Sensible and Sound Lifetime Investing

2026

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ISBN: 9781311157539

Editions

2013, 2016, 2023, 2026

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Chapter 1: Principles of lifetime and retirement investing

People can benefit greatly, when they decide to follow investment strategies that are:

1) savings-driven,
2) thoroughly diversified,
3) completely passive,
4) risk-adjusted,
5) cost-effective, and
6) tax-efficient.

These factors are all interrelated. In fact, when you choose personal investment strategies with these characteristics, your financial life becomes less complicated. You can achieve better investment results, while you spend less time managing your money. When you have a simplified and durable lifetime investment strategy, you can get on with the life that you really want to live.

By earning more and spending less, most people will have much more impact on their future financial well-being than they ever could by trying to be more clever investors. Investment cleverness tends to be counter-productive for individual investors. In contrast, another dollar saved is another dollar to invest.

Thoroughly diversified strategies eliminate unnecessary and uncompensated risk. In addition, fully diversified strategies usually are completely passive, and they tend to have lower investment risk. The more passive your strategies are, the better they are.

Motion without effective purpose in finance wastes both your money and your precious time. Motion in finance is futile, because asset price setting is generally very efficient, and the costs of making changes are high and push you backward. Market timing does not work. With investing, the watchwords are buy-and-hold-and-hold-and-stay-put-until-you-actually-need-the-money to live -- not to reinvest in some alternate investment scheme. This is easily proven by the academic research literature.

Optimal investing is all about risk-adjusted asset returns at the portfolio level. Securities markets tend to pay a premium for risk taking, but only for market level risk taking. Securities markets tend not to compensate for the risks associated with holding some subset of selected securities. Stock picking does not work and individuals need to understand this. There is no risk

free money in investing, but there are many ways to take more unnecessary risk without commensurate rewards.

Your financial and investment practices need to be cost-effective. Cost reduction is the single most important factor that will improve investment returns for most people. In addition, when you cut down your investment costs, you also cut out the incentive for someone to sell something to you. When you stop listening to financial sales people and start looking proactively and only for low cost, passively managed, risk-adjusted, and fully diversified investments, you will simplify your choices. You will still have plenty of low-cost, broadly diversified investment options. Furthermore, the scientific evidence indicates that these choices will be the most favorable to your interests.

Greater tax efficiency tends to be a simple by-product of following the other decision rules listed above. More risky, poorly diversified, active strategies tend to incur higher taxes. Nevertheless, you always need to understand the tax implications of the financial actions you take.

Choosing the lowest cost investments will always mean adopting a passive index benchmark investment strategy.

The logical decision of individual investors is to avoid all activism and not to pay more for a poor chance of winning versus a much larger chance of losing. Instead of trying to beat the

market or trying to find a mutual fund manager who will beat the market net of his substantial added costs, individual investors should instead focus their efforts on:

* earning more income and saving more to fund their investment program
* understanding their relative investment risk tolerance and choosing an investment asset allocation that is appropriate for their personal risk profile
* using rational selection methods to acquire a low cost, low tax, broadly diversified, passive market-based portfolio
* applying time and energy to investment activities that tend to increase personal financial welfare, while eliminating time spent on activities that undermine it.

Invest passively in very low cost, very broadly diversified index funds across the world. Save more to build your assets. Save your time and do something else that you actually enjoy, instead of wasting your time and money playing amateur individual investor.

Most wealth comes from sustained savings

Valuable investments that many people will never have can slip through their fingers at the checkout stand every day. You should focus the great majority of your financial planning efforts on earnings, expenditure management, and savings. To understand your family's ongoing financial situation, you should measure all your income and all your expenses at least annually and, preferably, monthly.

Simply put, most people should save much more than they do. A person's ability to distinguish between needs and wants and to evaluate and control his current expenditures are the primary determinants of his financial success in life.

Sustained savings allow you to build wealth through investing For most families, how much you earn, spend, and save are by far the most dominant determinants of your long-term financial well-being. Self-control in your consumption decision-making is far more important than clever investing. Expenditure control works, while clever investing is usually counter-productive.

You always should consume currently at rates that are sustainable across your lifecycle. During their lives, the vast majority of people must convert their human capital into investment assets through their savings, before their ability to earn slips away with increasing age or disability.

Short of receiving a substantial inheritance, marrying "very well", or having unusually good luck in the lottery, all you have to rely upon in life is your personal human capital or your ability

to earn and save. There are no other shortcuts. You probably already know whether inheritance or marriage would relieve you of the burden of working and saving. As a wealth planning strategy, lotteries are a highly improbable. Regrettably, lotteries and casinos tend to attract the less educated and those who have poor knowledge of math and statistics.

Chapter 2: Unknown unknowns - investment risk and return

2.1: Investment risk is eternal

While you may hear comments, such as "this time is different," with investing it never is different.

Certainly, across time, the particular facts describing the current situation will differ, but the underlying issues of risk and uncertainty in the face of a truly unknowable future are always there. How humans respond will ebb and flow, but there is never a way to wash out the risk and uncertainty.

The only metrics we will ever have are metrics from the past – whether one minute, one year, or decades ago – and those metrics are NEVER predictive. They simply cannot be predictive because information about the future is simply not available.

If you consciously ignore the charlatans who twist the past into an implied prediction of the future, and instead you seek the knowledge of researchers who have genuinely tried to be objective in their investigations, you will find that investment knowledge tends to be timeless. General investment themes and reliable strategies tend to repeat. Studies from prior decades remain useful and their conclusions tend to repeat just with new data.

You must stay in the markets to earn investment risk premiums when they unpredictably occur. If you think you can get in and out of the game, you are also fooling yourself. Timing does not work over the long run. If you think you can get in and out of the investment markets and do better than the market over time, you simply have not read the research literature. Where are all the stay-at-home day-trader billionaires? There are none at home staring at computer screens and making $8 trades. The only "day-trader billionaires" are on Wall Street playing with other people's money and taking the fees and a piece of any random gains over time.

Key concepts related to the best investment strategy for your personal investment portfolio

The current price of a security represents the market's consensus about its potential future value, given the various advantages and disadvantages that all investors see in holding or selling that security. As such, the current security price is a weighted average value forecast of events that might or might not occur. Market prices are the best available assessment of forward-looking, risk-adjusted fair market value.

Through securities market prices, a wide array of investors with differing predictions and varying concerns essentially "vote" on the expected or likely future value of a security through its current price. Investors' evaluations of the value of securities may vary widely. What one person might see as a great bargain, another might consider grossly overpriced. Without this divergence of opinion over current securities values relative to potential future values, there would be no trading of securities. Given the immense volume of securities trading that occurs daily across the world's securities exchanges, it is clear that there is no shortage of significant differences of opinion about current market values.

Securities prices represent the current valuation consensus on a risk-adjusted basis. Risk refers to the expected size and likelihood of future up or down price variations or volatility. As

such, not only do prices reflect expected returns, they also reflect the panoply of concerns, optimism, risks, and euphoria about how a wide range of factors might affect the price in the future.

Given this highly speculative, future-oriented, and risk-adjusted valuation process, there are bound to be very significant price fluctuations as time goes on. This variability is the natural side effect of the market's communal, self-interested valuation process, and this variability is neither good nor bad. It seemly means that speculation about future investment value has been, is, and will always be subject to risk and uncertainty.

Future securities market values are fundamentally unknowable

The problem with trying to predict future securities market values is that the future is fundamentally unknowable, until it has arrived. As time passes, some of that future arrives and becomes history and securities prices adjust to reflect what really happened. The dilemma is that securities pricing is always forward looking into the unknown. All investors must place their bets beforehand and take their chances on what will happen.

While history can be instructive about what might be more or less likely in the future, history tends not to be predictive. Securities prices exhibit only a very tiny level of predictability within a very large range of random fluctuations. The blending of expectations about future returns and risks into current securities prices means that the situation is subject to a wide range of either insightful to specious predictions. Unfortunately, you can only guess which predictions are insightful or specious, until after the fact.

The volatility of prices across time provides an opportunity for just about anyone to develop a supposedly predictive theory on how the markets actually work and to offer selected data to support their arguments. The only reliable way to sort through what is true or false is to rely upon the investment research studies of highly disciplined academics who carefully test these theories using market price data that is unbiased.

Individual investors should ignore concerns about securities market values

Individual investors are usually better off, when they ignore concerns about whether the securities markets fairly value investment securities. If there is a reasonably large and liquid market where investors interact through "arm's length" transactions, then individual investors should simply accept current market prices and avoid the usually futile temptation to second-

guess current values and to try to beat the market. While some securities prices will eventually be shown to have been either too high or too low relative to their subsequent prices, the reasons almost always have nothing to do with market pricing mistakes by the securities markets.

Current securities market prices do a pretty good job of reflecting information that is already know. Statistical studies demonstrate that errors tend to cancel each other leaving little opportunity of investors - especially amateur individual investors - to identify, trade, and profit on these current pricing errors. In effect, especially among individual investors, those who appear to have done better than the market were largely just lucky and those who did more poorly were simply unlucky.

Instead, prices tend to change over time due to unpredictable future events which occur and cause the securities markets to revalue securities. New information continually changes forward-looking expectations about expected future investment values. Since this new information becomes known only if and when it happens, there is no way to have reliably predicted it. Speculation about a range of possible future events will influence current prices, but only time will tell what actually will happen.

2.2: Markets discount current values for perceived risk

The securities markets provide an evolving consensus of the risk-adjusted value of particular securities. By understanding how the markets value securities, individual investors can chose more durable investment strategies.

Judging the potential usefulness of different investment strategies requires an understanding of what the public securities markets really do. This section discusses how the markets price financial securities from the standpoints of risk and return. This description generally characterizes the behavior of modern securities markets in industrialized countries around the world.

Securities markets provide a continually adjusting balance of trading order supply and demand, wherein price changes enable this evolving balance. Important observations about securities markets from investment science are that:

1) The aggregate market return consists of payouts plus capital gains or losses across all investors. The aggregate market return is the total possible return for publicly traded securities.

2) Markets look forward. Participants attempt to peer into the murky and fundamentally unknowable spectrum of possible future events that could affect future asset values.
3) Markets price securities on a risk-adjusted basis. Current securities prices are discounted versus their projected future values to reward certain kinds of risk taking. Prices will differ from one security to another, because expected economic returns differ and because investors perceive greater or lesser certainty in the realization of those expected returns.
4) Current market prices reflect the current consensus or balance of expected risk and expected return. This valuation consensus reflects the balance across all active participants, including those who are paying attention, but chose not to act.
5) Current market prices tend to reflect fully all currently known information associated with a particular security. There may be a wide range in the interpretation of the importance of available information, and asset market values reflect the consensus across all investors.
6) New information disseminates widely and very rapidly. Investors quickly interpret new information for its potential impact upon both value and risk. Prices rapidly reflect new information, as supply and demand shifts quickly and market prices change accordingly.
7) When some investors "win," others must "lose" relative to the aggregate market return. Whether luck or skill determines who wins or loses and how one can tell the difference are pivotal questions in choosing investment strategies.

By understanding these critical investment subjects and being aware of the associated scientific evidence, investors can adopt investment strategies that are potentially more profitable. Scientific evidence indicating which strategies are preferable reduces confusion and reinforces the confidence needed to ride out market volatility.

