professors' websites, and searched the Internet for publications and working papers. As I searched the web, university libraries, and on-line scholarly paper repositories, I was impressed by how much useful, but obscurely written, financial information was scattered around the academic world. It seemed to me that many individuals and families were starved for such useful and objective financial planning and investment information, while they were drowning in a sea of self-interested financial industry sales pitches.

After a year of almost full-time reading, clarity began to emerge. Then, and in the decade following, I have read thousands of research papers in their excruciating economic and statistical details. These scientific finance papers hold information that is directly useful to individuals for financial planning and investing. Yet, academic papers are written for an audience of other academics and highly trained industry research professionals and not for individuals.

This useful academic information is obscured by the vocabulary of economics, mathematics, and statistical research. To make some of this information more accessible, in 2002, I began to write summary articles and publish them on the web. In the past decade, I have published hundreds of financial and investment articles on the web. The easiest way to find them is to go to my *The Skilled Investor* website: <http://www.theskilledinvestor.com/> On the front page of The Skilled Investor you will find a hierarchical listing of many of these articles. In addition, the red colored links in the left-hand sidebar of *The Skilled Investor* website will take you to my other personal finance, financial planning, and investing websites.

I became convinced that I understood more efficient and scientifically verifiable pathways for individuals to optimize their financial planning and investment strategies. I also realized that the computational details and complexity of the subjects involved prevented individuals from focusing on financial decision-making. Simple spreadsheets, free online financial tools, and back of the envelop calculations were generally useless when hundreds of personal income, expense, debt, tax, investment, and other factors at play, which were unique to each family.

In 2002, I had begun to design and develop a financial and investment planning spreadsheet for my family. I got a bit carried away with this project. In 2003, I designed the architecture for a fully automated, completely integrated, and highly customizable lifetime planning software tool build upon the Microsoft Excel spreadsheet engine, which eventually became VeriPlan.

I designed VeriPlan to be a decision support tool set for a financial planning advisory business that I intended to set up. I also designed VeriPlan to be self-learning and self-updatable, so that do-it-yourself users could purchase personal use copies and licenses through the Internet. I realized that the mass of Americans would never have access to a personalized lifecycle planning application, unless an inexpensive software product was developed. I decided that VeriPlan must be priced very low, so that everyone could afford it.

I estimate that I put between 3,000 and 4,000 personal hours into the development of VeriPlan between 2003 and 2006. When you are "retired" and self-employed you do not have to keep a time card. By 2006, the core cash flow, investment, and taxation projection functionality of VeriPlan was complete and robust. Since 2007, I estimate that I have spent between 300 and 500 more hours annually working to extend and enhance the functionality of VeriPlan. To date the total tally is probably about 8,000 to 10,000 hours.

With the scientific planning and investing knowledge that I gained from my reading and publication of financial articles on the web and from the development of VeriPlan, I also planned to become a financial and investment planning adviser. In 2004, I passed the Series 65 "Uniform Investment Adviser Law Examination" administered for the North American Securities Administrators Association (NASAA) by the Financial Industry Regulatory Authority (FINRA). In 2005, my firm, Lawrence Russell and Company, became a Registered Investment Adviser in the state of California (Certificate #133101).

Using VeriPlan as an integral part of my financial services offering, in 2008 I began to deliver comprehensive financial planning services to clients residing primarily in the Pasadena, California area. To avoid all conflicts-of-interest, I set up a purely fee-only advisory practice. I charge hourly or fixed fees for customized planning services. To avoid conflicts-of-interest, I do not sell any investment or insurance product of any kind. I do not charge any percent of asset fees. I do not accept or pay third party fees of any kind.

Before starting my development of VeriPlan in 2003, I had searched for a sophisticated and customizable lifetime financial planning tool to use myself. I was unimpressed with what I

found. Instead of providing an interactive and personalized modeling environment that a client could use interactively with an advisor, many professional financial modeling tools had significant functional and analytic limitations. They also required extensive training to be used properly. Worse, all of these professional tools just cost too darn much.

Furthermore, many of these computerized professional planning tools are designed to channel clients toward the selection of more costly financial, securities, and insurance products. Through my research, certain scientifically verifiable selection criteria for financial and investment products had become very clear to me. The cost of any financial or investment product is at the top of this list of criteria.

Financial product selection should be separated entirely from the lifecycle planning process. The sale of financial products should never be embedded into any true financial lifecycle planning application. Lifetime financial planning software should provide interactive tools to understand personal needs and to evaluate financial tradeoffs between one alternative and another. Integrating financial product sales will necessarily distort objective financial planning, because what is best for the client, the advisor, and the industry most often are just not the same.



After (at age 70)

(Being told that I would never have to wear a suit again.)

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