Value fluctuations and conflicting opinions can challenge anyone to formulate and stick with a set of investment principles. Market fluctuations over time and across business cycles, industries, asset classes, geographies, etc. can raise significant doubts. The maelstrom of media and commentator truth, noise, and rubbish increases investor confusion. This very volatility and

conflict of opinion requires investors to strive for an objective basis for choosing their investment strategies.

Many investors want to jump immediately to investment tactics and many avoid thinking more deeply about the underlying logic or validity of their tactics. Shooting prior to aiming generally leads to poor results and collateral damage. With investing, very often this means that you shoot yourself unwittingly in your own financial feet. Given the astonishing amount of erroneous investment information and fallacious theories circulating, tactical action without a scientific anchor can be hard on your wallet.

2.3: Securities values - snapshots in time

Every securities market transaction requires a buyer and seller with differing viewpoints. Differences between investors in their assessments of the intrinsic value and risk of securities allow markets to operate.

Investment values are in the eyes of the beholders of investment securities. Knowledgeable participants in securities markets use a wide variety of methods, data, metrics, and information to assess the value and risks of particular securities.

The viewpoints of market participants regarding any particular security can vary dramatically. One participant might view the current market price as a wonderful bargain, while another might think that the price is excessive. This disparity of viewpoints permits markets to operate. A fluctuating market pricing mechanism sets the current price within this range of conflicting opinions about value and risk. The market matches buyers and sellers to complete transactions and balance supply and demand at each point in time.

Valuation involves both an assessment of the intrinsic value of a security and the likelihood that such value will be realized. The best that market participants can do is to incorporate two things into their valuation of that security: a) currently known information and b) their speculation about what might happen and how it would affect value in the future. Market participants must buy or sell at the current market price or remain inactive. Whether or not they act depends upon their assessment of value and risk versus the risk/return consensus that is reflected in the current market price.

Generally, market traded equity and debt securities are legal claims to some aspect of the finances of a business or governmental entity. While potentially quite complex, the “easy” part

of the analysis relates to assessing the underlying value of a security through financial modeling or whatever other valuation method an investor may use.

Unfortunately, future-oriented financial models are deceptively straightforward. Forecasted numbers on paper have a tendency to seem more real than they actually are. Perhaps this is because they are often similar in format to the reporting of actual historical financial performance. However, forecasts on paper are simply rational fantasies about an unknowable future. Every investor, analyst, business planner, manager, and executive faces the same problems with the reliability of forecasting.

The major problem with plans about the future is risk. Risk assessment is the much harder part of securities valuation. A myriad of positive and negative factors could intervene as time goes on to create economic successes and failures. For those who attempt rationally to value a security, assigning a current risk-adjusted valuation requires predicting events that may or may not happen. This process gives rise to a substantial amount of uncertainty regarding any particular security. The further into the future an investor attempts to peer, the greater that uncertainty.

The future is fundamentally unpredictable in any of its details. No investor has a working crystal ball. If you go for a cup of coffee, you expect to get it in a few minutes. The odds are strong that you will be savoring your coffee as you planned. However, there are no guarantees. Many things positive and negative could intervene to alter your quest for caffeine … the phone, the boss, etc.

As with anything in life, business, and economics, no one knows what will happen with absolute certainty. Anyone can have a more or less informed opinion about what “may” happen to the value of a security. However, people do not and cannot “know” with any certainty. This uncertainty of future asset values is why markets can and should be baffling to thoughtful individual investors and professionals. Anyone who predicts with an air of certainty what the securities markets will do or who does not offer a slew of caveats should be ignored.

Uncertainty about future outcomes is the reason why historically investors have been paid a fluctuating "market risk premium" for investing their money in risky assets. While these risk premiums or investment returns can be seen in historical numbers, this history only means that investors have paid on average less in the past than they receive in the future. Sometimes the returns are very high and sometimes the invested capital is wiped out.

One of the most significant and fundamental questions investors must ask is whether the past is a prologue for the future. They must ask this question about specific investment securities to buy or sell right now, which can be as narrow as ownership of the debt or equity of a single entity or as broad as an investment fund with the broadest possible ownership of investable assets. Despite the assertions of a financial industry pushing various investment products, investors must put their money on the line and wait for time to pass to find out what really would occur as the future became the past.

Except for the legal fine print, the financial industry always sells the sizzle. However, the quality of what you have been served may not live up to your expectations once you eventually get to taste of what you have bought. While the promotional behavior of the financial industry is covered in more detail elsewhere in this book, as an investor, you need to decide your strategy given the risk and uncertainty about investing that I am pointing out here.

You can choose to spend your life chasing winners with active investment strategies in the face of risk and uncertainty. Or, you can decide to sidestep the whole game and invest passively, while taking whatever the market return turns out to be. The investment research literature demonstrates that investors should avoid active strategies that bet on particular securities outcomes, because on average current market prices tend not to allow for profit in excess of the market return after investment costs, taxes, time, and risk are properly valued. Cumulatively, "lucky losses" just tend to outweigh "lucky gains."

Amateur and professional investors need to recognize they cannot reliably place profitable active bets, because they simply do not know what will happen to future asset values relative to current values. All you can "know" is that investors in the past have been positively compensated on average by the securities markets for exposing their assets to general market risks. If you "believe" that securities markets in the future will have similar characteristics, then you take a leap of faith and invest your assets in the markets now in proportion to your tolerance for risk.

Since there is also no evidence that investors can consistently time market downturns and upturns, then you simply keep tolerable portions of your assets invested across time, unless you need them for expenses. You have to be in the market to capture the market premium when it occurs, and you have to take the bumps as they occur.

There is no safety either in the market or on the sidelines. Markets are unsafe because they have unpredictable downturns. Staying on the sidelines is unsafe because the market premium is

unpredictable and you will miss it when it happens. No potential pain no potential gain. Staying on the sidelines in cash means that all you may earn is a rather modest return, if history is any guide. Of course, the risk on cash assets has been far lower, when viewed using "nominal" or inflationary dollars. However, once inflation has been removed from the historical picture, the interest return on cash has been very thin. Inflation is the risk chasing cash assets.

2.4: The confusing securities market motion picture

Securities markets are usually very quick to adjust prices to reflect new information. However, this price adjustment process may take longer and be more volatile, if the new information is ambiguous. At any point in time, market participants will already have used more or less rigorous valuation methods to judge their expected risk-adjusted value of securities. Then, time passes and something new happens. Participants who are aware of the new information must decide whether it will change their perspective and cause them to alter their trading strategy. To most, the result is a very confusing securities market motion picture.

This process of reflecting new information in the market prices of securities is known as “impounding” new information. The rate at which information is impounded into prices has increased dramatically in recent years, in large part do computer, networking, and communications technologies that make information available instantly and globally.

Only a small portion of potentially interested investors needs to react to change the valuation balance and shift the market price. Significant new information that is generally viewed either positively or negatively will cause some currently active investors to change their trading strategies quickly. Other investors who had been inactive may decide to enter into transactions. If there is a consensus about the meaning of the new information affecting a particular security, its price will change quickly, and that change will tend to persist.

Not all opinions are of equal importance to the market. Market participants with more assets will have greater influence on securities pricing. The strength of their willingness to buy or sell has a greater impact on the markets. To execute their transactions, bigger players may absorb all current demand for the other side of the transaction. To execute larger transactions the market price or bid-ask spread may need to shift up or down to induce other participants to trade with them.

As other less attentive players subsequently become aware of new information, they too may adjust their valuation. However, because the market price has already adjusted to reflect the change in the information environment, these less attentive players may or may not decide to take action. Because the price has already changed, it may already reflect their revised valuation opinion, and they will remain inactive. Other players may continue to come into the market, but the price may not need to adjust further. The revised price may be sufficient motivation for these investors to take the other side of transactions.

In addition, the price could become highly volatile for a time and then will settle down as supply and demand adjust. As the price adjusts, it helps to align the revised supply and demand picture. Eventually, the price will tend to stabilize and fluctuate more narrowly around the newly adjusted price. If the new information is significant, but ambiguous, there could be a more extended period of higher price volatility. The direction and magnitude of the price may fluctuate as participants both sort out what the information means and react to price fluctuations.

2.5: Are securities markets foolish?

Efficient market pricing is the theory that all known information is already reflected in current securities prices

Efficient securities market pricing has become very widely accepted within the investment community. The preponderance of evidence is that securities markets are efficient and tend to

reflect available information. Whether you believe markets are efficient is very important to your decisions about appropriate investment strategies and tactics.

On one end of the spectrum, if you believe that market prices fully reflect available information, then you are more likely simply to accept the current price as the fair market value. Market efficiency means that even if you were to engage in significant research you would only be reanalyzing information that has already influenced enough other market participants to be fully reflected in the current price.

If you do not believe that markets are generally efficient, you are much more likely to engage in research in an attempt to find overlooked or improperly understood information. Your objective would be to use this unappreciated information to identify securities that are not yet properly priced by the market. You would implement trading strategies in the hope that they would allow you to capitalize upon that information and earn exceptional profits.

Efficient market theory gives rise to an often-repeated investment joke that comes in many different variations. In general, two economists are walking down the street and both see a $100 dollar bill on the ground. One asks the other, "should I pick it up?" The other says, "Don't bother, the markets are efficient and therefore someone else already has." This joke reveals some of the misunderstandings that surround efficient market theory.

Markets can be efficient if they tend to reflect fully the available information in securities prices on average

Across different securities and from time to time price inefficiencies may crop up here and there, and active market participants can and will move in to profit from these inefficiencies. By picking up the occasional $100 dollar bill found on the ground, traders – or the economists in the joke – make the markets more efficient.

If securities markets are efficient, then positive and negative price inefficiencies will tend to be small and cancel each other. However, if profits net of analysis and trading costs on information-based trading strategies are significant and sustained over a long period, then this might be an indication that the market is less than completely efficient. Nevertheless, this still could just be the result of good, dumb luck. Just because one investor has a winning streak does not indicate skill. See: Distinguishing between true investment skill and luck

Incidentally, you do not really need to read the investment research literature in any detail to reach a conclusion about whether investment securities markets are more or less efficient. You

can instinctively judge the likelihood of whether a huge volume of stray, investment risk-adjusted $100 bills is or is not constantly sloshing around the world's securities markets.

Think back over your lifetime and estimate that total amount of money that you have ever found out in public. Now, guess whether you have found in public more or less than the average person. How long could you live on that money? A year, a month, a week, a day, a few hours, minutes? For the vast majority of people, the amount of money they have found in public over their lives would cover their living expense for just minutes to hours. How many homeless people do you see, who are living extremely well off the cash accidentally spilled from people's pockets? Are you willing to quit your job for a life of luxury funded by just walking around and picking up cash that other people carelessly drop?

So, if it seems that most people are pretty good at holding on to their cash, what is the likelihood that their behavior would change in the global, real-time securities markets? After people have worked hard to earn and save money will they blithely toss it around the securities markets? After you consider that the securities industry has amassed knowledge, brainpower, and computational resources to rival all other institutions in the world, how much of investors' hard earned savings will be allowed to just slosh around the securities markets for minutes, days, weeks, months, or years, without some more tightfisted person grabbing and holding on to those $100 bills?

Now, there are many arguments that could be made whether the "cash on the street versus investment securities market" example that I have given above is comparable. Okay, narrow it down just to a comparison of cash lost on the street with cash lost in banking behaviors. For those who see mistakes on their financial statements (which are not in their favor) and blithely ignore them, then these are banking equivalent of inefficient $100 dollar bills lost in banking. Now, estimate the total amount of these inefficient and careless dollars versus the amount of dollars that the banking industry extracts from peoples' cash assets in the form of no interest, below market interest, and a myriad of fees? Get the point?

Now, to get back to the "cash on the street versus investment securities market" example. With respect to known information, the securities markets are highly efficient and, as they should, market participants are selfishly grabbing every dollar they can. The problem is that they are grabbing at future dollars without knowing which will materialize and which are chimeras.

In general, the relevant question for an individual is not whether securities markets are informationally efficient. If markets are inefficient and there are some free $100 dollar bills lying around, it is far more likely that professional participants will grab and keep them. How absurd is the notion that you can pay someone who actually has this skill (if this skill really can even exist given all the uncertainties), and that they would be willing take your lesser fee and in return give you some of the proceeds of their skill in collecting all those stay $100 bills?

Individual investors should not worry about market efficiency and convince themselves that they can "beat-the-market" directly through their trading net of costs and taxes or indirectly through actively managed fund investments net of cost and taxes. Any individual investor who believes this needs to do some research or they are likely to spend their lives on the active investor hamster wheel and fall farther and farther behind a passive market return, as time passes.

Efficient markets do not mean that the current price of a particular security is either "right" or "wrong."

On occasion, the markets can seem to make specific and/or systematic pricing errors. The important thing about efficient market is that positive and negative pricing errors will tend to cancel out over the long run. These pricing errors – if indeed they are errors and not an accurate reflection of current risk-adjusted knowledge – will also tend not to be systematically detectable by investors over time.

Gains from inefficiencies would tend to accrue to investors who can tell the difference and react swiftly. Greater knowledge and swiftness tend to be more the characteristics of professional rather than amateur investors. Professionals have more research resources and the ability to pay full-time attention to portfolio selection and management. Nevertheless and unfortunately for individual investors, the data indicate that is virtually impossible to detect professional managers with superior skills. An even more unfortunately, professional managers tend to charge more than they deliver in improved performance. (1)

Certain individual investors may also have some skill in detecting price inefficiencies related to selected equities. Unfortunately, it seems that these more prescient investors can only track and hold a very small number of equities and they lose the "free lunch" risk reduction benefits of portfolio diversification. Despite their activist investment efforts, on average their gross performance still tends to trail a passive multi-factor index investment strategy. (2) When

costs and taxes are considered, including the opportunity cost of their time, it is highly likely that their net returns are even more inferior to a passive index strategy.

1) Mark M. Carhart "On Persistence in Mutual Fund Performance." The Journal of Finance, Vol. LII, No. 1: pp. 57-82.
2) William Goetzmann and Alok Kumar. "Diversification Decisions of Individual Investors and Asset Prices." January 14, 2004: 1-58.

2.6: Risk-free money is investor fantasy money

Particularly for individuals, no "free" investment money is ever available. Low risk, high return investments are fantasies. Luck dominates skill. Investment "skill" tends not to age well. Apparent short-term skill vanishes with time, as the dominant element of luck becomes increasingly clear. Clever investment selection is vastly, over-hyped. On average over long periods, investors get paid a market return, less costs, largely because their money is at risk. If there is such a thing as easy money, it is the money that naive individual investors give and give to full-time professional investors.

Securities markets pay risk premiums and nothing more. While the risk premiums that have been paid historically on asset classes have been highly variable and unpredictable, long-term averages demonstrate their existence.

In general, you can expect compensation only for some of the investment risks that you might bear. An optimal investment strategy is one that attempts to capture risk premiums and to avoid other unnecessary and unproductive investment risks.

Someone will capture the risk premiums that the securities markets will pay. It might as well be you. Suboptimal strategies simply are more likely to give the risk premium to someone else. Variations in returns surrounding the market return are largely a matter of luck. The more active an investment strategy is, the wider the expected performance variation will tend to be. Competitive markets make many smart people just average, and dumb luck tends to predominate.

The more active the strategy is, then the higher the associated investment costs tend to be. Higher variability of outcomes and higher costs are a recipe for both missing and under-achieving your goals. Because of higher costs taxes, expected net performance is more likely to be on the low side rather that the high side.

To believe that the securities markets will pay you more, because of your supposedly superior securities selection method or because of the latest investment fad or that hot company reported in the media, means that the securities markets would have to pay less to someone else. Every 'beat-the-market' notion requires a patsy.

While luck overwhelming dominates skill in investing, each individual needs to assess realistically whether he is likely to be among that very, very small minority who might possibly have superior investment management skill. Recall the saying from gambling: "If you look around the poker table, and you cannot identify the sucker, then it is you."

The Skilled Investor website has numerous educational articles about investment skill, returns, and risk premiums.

Click here for Luck versus Skill articles on my The Skilled Investor website

Click here for Returns and Risk Premiums articles on The Skilled Investor

2.7: Dividend stock funds: a superior returns delusion?

In this book, you will find listings of low cost international and US dividend stock mutual funds. These low cost dividend stock fund lists are provided because some investors have chosen to emphasize dividend paying stocks in the equities portion of their investment portfolios.

Dividend-oriented mutual funds have been in existence for many years and normally are categorized, as core/blend funds rather than either value or growth funds. Therefore, this book will include dividend-oriented mutual funds in its core/blend mutual fund lists.

The purpose of this section is to question whether an investment strategy emphasizing dividends is necessarily a preferred investment strategy. The alternative is to invest in the broadest possible diversified stock portfolio or the entire universe of stocks whether or not they pay a dividend.

While there may be no "right answer" to this question, to invest in low cost mutual funds that skew toward companies that pay dividends, you will necessarily have to pay a modestly higher expense ratio. Doing this will also skew the stock exposure in your portfolio toward larger, more mature, and perhaps slower growing companies. Furthermore, a dividend strategy may tend to skew a stock portfolio with respect to industry type, perhaps increasing exposure, for example, toward consumer products, industrial, and financial services firms.

Investor preferences for stock dividends and many dividend investment funds serving these investors have been around for many years. However, the low return environment in the wake of the financial crisis and Great Recession has greatly amplified investor demand for dividend paying stock funds. In more normal markets, the price earnings ratios of dividend paying stocks have been significantly lower than those of firms that pay no dividends or that pay relatively small dividends.

As the Federal Reserve has restrained interest rates and the number of low return years has ground onward, investors have reached for higher returns. They have sought higher returns in riskier bonds, in supposed "alternative" assets, and in dividend paying equities. By 2012, as measured by the price earnings ratio, dividend paying stocks had been bid up in price to the point that the P/E ratio of dividend stocks was on parity with that of non-dividend paying stocks.

If and when the business environment continues to normalize, there is a question whether relative these P/E ratios will revert back toward their historical relationships. Time will tell, but if this were to happen, dividend stocks would have to experience relatively lower price appreciation than would non-dividend paying stocks.

Personally, a focus on dividend paying firms has always seemed a bit odd to me. Over the long-term markets price the relative value of companies and their common stocks in relation to the expected growth of future earnings. Whether and how those earnings are disbursed is a matter of far less concern in the valuation of equity securities.

Obviously, firms may need to use some cash from earnings to fund operations, but they have alternatives regarding what to do with any excess earnings. The primary alternatives for excess earnings are:

A) to increase assets by retaining cash thereby supporting growth in per share stock price through increased assets,

B) to buy back shares with cash, which supports a higher per share stock price by reducing the number of shares outstanding, and/or

C) to issue cash dividends that remove the excess cash from the corporation.

By issuing dividends, the distributed cash does not enhance the share price, but it does enhance the pre-tax total yield to shareholders.

If two firms are exactly the same in all respects and are exactly the same in their expected future earnings, then how they deal with excess cash earnings should not make a substantial

difference in their valuation. For example, if one firm pays no dividends and retains all earnings, the market will set its stock price based on the combined value of its expected future earnings and the value of its retained assets. For example, the net result might be that the markets value the firm's asset growth component at 3% and its future earnings growth component at 4% for a total stock price appreciation of 7% per year.

The second firm distributes all excess cash earnings as dividends, so the market would value future company growth at 4%. However, from the investor's point-of-view, he has also received a pre-tax distribution of 3% for a total pre-tax return of 7%. If the investor is an non-taxable institution, their net return is also 7%. If they are an individual investor subject to taxation, their return is 7% less any personal investment tax obligations.

Alternatively, the second firm could use the excess cash earnings to buy back shares. Therefore, similar to a dividend distribution the markets give no credit for asset growth because the cash was disbursed to buy back the shares. However, since there are fewer shares outstanding, earnings per share is expected to be 7% because the same expected earnings are divided by a smaller number of shares.

Yes, of course, there are a myriad of additional factors that might elaborate the model, but they do not materially affect the fundamental idea that assets and expected earnings drive stock valuations. Dividend policy tends to be irrelevant.

The problem, however, is that dividend policy is not irrelevant to many individual investors. Many investors who favor dividends have also decided that they are willing to spend the dividends to support their living expenses, but they are not willing to "touch the principal." Therefore, they skew their investment portfolio to enhance the dividend payout.

While they may never have to touch the principal, when they skew their investment portfolio toward dividend paying stocks, the principal of their portfolio must necessarily grow at a lower rate. If these investors took a more holistic view, they would recognize that dividends were largely irrelevant. If they need to live on some of their assets, and the company stock they own does not pay dividends, then they need to sell some shares, but the effect would be the same as spending the dividends, while they leave the principal alone.

However there is a key question in the choice of a dividend oriented stock investment portfolio. Is it worth higher investment fees, higher investment taxes, and a less diversified and

skewed investment portfolio relative to owning the whole market, just so that they can maintain the illusion of not having touched the principal?

2.8: More readings on investment risk and return

I have published these additional articles on the Internet that may be useful to you.

You must stay invested in the securities markets to earn market risk premiums

https://www.theskilledinvestor.com/financial/You-must-stay-invested-in-the-securities-markets-to-earn-market-risk-premiums_58.html

The securities markets pay risk premiums. You have to have your money invested and at risk to be paid a risk premium. Attempting to avoid risk or losses by jumping in and out to "time the markets" does not work. Finance studies demonstrate the both amateurs and professionals are lousy at market timing.

Asset class investment risk premiums — your reward for taking investment risk

https://www.theskilledinvestor.com/financial/Asset-class-risk-premiums-your-reward-for-taking-investment-risk_88.html

Risk premiums compensate investors for taking some of the risks associated with financial securities. To enable payment of risk premiums, markets set current prices at a discount relative to expected future prices.

What might explain the dramatic rise in common stock equity prices during the 1980s and 1990s?

https://www.theskilledinvestor.com/financial/What-might-explain-the-dramatic-rise-in-equity-prices-during-the-1980s-and-1990s_44.html

The long-term fixed income and equities markets of the 1980s and 1990s performed very differently that the markets of the past two centuries. Whether recent trends will continue or not is an open question with essentially unknowable answers. However, the longer history indicates that it would be reasonable to expect both fixed income and equity returns to be lower.

How unstable have stock market returns been over time?

https://www.theskilledinvestor.com/wp/how-unstable-have-stock-market-returns-been-over-time-231.htm

Common stock equity market returns have varied widely in the past. The common stock equity risk premium has averaged about 4.1% from 1872 to 2000. The equity risk premium is the equity market return less the risk free rate of return. The risk free rate of return includes both the inflation rate and the risk free interest rate. When it is subtracted from the market return, the resulting figure is the real or non-inflationary equity risk premium.

What have average investment asset class risk premiums been over long periods?

https://www.theskilledinvestor.com/financial/What-have-average-asset-class-risk-premiums-been-over-long-periods_57.html

Over the past two hundred years, real or non-inflationary equity market returns have averaged just under 7%. During the 19th century, cash and bond returns "were king" and additional equity risk returns were relatively small. In the 20th century and particularly during the second half of that century, investors were much more richly rewarded for carrying the risks associated with equity investments.

What explains the recent common stock equity risk premium?

https://www.theskilledinvestor.com/financial/What-explains-the-recent-equity-risk-premium_46.html

In a widely referenced scientific investment paper, Professors Fama and French concluded that the average investor lowered his discount rate for equities over the 1980s and 1990s. Much of the extraordinary equity appreciation over this period was the result of investors simply being willing to pay a higher price for an ordinary dollar of returns.

How do return expectations of investors compare to historical stock returns and risk premiums?

https://www.theskilledinvestor.com/financial/How-do-return-expectations-of-investors-compare-to-historical-stock-returns-and-risk-premiums_67.html

At the peak of the market bubble, many stock market participants had extremely high return expectations. The consensus of investment science is that the long-term equity risk premium is 4% to 5%. In the wake of an extended and brutal post-bubble bear market, investor return

expectations in the second half of 2004 were much diminished. However, their expectations were still over twice as high as the long-term historical equity risk premium.

What common stock returns might individual investors expect going forward?

https://www.theskilledinvestor.com/financial/What-common-stock-returns-might-individual-investors-expect-going-forward_76.html

Obviously, no one really knows or can know what common stock returns will be going forward. Using rationally based estimates of the forward-looking equity premium, investors should probably not expect anything like a repetition of equity market returns during the 1980s and 1990s. Performance in those decade was simply exceptional and not the norm.

To estimate the future common stock risk premium, how might individual investors extrapolate from the past?

https://www.theskilledinvestor.com/financial/To-estimate-the-future-equity-risk-premium-how-might-investors-extrapolate-from-the-past_74.html

The past is the only source of guidance on how securities markets might perform in the future. Investors face critical choices about which method to use when extrapolating from the past. A study by Professors Fama and French provides individual investors with important guidance on which scientific methods to use. With these methods, a real or non-inflationary equity premium of between 3.8% and 4.8% could be a rationally derived estimate of the real forward equity premium.

What happens to the expected equity premium, when the common stock P/E ratio reverts toward historical norms?

https://www.theskilledinvestor.com/financial/What-happens-to-the-expected-equity-premium-when-the-common-stock-PE-ratio-reverts-toward-historical-norms_99.html

U.S. equities prices have had a long-term tendency to revert toward their average price to earnings ratio. In the 1980s and 1990s, the PE had increased substantially above the long-term average. Much, but not all, of this reversion occurred in the first five years of the 21st century.

How are asset class risk premiums and the risk free rate of return related?

https://www.theskilledinvestor.com/financial/How-are-asset-class-risk-premiums-and-the-risk-free-rate-of-return-related_87.html

Risk premiums are estimated relative to a baseline "risk-free" rate of return. The risk free rate of return in the scientific investment literature has been measured by either short-term U.S. T-bills or by long-term U.S. T-bonds.

Chapter 3: Always diversify completely

3.1: Something for nothing – lower risk without lower returns

Always own a fully diversified portfolio. Diversification eliminates unnecessary risks without reducing expected returns. Diversify your investments completely and globally – now and always

A fully diversified portfolio is a key contributor to improved investment risk management and a more certain path to wealth. Diversification has become an axiom of personal investing. With a diversified portfolio, the variability associated with the specific risks of businesses and other investment entities can be reduced or eliminated – without reducing total expected returns. Diversification genuinely is an investment "free lunch" with respect to investment risk reduction.

When you hear that you should diversify your investments, this means that you should diversify your investments completely and globally - now and always. The investment research literature repeatedly demonstrates that a fully diversified, low cost investment strategy is superior. Get diversified. Stay diversified. Be globally and fully diversified all of your life. Stay in the markets through thick and thin, while investing with an asset allocation that is appropriate for your greater or lesser tolerance for investment risk.

The best investment strategy is to seek complete market diversification at the lowest investment cost using passively managed and globally diversified index mutual funds. You can reduce the volatility of your personal portfolio significantly and track the return of the market with relatively small investment costs. Other strategies tend of be sub-optimal, and involve greater portfolio volatility and risk -- also accompanied by higher costs in term of expenses, taxes, time commitment, and stomach acid.

Nothing that has happened in the credit crisis/great recession changes the value of broad market diversification. Some uninformed post-crisis commentary has questioned the wisdom of diversification, which only indicates a failure to understand what diversification can and cannot do for you.

Diversification mitigates volatility over time

Diversification across a portfolio can and does mitigate volatility over time. However, when systemic factors across asset classes are in motion in the securities markets, then there is nowhere to hide, as occurred with the credit crisis. As over-leveraged investors across a wide variety of asset classes scrambled for liquidity, selling pressure increased broadly, buying demand collapsed, and asset values crashed generally, albeit, not uniformly. Those who were very broadly diversified felt less pain, but they still felt pain.

However, if you really like the potential for a lot more pain, then go ahead and do not diversify. Eventually, that pain is much more likely to come to an ill-diversified investor's portfolio compared to the portfolio held by a broadly diversified investor.

Of course, ill-diversified investors chasing tactical and active strategies are always hoping for outsized returns for the added risk. Sadly, only a minority of active investors trading in and

out of the market will get lucky. Largely, luck is at play here. For most investors, in fact, it is actually the lack of luck. The percent of the lucky minority achieving excess returns tends to diminish with time -- as excessive fees and taxes cumulatively eat away at illusory excess returns -- proving the foolishness of active strategies.

Why is investment diversification valuable?

Diversification minimizes or eliminates "un-systematic" or "non-systematic" risk associated with individual investments and leaves only the price volatility risk of overall securities markets

When people speak of investment diversification, they may mean different things. Therefore, clear definitions are important. Non-systematic risk is the risk that relates to company-specific risk factors, such as competition, labor strikes, faulty management decisions, adverse technological changes, etc.

By holding a very broadly diversified portfolio containing the securities of numerous companies in different economic spheres, the risk in your portfolio can be reduced dramatically. By holding the full market in your portfolio through broad-based index funds, non-systematic risk can be fully eliminated from a personal portfolio.

Non-systematic risk can be eliminated, because there is not a one-to-one correlation between the opportunities and risk factors that affect each particular firm. To the extent that you hold more than one firm in your portfolio and particularly a very large number of them, then company specific price movements tend to cancel out the securities price fluctuations of other firms. When fully diversified, securities market risk measured by its market price volatility will remain.

When you hold the entire market as your investment portfolio, then you can achieve a very significant reduction in the price volatility of your overall personal investment portfolio. What remains then is only the "systematic risk', or the impact of broader economic, policy, and political risk factors, such as general changes in economic growth, monetary policy, inflation, taxation, wars, exchange rate fluctuations, etc. A well-diversified portfolio is still subject to these systematic risks.

In summary, you diversify to eliminate the company-specific and entity-specific risks to your investment portfolio. You also do this, because the market does not compensate you for company specific risk. Equity risk premiums are paid to investors, because they are willing to expose themselves to market risks and not to company specific risk.

Portfolio diversification is an extremely important investment strategy for every individual investor, and it is a genuinely free lunch, because of risk reduction. Increased diversification reduces portfolio risk or price volatility without a corresponding reduction in expected portfolio returns. Thus, if you fully diversify, you get something free – lower risk for the same expected return.

If you do not believe in any type of free lunch in any form, then alternatively you could look at this situation as an issue of optimization. A fully diversified portfolio is optimized with respect to eliminating those investment risk exposures that the markets tend not to compensate.

Investment portfolio is the single biggest idea of investment theory. I will not bore you with its history. If you want to understand the history of investment theory, read "*Capital Ideas: The Improbable Origins of Modern Wall Street*" (1993) or "*Capital Ideas Evolving*" (2007) by Peter Bernstein. These books chronicle of the intellectual development of modern investing.

A very high degree of diversification can be achieved through investing in a variety of passively managed index mutual funds. Such investments are also among the lowest cost investment vehicles available to individual investors in the financial markets. Given that this alternative is easily available, the relevant question is never whether a portfolio should be fully diversified. Of course, it always should be.

Instead, investors should ask what the true cost of an under-diversified investment strategy would be to their long-term investment returns and overall financial welfare. Ultimately, there are numerous paths to achieve poorly- or well-diversified portfolios. In the end, the answers are simple: hold funds and not individual securities; own the market and not a subset of it.

For risk-adjusted investing, diversification is not an option

Diversification is not an option, if your goal is optimized, risk-adjusted personal investing. Diversification is not an optional part of family investment strategy, if that family wants to sleep well at night. When you are less than fully diversified, every day that you wait exposes you to investment risks that the securities markets do not compensate through better returns. When you are less than fully diversified, your investment portfolio risks are higher than they need to be without any reasonable expectation of getting additional returns.

When you

1) chose an active management strategy versus a passive one,

2) try to time the markets versus staying put,

3) buy individual securities versus funds, and/or

4) favor certain economic sectors versus full domestic and international diversification, etc.

then you are much more likely to lose than to win. This is simply because the road you are taking is unnecessarily rough and unnecessarily winding, and this gives you less certainty that you will reach your goals. You might overshoot in performance if you are lucky, but you are far more likely to under-perform, because of the various higher expenses, higher costs, and higher taxes that cumulatively drag down active strategies. The longer your time horizon the greater the chances that you will fall behind a passive, lowest cost, market index investment strategy.

A passive strategy targets a market return, which can still be a bumpy ride especially:

A) if you are not fully diversified globally and

B) if you have not adopted an asset allocation that is appropriate to your tolerance for investment risk.

Nevertheless, the attendant risks are lower and potential variations are much narrower than active strategies. Furthermore, passive strategies that drive down investment costs and expenses to the bare minimum are not continually burdened by repeatedly having to pay tribute the financial services industry with a much larger and undeserved share of your returns. It is hard enough to finish a marathon without carrying water for the financial securities industry at the same time.

Diversification and the credit crisis

The best personal investment and financial planning practices are durable and should not change because of market cycles and financial crises. Less diversified active strategies tend of be sub-optimal, involving greater portfolio volatility and risk accompanied by higher costs in term of expenses, taxes, time commitment, and stomach acid. The best investment strategy is to seek complete market diversification at the lowest investment cost using passively managed and globally diversified index mutual funds.

Nothing that has happened in the credit crisis changes the value of broad market diversification. Some uninformed post-crisis commentary has questioned the wisdom of diversification, which only indicates a failure to understand what diversification can and cannot do for you. Diversification across a portfolio can and does mitigate volatility over time.

However, when systemic factors across asset classes are in motion in the securities markets, then there is nowhere to hide, as occurred with the credit crisis. As over-leveraged investors (professional speculators "managing" other people's money amped up with borrowing – AKA hedge funds) across a variety of asset classes scrambled for liquidity, selling pressure increased broadly and asset values crashed generally, albeit, not uniformly. Those who were very broadly diversified felt less pain, but they still felt pain.

If you really like the potential for a lot more pain, then don't diversify. Sooner or later, that pain is much more likely to come to an ill-diversified investor's portfolio compared to the portfolio of a broadly diversified investor. Of course, ill-diversified investors chasing tactical and active strategies are always hoping for outsized returns for the added risk.

Diversification is really not an option, if your goal is optimized, risk-adjusted personal investing. Diversification is not an optional part of family investment strategy, if that family wants to sleep well at night. When you are less than fully diversified, every day that you wait exposes you to investment risks that the securities markets tend NOT to compensate through better returns. When you are less than fully diversified, your investment portfolio risks are higher than they need to be without a reasonable expectation of getting any likely additional returns.

Few in the financial services industry will tell you this, because a lowest cost, global and passive diversification strategy is the least profitable to the financial services industry. The securities industry looks upon you as a naive "retail investor." The industry trains its representatives to sell to you the most profitable products that it can at "retail" prices. If you tell a commissioned financial advisor that you want to pursue such a strategy, expect to be told directly or indirectly why you are an idiot.

3.2: Always choose the broadest whole market diversification

To diversify globally, use the broadest, cheapest passive index mutual funds

A fully diversified portfolio is an absolute investment necessity. A very high degree of diversification can be achieved through investing in a variety of low cost passively managed index mutual funds. Such investments are also among the lowest cost investment vehicles available to individual investors in the financial markets. Given that this alternative is easily and cheaply available, the relevant question is never whether a portfolio should be fully diversified.

Through investments in broad-based index mutual funds, diversification is relatively easy and inexpensive to achieve. Attempting to become broadly diversified through the self-assembly of a portfolio of a large number of individual securities is far more difficult and much more costly.

Portfolio self-assembly is much more likely to result in higher risk with returns that lag the market. Buying individual stocks and bonds instead of diversified funds provides you with no advantage whatsoever. The industry likes it, because individual securities trading generates fees and keeps going the charade of potentially beating the market.

However, when you buy individual stocks and bonds, you are less than fully diversified, and you are exposed to more risk. In addition, you get to waste your money and time for nothing. Pay more and get less. What kind of value added is that? You are better off ignoring this kind of investment counseling and financial advice.

How can investors achieve the broadest possible securities market diversification across their portfolio holdings? Whenever several low cost investment funds are available, I suggest choosing the fund with the broadest market coverage. This reflects a preference for owning the entire market. Such funds are often named “whole market,” “total market,” or “multi-cap” funds.

Funds that invest in company size-based subsets of the market are usually known as “large-cap” versus “mid-cap” versus “small-cap” stock mutual funds. Overall, it is important to hold all different sized equities roughly in proportion to the market capitalizations of these company size groupings.

The investment research literature indicates that investors in funds with portfolios that are skewed by company size will experience greater volatility. Over time, as demand shifts from large-to-small or small-to-large capitalization companies, these portfolios are more variable compared to the returns of the overall market.

Thirty years ago, research indicated that US small capitalization stocks delivered excess returns that were disproportionately high even in comparison to the presumably greater risks of smaller firms. Research that is more recent suggests that this argument is much less conclusive today.

In addition, there are also many more mid-cap and small-cap investment funds, and vastly more assets are deployed to exploit this supposed small-cap company investment advantage. Such is the nature of investing. Apparent advantages often disappear as more assets move in to exploit suspected advantages.

However, that does not mean that you should avoid small-cap and mid-cap stocks. You should hold them in your portfolio. Too many US investors hold only large cap stocks through mutual funds that track only the S&P 500 index. These investors miss the diversification benefits of holding the US whole market versus just the S&P 500, which represents about 70% to 75% of total US stock market capitalization and only large cap stocks. This also begs the question of the international stock exposure of US investors. With the international share of the world’s total stock market capitalization at above 60% and the US share under 40%, US investors who hold only US equities are significantly under-diversified.

Other more hidden problems might arise, when investing in company size-based market subsets rather than in the overall stock market. Some stock market indexes are mechanically defined, and changes in the list of company constituents of an index may be anticipated. As companies are added or are withdrawn from the company size sub-indexes, some market participants may attempt to profit by anticipate these sub-index changes and by accumulating long and short trading positions in advance.

When company size-based benchmark indexes change, the index funds that track those benchmark indexes must buy or sell to reflect these changes in their portfolio holdings. Changes in demand for particular stocks can create a potential advantage to traders who have anticipated these changes. This “front-running” could be detrimental to the performance of these company size-based index investment funds. Note, however, that adjustments have been made in the past decade to make this type of index change front-running much more difficult for traders.

Whether or not this is a potential problem when one chooses funds based on sub-indexes of the market that are skewed by company size, it is not a problem when one invests in index funds that span the entire market. When an investor holds low cost, passively managed index investment funds that represent all sizes of companies, it will not matter if individual stock prices change somewhat as companies are added or subtracted within subsets of the overall market.

Price fluctuations due to sub-index membership changes will be neutralized overall. The total market index investor holds all the stocks, including those that might increase modestly in value by being added to a sub-index and those that might decline slightly in value by being removed from a sub-index. By owning the whole market, these potential hidden cost problems related to redefining sub-indexes just disappear.

3.3: Whole market index funds provide the broadest diversification

Assembling a US whole stock market ownership position using multiple funds with different market capitalizations

US "total market" or "whole market" stock mutual funds provide an easy and efficient means to achieve broad US stock market diversification cost-effectively. In addition, instead of selecting US total/whole market funds, you could also assemble a whole market ownership position using large-, medium-, and small-capitalization funds.

Below you will find two of my other books that you can download for free. The first focuses on low cost mutual funds and is the book that most people should use. The other book is about low cost ETFs, which are exchange tradable investment funds. ETFs have additional characteristics and require a knowledge of safe trading. Anything you want to achieve with low cost ETFs can be achieved by using low cost mutual funds.

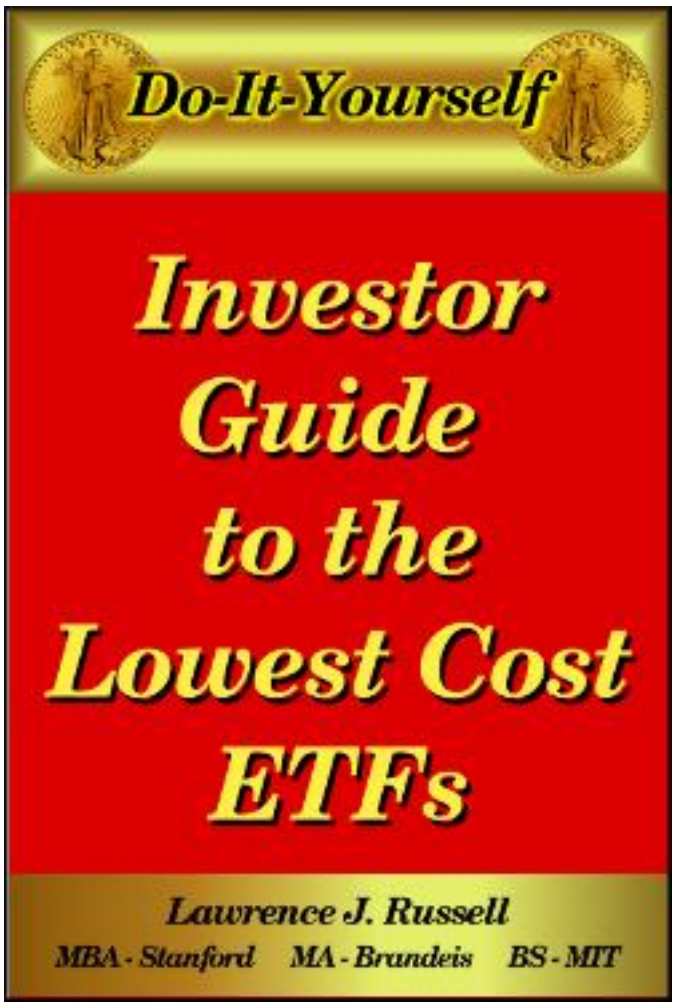
Table 3.4 in the low cost mutual funds book lists total market US mutual funds with the lowest costs. Other tables list US investment funds segmented by size, which you can use to assemble your own US whole market investment holdings.

I have researched and written two objective books

that can help you cut your investment expenses and increase your wealth.

They are both FREE to download at this web address:

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



3.4: Whole stock market investments versus strategy skews

Investors who decide to pursue passive equity index strategies still have a few very important strategy decisions to make. They can choose to buy the whole stock market or to adopt a "strategy skew," when choosing stock index investment funds.

If an investor buys the whole stock market, they seek the market's return without selecting any particular subset of the market or any investment strategy skew. Doing so is consistent with investment theory and the research evidence. The total stock market is expected to deliver an optimal risk-adjusted return less, of course, whatever minimal costs are associated with the passive broad market index funds chosen to implement this total market strategy. When winners are not identifiable beforehand, this strategy is optimal and efficient.

Without the details, certain factors or investment skews have been demonstrated in the research literature to have the potential to improve modestly upon the market's risk-adjusted return. Sometimes known as the Fama-French factors, these investment strategy skews are:

1) value versus growth,

2) large capitalization versus small capitalization, and

3) momentum.

These factors may enable investors to improve upon the risk-adjusted performance of the overall market and deliver slight to modestly improved returns. However, to implement these skews or strategies is not costless, and therefore the incremental costs and taxes associated with these strategies also need to be taken into consideration.

A section below will address the value versus growth and large-cap versus small-cap factors or skews. This is because it is practical for passive index investors to adopt such skews through index funds, if they wish and if they are willing to take on the additional risk and costs associated with these skews.

Momentum, which is the sometimes slight tendency of stock price trends to persist, cannot practically be invested in by individuals. If there is any persistence or price momentum, professional traders with very low trading costs, substantial capital, and ample computational resources are the only market participants who are likely to be able to capture this factor economically.

Selecting a broadly diversified investment portfolio WITHOUT any investment strategy skew

The first step in achieving a fully diversified investment portfolio is to choose from among only very broadly diversified and low cost mutual funds. The second step is to choose a mix of investment funds that tends to approximate the broadest markets. The no load mutual fund lists provided in this book focus entirely on broadly diversified, low cost investment funds.

Various market participants and advisors advocate that investors favor one or more of a multitude of investment selection factors, when assembling an investment portfolio. Unfortunately, these selection factors often involve higher costs, lower diversification, greater risks, and more activity – without a reasonable assurance of improved total returns net of taxes and investment costs.

In general, I usually suggest that investors own a proportional share of the global public securities markets by buying and holding passive, low cost, and very broadly diversified investment fund vehicles. To do so you would make investments in proportion to the capitalization or total market value of individual securities within the markets.

This is known as capitalization weighting. You can easily assemble a capitalization weighted portfolio by buying low cost, no load index mutual funds. Such fund track broad market indexes closely by buying and holding securities in proportion to the capitalization-weighted strategy of the benchmark index. This is where you will also find investment funds with rock bottom fees and costs.

Selecting a diversified investment portfolio WITH an investment strategy skew

To adopt a portfolio skew toward some alternative portfolio weighting factors will require paying higher fees, trading costs, and taxes. To the extent that you "skew" you portfolio or deviate from a very broad and very low cost capitalization-weighted strategy, you should ask whether you are likely to be compensated on a risk-adjusted basis for the added costs of an alternative "skew" to your portfolio. Are you likely to be compensated with sufficient "excess" performance that is disproportionately higher than the additional investment risk that you will incur – after costs and taxes are taken into account?

My reading of the investment literature makes me skeptical on this point from the point of view of the individual investor. In general, the lowest cost and most broadly diversified investment strategy tends to have a better opportunity to come out ahead.

However, as an overview, the following are brief summaries of major skews that a portfolio might have:

1) "Value versus Growth" — In general, value strategies beat growth strategies over the long-term, although there can be extended periods (think years) when one or the other is in relative ascendancy or relative decline. A growth or value skew can lead to results that deviate unpredictably for sustained periods from the overall market return during the course of market cycles. Furthermore, growth and value investment vehicles often have substantially higher costs. The higher costs, lower diversification, and challenge of sustaining contrarian tactics associated with value and growth strategies are the primary factors that lead me to conclude that

most investors should instead simply select the lowest cost, total market investment funds that cover the broadest range of securities.

A) If you feel compelled to adopt a value or growth skew to your investments, the investment research literature supports implementing a value skew rather than a growth skew in a portfolio. If you are willing to accept sustained deviations from market index returns, a value skew tends to win over the long-term. Since the costs of a value strategy can be significantly higher than a passive capitalization weighted "full market" strategy, a value skew might not turn out to be worthwhile.

B) Simultaneously, you need to be prepared to maintain faith in your value strategy and accept deviations from a market return. Value strategies tend to win when things get ugly or the markets move laterally. The hardest periods for value investors are when everything seems peachy and the stock market is rocketing ahead, because that is when value strategies tend to trail both broad market and growth strategies.

C) While it is beyond the scope of this book, you should also note that discussions about how to implement stock selection methods for passive value strategies have become more heated recently. For example, the best method to select a value-based subset of stocks from the universe of stocks is not clear. Nevertheless, the greater the investment management cost differential, then the higher the cost hurdle that a value strategy must overcome.

D) Note that, while the name "growth" may sound appealing, the actual long-term results of a growth skewed investment strategy might not be as appealing. This is akin to the naming of the "delicious" apple. Many people are under-whelmed by the taste of delicious apples, and they prefer the flavors of many other apple varieties. However, naming apples delicious is a great marketing strategy. The same might be said about growth investment strategies – good naming, but better long-term risk-adjusted out performance? Maybe not so much.

2) "Large versus Small Capitalization" – Investors gravitate toward investments in large companies, while perceiving them to be less risky. Perhaps the securities of

larger firms are somewhat less risky, but small capitalization stocks sometimes have exhibited better returns historically even after risk differences have been taken into account.

A) In general, if you chose to invest across all sizes of firms and you can invest at very low costs and in proportion to securities market capitalization, then you will be more broadly diversified and you can participate is the relative ascendancy and relative decline of all size groups. Skewing your portfolio in an even greater degree toward small or large companies is not a reliable recipe for gaining superior risk-adjusted returns when compared to a passive, whole market investment strategy.)

B) Within the US equity securities markets, large capitalization stocks, measured by the S&P 500 represent about 70% to 75% of total market capitalization. Roughly speaking, "mid-cap" stocks represent 15% to 20% of total market capitalization and "small-cap" stocks represent 5% to 10% of market capitalization. This information is provided for those who wish to assemble a US equities portfolio using large-cap, mid-cap, and small-cap investment funds in rough proportion to overall market capitalization.

3) "Domestic versus International" The total market capitalization of non-US equities markets exceeds 50% percent of the total capitalization of world stock markets. If you hold at least 50% international equities in proportion to the capitalization of equities securities markets across the world, then you are also very diversified from a global geographical standpoint.

A) Note that when you hold both domestic and international equity mutual funds, for some years you may see relatively dramatic, even double digit percentage increases or declines in the value of international stock holdings. This does not necessarily mean that there is a similarly large disparity between domestic and international economic growth rates or local stock market returns.

B) When you own international stock holdings, returns are denominated in a wide variety of foreign currencies, which must be converted back into US dollars for investment fund reporting purposes. Currency exchange rate fluctuations can amplify or dampen returns percentages both positively and negatively. To

understand what really has happened, you need to compare stock market return percentages denominated in local currencies prior to the exchange rate conversion of foreign returns into the local currency of the investor.

3.5: How well have less diversified investors performed?

What is the cost to individual investors of sub-optimal portfolio diversification?

Investors more easily understand investment costs that are directly measurable, such as fees deducted on investment statements. However, many investors ignore or are unaware of the "opportunity costs" of their sub-optimal investment behaviors. Opportunity costs are usually much more difficult to measure directly, but can be even higher than the more visible costs that they do understand.

The opportunity cost of being poorly diversified can be quantified under certain circumstances. While sub-optimal diversification costs can be difficult or impossible to anticipate for individual portfolios, investors can look at studies of large investor populations for guidance on the size of investment opportunity costs. The study, "*Equity Portfolio Diversification*" by Alok Kumar of Cornell and William Goetzmann of Yale is particularly useful in providing investors with an indication of the scale of the opportunity costs incurred by poorly diversified individual investors.

Professors Kumar and Goetzmann analyzed over 40,000 discount brokerage equity investment accounts with over $2 billion in total assets for the 1991 through 1996 period. The equities purchased by these investors tended to be in large consumer products and technology companies with well-known names – many of the same firms that constitute the S&P 500 index.

The vast majority of these investors' portfolios were very significantly under-diversified. About 25% of accounts held only one stock, and about half held one or two stocks. On a risk-adjusted basis, this lack of diversification was quite costly to these investors. When compared to the broad market portfolio, 80% to 90% of these investors' portfolios underperformed the market over the period of the study. During the four-year period that was modeled, the total underperformance totaled roughly 10%. Given that the sum of investor assets averaged about $2.18 million, these investors had an estimated opportunity cost of over $200 million in only four years!

Owning a poorly diversified of portfolio stocks was a very poor investment strategy for the average investor in this very large sample. The average annual return of the typical investor in this study was reduced by about 2½ percent annually. For example, an average investor with a poorly diversified $100,000 account unnecessarily threw away approximately $2,500 annually or $10,000 over four years!

Compared to investing with a passive, broad market index strategy, these individual investors paid several unnecessarily prices. Because they were not diversified, on average:

1) They incurred higher portfolio risk.
2) They lost money relative to the passive multifactor market index return.
3) They paid unnecessary transaction costs and higher taxes associated with these active management strategies.
4) They simply wasted the time that they spent tracking companies, but did not achieve superior risk-adjusted returns.

This is strong evidence that the average investor simply does not know how to manage his or her own portfolio. Individual investors need either to dramatically improve their personal skills or fire themselves and hire someone who can do a better job.

3.6: Concentrated investments can be very bad for you

Portfolio risk increases dramatically with concentrated securities holdings

A significant portion of a portfolio may sometimes become concentrated in a single investment entity, which dramatically increases the overall risk of the portfolio. While generally undesirable, there sometimes are unavoidable reasons for investment concentration. Unavoidable reasons for lack of diversification can include owning a private business or being a key member of a company management team who is required to own company stock by an employment agreement with the company. In such circumstances, you should seek expert guidance on possible ways to mitigate the risk associated with your concentrated investment position.

Nevertheless, for 99.9+% of investors, there is absolutely no good reason to maintain any high level of concentration in any individual security. Immediate steps should be taken to reduce the exposure to under 1% of a personal portfolio.

How many failed public companies like Lehman Brothers, Enron, and WorldCom do investors need to see crash and burn, before they realize that excessive concentration often does not pay and can lead to very significant personal financial peril?

Of course, multiple millions of people think that they work for a "good company" with a stock that will become more valuable, and they want to own a part of their employer. For some of these loyal employees, this has worked out, but for others it has not turned out so well. Of course, this could not happen to you and to your company, right?

Well, look at this list of the largest US bankruptcies over the last several decades years:

> Bank of New England, Calpine Corp, Chrysler, CIT Group, Conseco, Enron, Financial Corp. of America, General Motors, Global Crossing, IndyMac Bancorp, Lehman Brothers, Lyondell Chemical, New Century Financial, Pacific Gas and Electric, Refco, Texaco, Thornburg Mortgage, United Airlines, Washington Mutual, and WorldCom.

Do you think any of these bankrupt companies above had employees who held a substantial part of their investment assets and/or retirement assets in the company issued their paycheck? What do you think happened to their personal portfolios? Do you remember the stories of the “loyal employees” who "supported" their company and held a large portion of their retirement plan assets in company stock? What happened to their secure retirements?

In addition, by the way, what else tends to happen to companies in a bankruptcy? During bankruptcy proceedings, the value of an employee's pension plan may be slashed dramatically, if the pension plan was not properly funded before the bankruptcy filing. When a company is

sliding downhill toward bankruptcy, what is your guess about the odds that the company is fully funding its employee pension plan?

Have I not listed enough bankrupt companies yet for you to think seriously about avoiding a concentrated investment position in the same company that issues your paycheck right now? Okay, here are some smaller companies that have filed for bankruptcy. Do you recognize some of these names?

> Aloha Airlines, America West Airlines, Appalachian Oil, ATA, Bally Total Fitness, Bed, Bath and Beyond, Bennigans, Blockbuster, Circuit City, CompUSA, Continental Airlines, Covad Communications, Delta Airlines, Downey Financial, Excite@Home, Exodus Communications, Fremont General, Hawaiian Airlines, Help-U-Sell, Hollywood Video, KB Toys, Lenox Group, Levitz Furniture, Lillian Vernon, Linens N Things, Lyondell Chemical, Mervyns, Midway Games, NorthPoint Communications, Northwest Airlines, Pan Am World Airways, Sharper Image, Shoe Pavilion, Skybus, Smurfit-Stone Container, Steak & Ale, Tribune Company, Tropicana Entertainment, Trans World Airlines, Trump Entertainment Resorts, US Airways, and Whitehall Jewelers.

Do you think these additional bankrupt companies also had employees who suffered as a result? Also, remember that the company lists above only contain companies that went bankrupt. In addition, there are a horde of public companies that have under-performed very low cost, passive broad market index funds over the long-term.

In fact, the majority of public companies have under-performed the broad market. Why? Because only a small percentage of all firms will have stock values that grow 10 times, 100 times, or even 1,000 times in value over time. These few mega-growth firms eventually represent a disproportionate share of total stock market value.

Moreover, sorry to say this, but these mega-growth stocks are only recognized by most people in retrospect. It is almost always the nature of mega-growth stocks to look too expensive to buy along the way. Lots of people will think they are working for a company that eventually will have a stratospheric stock price. However, the majority of these loyal employees will find out too late that their company will not have a shooting star stock. If they ever do a comparison against a passive benchmark, the majority might have some regrets for taking on so much undiversified risk, while simultaneously under-performing passive market index funds.

3.7: Measure your portfolio's diversification

Gauge the level of your portfolio's overall diversification with this free on-line tool

Whenever you invest in multiple mutual funds, you may wonder how broadly and appropriately diversified your aggregate portfolio might be. Have your investment holdings and mutual funds that you have chosen increased the global diversification of your personal financial asset portfolio? Do they just duplicate what you already own?

You can use to measure your portfolio diversification with an on-line tool. This tool can help you to understand better the relative contribution that each of your investment holdings makes to your goal of holding a broadly diversified investment portfolio. On the Morningstar website, you can find their "Instant X-Ray" tool.

https://www.morningstar.com/help-center/user-guide/x-ray-overview

It used to be free to use X-Ray, but now you need to pay a Premium subscription fee. To use the Instant X-Ray Tool, just enter the ticker symbols for all of the mutual funds and individual securities that you own or intend to own with the dollar value of each holding. Then, click "Show Instant X-Ray" to see a summary of your overall portfolio. Note that when you enter only one mutual fund ticker symbol or only one stock or bond holding into the Instant X-Ray Tool, the summary provides data for that single fund or security. This can be very useful, as you evaluate individual investment funds and investment securities. When you enter multiple funds, you will get an overview that blends all the funds and securities in proportion to the dollar values that you enter for each holding.

This Instant X-Ray summary provides a variety of data about your overall portfolio. The overview allows you to evaluate how diversified your portfolio is on a variety of dimensions, including the major dimensions that are important in selecting a broadly diversified investment portfolio. (Note that I have no relationship with Morningstar. The "Instant X-Ray" is simply a useful financial tool for individual investors.)

3.8: More reading on investment diversification

These additional articles that I have written and published on the Internet may be useful to you.

Is the average individual investor portfolio well-diversified?

https://www.theskilledinvestor.com/financial/Is-the-average-individual-investor-portfolio-well-diversified_99.html

No, the average investor is not well diversified at all. Instead of investing in broadly diversified index funds or across a large number of individual securities, many individual investors concentrate investments in a very small number of equities. This lack of diversification causes most individual investors to under-perform a passive market return, while they suffer greater price volatility.

Investment securities markets do not pay you for the risks of holding individual common stocks and bonds

https://www.theskilledinvestor.com/financial/Investment-securities-markets-do-not-pay-you-for-the-risks-of-holding-individual-common-stocks-and-bonds_66.html

On average, the securities markets will not pay you for the undiversified risks of holding individual common stocks and fixed income securities. Individual investors should get out of the active management business and hold passively managed broad-based market index mutual funds.

How many common stocks are needed for a well-diversified portfolio?

https://www.theskilledinvestor.com/financial/How-many-common-stocks-are-needed-for-a-well-diversified-portfolio_47.html

Industry rules-of-thumb often state that 15 to 30 stocks are enough for a well-diversified portfolio. This can be very misleading. Price volatility at the individual stock level has increased substantially in recent years. In addition, the correlation of price movements between individual stocks has also declined. These changes mean that significantly increased numbers of stocks are required to achieve adequate diversification.

Can a limited number of stocks provide complete portfolio diversification?

https://www.theskilledinvestor.com/financial/Can-a-limited-number-of-stocks-provide-complete-portfolio-diversification_88.html

No, holding a limited number of securities does not guarantee complete portfolio diversification. An analysis by William J. Bernstein challenges the idea that a comparatively

small number of securities can provide adequate diversification when compared to an investment in a much broader index.

How many mutual funds are needed for a well-diversified portfolio? – evidence

https://www.theskilledinvestor.com/financial/How-many-mutual-funds-are-needed-for-a-well-diversified-portfolio-evidence_66.html

Mutual funds are not created equally. Particularly with actively managed mutual funds, performance can vary significantly -- even when those funds are pursuing similar strategies or "styles." Holding multiple funds will reduce the volatility or risk of your portfolio.

How many mutual funds are needed for a well-diversified portfolio? – Commentary

https://www.theskilledinvestor.com/financial/How-many-mutual-funds-are-needed-for-a-well-diversified-portfolio-commentary_66.html

Additional mutual funds in a portfolio improve diversification slightly, when looked at year-to-year. However, if the terminal value of a portfolio after multi-year investment holding periods is considered, then very substantial reductions in risk or volatility can be achieved by holding multiple mutual funds.

How do changes in common stock price volatility affect portfolio diversification?

https://www.theskilledinvestor.com/financial/How-do-changes-in-common-stock-price-volatility-affect-portfolio-diversification_67.html

Company-level price risk has risen significantly in recent years, and price movement correlations between individual stocks have declined. This means investors must hold significantly more stocks to achieve diversification. Furthermore, volatility tends to jump well above average at the bottom of market cycles. Investors should understand these peaks in volatility and not just focus on the average volatility across market cycles.

How does the size of the common stock risk premium affect portfolio diversification?

https://www.theskilledinvestor.com/financial/How-does-the-size-of-the-common-stock-risk-premium-affect-portfolio-diversification_57.html

Diversification depends upon the expected equity premium and the correlation of price movements between individual stocks in the market. Depending on the size of the equity risk

premium, non-diversified individual investors could unwittingly give up their entire expected equity premium. This is an extraordinarily unproductive risk to take.

Chapter 4: Investment risk management through asset allocation

Only some can live with the greater risks associated with the potential for higher returns

Everyone would love both low investment risk and high investment returns in the same portfolio, but such portfolios are just pipe dreams. Investing is all about intelligent and sensible exposure to investment risks. Investing means that the investor is willing to incur risk in exchange for the possibility of a higher future payoff. Unless there is a chance that you will lose some or all of your capital investment, you simply are not investing.

Rational investors expect increased returns for taking on investment risks. Investors have rational expectations for positive risk-adjusted payoffs. Current securities market prices reflect the current risk consensus and carry a discount compared to expected future values.

On average, stock and bond investments have paid investment risk premiums historically. These premiums have fluctuated and have been thoroughly unpredictable until after the fact.

Investors who have consistently stayed in the market have earned higher returns over time. While the desire to avoid investment risk is understandable, investment studies have demonstrated that efforts to time the market by jumping in and out have not been successful.

Investors need investment strategies aligned with their personal psychology and risk tolerance

Investors with different levels of risk tolerance are more satisfied by the expectations associated with investment strategies that are better aligned with their risk preferences. Differences in risk tolerances mean that more risk-averse investors are personally more satisfied with a lower risk portfolio despite its lower expected returns. They must save at a higher sustained rate and consume less along the way, but their financial strategy is more certain.

Less risk-averse investors are more satisfied with portfolios characterized by higher risk and higher expected returns. In relative terms, they can consume more and save at a lower rate, because they are expecting and depending upon higher asset growth. However, the success or failure of their financial plan is subject to greater variability, since they have a greater dependence on more risky investment assets, which may or may not deliver the returns that they expect.

Because investing is inherently risky, individuals should understand their probable response to risk factors that actually do materialize. Risk tolerance is an issue of personal psychology and will determine whether an investor will adhere to and sustain an investment strategy, during difficult economic times. When markets are performing poorly and fears are high, an inappropriate alignment between an individual investor's portfolio risk or volatility and his or her risk tolerance can be very costly.

In such circumstances, some less knowledgeable and unprepared investors may take inappropriate actions that can be explained by their personal psychology at the time. However, these mistaken actions can be inappropriate for the financial market situation and highly detrimental to their long-term financial goals and welfare. Some investors may panic and sell when they did not have to, only to see the market recover, while they subsequently remain on the sidelines with a dramatically diminished financial asset portfolio. Portfolios with different risk and return characteristics are simply better for certain investors depending upon their tolerance for risky investments.

4.1: Take personally appropriate investment risks

Asset allocation reduces risk by investing across asset classes with differing risk and return characteristics

Your risk and return preferences relative to the average investor who hold the average portfolio will influence your choice of a portfolio asset allocation. Appropriately setting your personal asset allocation in line with your personal risk tolerance is a critical decision for every investor. Because the average risk-averse investor holds the average portfolio asset allocation, this becomes the starting point in determining how a specific individual's portfolio might diverge from that average allocation. Periodic rebalancing over time maintains your intended expose to investment risk and return.

Investing and asset allocation is all about risk-adjusted investment returns related to your overall investment asset portfolio. Because the risk and return characteristics of various asset classes are not completely correlated, changes in their market prices tend to offset each other to some degree. Therefore, you normally can assemble an investment portfolio with lower overall investment risk, when compared to the risk of each of the individual asset classes that make up your portfolio. In effect, the various asset classes provide additional diversification benefits that go beyond the benefits of investment risk reduction that can be achieved through full diversification within each individual asset class.

What is an investment asset class?

The largest and most established financial asset classes of broadly diversified index mutual funds are stocks, bonds, and cash. Stocks, bonds, and cash are sometimes referred to as financial assets. Most financial assets are priced and are traded on real-time securities markets publicly.

Real estate property is an additional asset class, which creates some complications related to portfolio diversification. The great majority of individual investors with some financial assets also tend to be real estate property owners. For many, their real estate assets - usually their personal residence - can grow in value over their lives to become a very substantial and even majority part of their personal investment asset portfolios. Since this real estate equity is in a home, which also provides shelter, then these real estate assets really function as a financial asset reserve of last resort after equity, bond, and cash financial assets are exhausted.

Beyond stocks, bonds, cash, and personal real estate holdings, there are numerous other perhaps real, but very often fanciful or false asset classes that are promoted to individual investors by the financial industry. A few of the alternative asset classes and associated investment products that are pitched to individual investors include various commodities, gold, foreign exchange, hedge funds in 57 varieties, infrastructure, managed futures, private equity, limited partnerships, and on and on.

Once you stray beyond public market stocks, bonds, cash, and real estate, the proliferation of additional asset classes and investment vehicles seems virtually unlimited. Unfortunately, many of these alternative asset classes and investment products are fraught with problems for less sophisticated (and even for more sophisticated) individual investors. Promoters suggest that the grass is greener with these alternative asset classes, but many seem more like swamps upon closer inspection. In general, false or misleading performance claims, excessive sales fees, excessive costs, excessive risks, and excessive taxes characterize this alternative investment swamp.

If you are not highly sophisticated in financial analysis (and even if you are), you can do fine and probably a lot better, if you stay away from these alternative asset classes entirely. Individual investors can do quite well across their lives by sticking solely to the cash, bond, stock and real estate asset classes for their entire investment portfolios.

Your personal investment risk tolerance should determine your investment asset allocation

Investing always involves risk. All investors -- small or large -- skilled or unskilled -- irrational or rational -- sophisticated or unsophisticated -- must navigate the same uncertain securities market and economic waters to get to their financial goals. An investor's ability to tolerate risk will dictate whether they can stay in the markets in the bad times, as well as the good times.

By analogy, those who cannot tolerate rough waters should sail in a bigger, safer, and slower boat (more cash and bonds and less stocks). Those who can better stomach the storm can sail in smaller, faster boats (more stocks and less cash and bonds) and perhaps go faster while exposing themselves to greater risk. On average historically, greater risk has yielded greater rewards, but investors need to be aware of their personal limitations and choose the appropriate investment boat, given their risk tolerance and fortitude.

If the average investor sails in the average investment boat, then the more risk averse investor should choose a larger, slower boat, while the more risk tolerant investor should choose the smaller faster boat. Risk tolerant investors tend to be frustrated by the lower performance of slow boats, while risk averse investors in small fast boats may experience fears and losses (however temporary) that they simply cannot tolerate.

Virtually all investors are risk averse to some degree. Therefore, securities markets are expected to pay a positive, albeit uncertain, future return or risk premium. Otherwise, no investor with greater or lesser risk aversion would be willing to put their capital at risk versus storing their money in a more certain asset with lower risk. The few who crave risk have casinos, day trading, Forex, commodities, or some other “zero-sum-plus-costs" games, where they can give their money away to the "house" slowly or quickly. Unfortunately, few will enjoy themselves during this foolish process.

Setting your personal investment asset allocation is a critical decision for every individual investor

Because the average risk-averse investor holds the average portfolio asset allocation, this becomes a reference point in determining how a specific individual’s portfolio asset allocation might diverge from that of the average investor's asset allocation. The aggregate values and relative proportions of the financial markets will define this average asset allocation. Then, the relevant questions to ask are "How does my personal risk tolerance compare to the average investor and how should my personal asset allocation differ from that of the average investor?"

4.2: Stay in the market with a portfolio reflecting your risk tolerance

Investing is ALWAYS inherently risky. There is NEVER a safe time to be IN or OUT of the markets.

Allocate your investment assets to reflect your relative tolerance for risk, while staying in the markets to earn risk premiums. You need to allocate your financial assets in a manner that reflects your relative tolerance for investment risk. You need to stay in the securities markets to earn market risk premiums. Since securities markets tend to pay risk premiums, you have to have your money invested in the markets to get paid. Trying to avoid risk by jumping in and out to "time the markets" does not work.

In addition, your tolerance for risk is a relative thing. Few people like risk, but some can handle it better than others can. The more risk you can tolerate, the higher the potential return and perhaps the rougher the road. How you allocate the major portions of your total assets among investments in the primary asset classes will determine your portfolio's overall exposure to investment risk and return.

To earn the risk premiums that the securities markets tend to pay to investors, your assets must be invested and exposed to potential risk. Virtually all investors are averse to risk, so risk tolerance is a relative rather than absolute issue. You need to judge your preference or tolerance for risk relative to other investors.

While very few people like investment risk, those who can tolerate it better will be those who will be less uncomfortable when risk happens from time to time, and market values decline by a little or a lot. Over the long run, these investors tend to earn more. Tolerating the potential for loss is the cost that investors occasionally pay so that they are always at the table, when the markets deliver positive rewards.

Whether held directly as individual securities or in funds, trusts, retirement accounts and other vehicles, the vast bulk of individual investors' publicly traded investment assets are held in the primary cash, fixed income, and equity financial asset classes. Your relative risk tolerance should influence how your assets are allocated among these financial asset classes. If your asset allocation is more risky than your risk tolerance, you may not be able to handle the downturns. If your asset allocation is less risky than your risk tolerance, then you are likely to need to spend less and save at a higher rate to reach your goals.

Nothing is certain about this process, and that is the nature of investment risk. However, the scientific investment literature is relatively clear on certain points. Investors are not good at timing changes in the markets. It is better to buy into the asset markets in proportion to your preferred asset allocation and just stay in.

Trying to sit on the sidelines and only get in when things seem safe does not work. The converse of trying to jump out and avoid the downturns also does not work. Active strategies that attempt to time market turns have under- performed strategies of continuous investment. Consistently and profitably calling serial market turns correctly has been a skill beyond mere mortals and certainly beyond the skill of both professional and individual investors.

Staying in the markets tends to work better. To earn an investment risk premium, you need to keep your assets in the markets through thick and thin. Reasons to withdraw funds relate to meeting necessary living expenses and taxes, and not to trying to earn a better return by timing the market.

If you are more highly risk averse, it is more appropriate for you to select an asset allocation that reflects your relatively higher risk aversion. You would hold a relatively small portion of your assets in the more risky equity asset class. Therefore, you might be more comfortable and more able to keep that smaller allocation invested at all times. Even having a smaller, but sustained exposure to equity assets generally tends to work better than jumping in and out of the equity markets.

If you stay out of the markets due to uninformed fear, you are likely to need to save far more to reach your goals. Over-cautiousness is not a free lunch. There is never a safe time to be in the markets, because investing is always inherently risky. There is never a safe time to be out of the markets, because you cannot earn investment risk premiums with your cash under your mattress.

Nevertheless, you should not carelessly bear excessive risks that your mind and gut cannot endure, when the risk materializes. Inappropriate actions at the wrong times have jeopardized the future financial welfare of many investors. Do not put yourself into a strategy that you could not stick with through very tough times.

Finally, you should rebalance you assets periodically back toward your planned asset allocation proportions. However, to minimize the negative impacts of investment transactions costs and taxes, you should rebalance infrequently and in a planned manner that takes advantage of deposit and withdrawal transactions that you would need to do for other reasons anyway.

My *The Skilled Investor* website also provides articles on asset allocation.

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My *The Pasadena Financial Planner* website also provides an article about asset allocation and the financial crisis.

Click for this asset allocation article on The Pasadena Financial Planner website

4.3: The average asset allocation of the average investor

Defining the average asset allocation of the average individual investor

Because the average risk-averse investor holds the average portfolio asset allocation, this becomes a reference point in determining how a specific individual's investment portfolio asset allocation might diverge from that of the average investor's asset allocation. The question becomes, "What is the average asset allocation of the average investor?" The aggregate values and relative proportions of the financial markets will define this average asset allocation.

For the rest of this discussion, we will focus on getting rough estimates of the primary financial asset classes — cash, bonds, and stocks — to develop a point of reference for the "average investor." Of course, there are other asset classes that some individual investors hold, such as real estate and private business interests. These other classes need to be taken into account when developing a comprehensive family financial plan. Nevertheless, cash, bond, and stock financial asset interests tend to be the most easily changeable in their composition. Each of these financial asset classes can be converted readily into the other through modern real-time securities markets, and thus an asset allocation plan with infrequent rebalancing is prudent.

Measuring the average asset allocation of the average investor is therefore the goal. This should be pretty simple, correct? Just measure all financial assets held directly or indirectly for the benefit of individuals (in our case US residents) and figure out the proportions of cash, bonds, and stocks. These asset class proportions then become the average asset allocation reference point for the average investor. A more risk averse investor would then hold a portfolio the skews toward less investment risk, and the converse would be the case for a more risk tolerant investor.

However, this is only half of the puzzle, because the average asset allocation is not always stable over time. Economic cycles and securities market cycles exist, and their movements are correlated. The economy grows more quickly at some times and goes into a reversal during recessions and depressions. Securities market cycles tend to anticipate business cycles, but without any reliable assurance that the direction and strength of current securities market anticipation is accurate. The prescience of securities markets can only be measured in hindsight, after changes in the economy have become clear and the future that was anticipated by securities markets becomes the past or history.

Since the turn of the century and the millennium, the US and the world has experienced extraordinary financial times. Two decades of expansion in the 1980s and 1990s peaked in a technology – communications – financial bubble that collapsed in 2001 and was followed by an

anemic recovery and growth cycle from about 2003 to 2007. Without strong US job growth in this growth cycle and driven by rising US consumer debt obligations and a US housing value bubble, the US then lead the world into another financial or "credit crunch" crisis that was far worse than the dot com crash.

In the fall of 2008, the world stared into the abyss of global financial crisis, akin to Calypso's maelstrom in "*Pirates of the Caribbean: At World's End*." It did not matter whether you were in a big slow investment boat or a small, speedy investment boat. Without the real world "special effects" of massive global government intervention in the securities markets, we would have found the end of this unfolding securities horror movie would have been to find most large boats and all small boats in Davy Jones locker at the bottom of the economic ocean.

In panic, those who could not stomach this maelstrom fled to the "dry land" of government guaranteed cash investments, and away from stocks and even bonds. The remainder of this section provides a few numbers that tell this disturbing financial tale. For purposes of setting an asset allocation strategy, one needs to decide whether to pay attention to the average asset allocation "normal" of the last several decades or to decide that what we just have collectively endured is the "new normal," which it likely is not.

Before the Credit Crisis: average asset allocation percentage data for 2004

To understand the overall asset allocation percentages of the major financial asset classes, in mid-2004 I performed a detailed analysis of all US personal financial asset ownership held directly by individuals and indirectly by institutions for the benefit of individuals. Concerning the average portfolio of the average investor, I reviewed detailed data from the US Federal Reserve Bank which tracks total personal assets across all kinds of personal accounts including brokerage, tax deferred, pension, insurance, trust, and other accounts. The Fed's June 2004 Z.1 report indicates that total U.S. personal financial assets were approximately $26.9 trillion dollars. In total in mid-2004, the percentage allocation across the major financial asset classes was 26.9% in cash and equivalents, 18.9% in fixed income, and 54.2% in equities. (1)

For purposes of comparison, the Investment Company of America's (ICI) end of 2004 estimate of total US domiciled mutual fund assets, which is a subset of the personal assets that the Fed tracks, totaled $7.5 trillion dollars. (2) The percentage allocation was 27.7% in cash and equivalents, 19.7% in fixed income, and 52.6% in equities. The mid-2004 Federal Reserve and the end of 2004 ICI numbers are remarkably similar. This gives confidence that these figures

represent approximately the average asset allocation of the average personal portfolio. Analyzing the Federal Reserve data takes quite a bit of time, whereas the ICI data can be analyzed and understood much more quickly.

The average asset allocation at the mid-point of economic and securities market cycle can serve as a baseline for the asset allocation of the average risk-averse investor

If we summarize the Federal Reserve Z.1 assets data and the ICI mutual fund assets data for 2004, about 27% of assets were in cash and equivalents, 19% were in bonds and fixed income assets, and 54% were in stock and equity assets. With the benefit of several years of subsequent hindsight, the end of 2004 was roughly the middle of the last combined business and securities market cycle.

For an asset allocation comparison taken near the tail end of the market cycle prior to the credit crunch debacle of 2008/2009, I also looked updated ICI data for total U.S. domiciled mutual fund assets in November 2007. (U.S. domiciled mutual funds would include both domestic and international stock, bond, and cash investment assets.) The ICI reported that, at the end of November 2007, U.S. domiciled mutual fund assets totaled $12.1 trillion, which is about a 60% increase over total assets in mid-2004. (3)

Even with this huge, $4.6 trillion increase in total mutual fund value, the late 2007 percentage allocation was 25.7% in cash and equivalents, 17.0% in fixed income, and 57.7% in equities – again reasonably similar to mid-2004 with a moderate shift of value toward equities. The proportion of asset value in the equities asset class rose about 5 percentage points, as the business/economic cycle and securities market cycle advanced and matured.

Meanwhile the proportion of asset value in both cash and debt securities declined modestly. Cash has been redeployed somewhat, and bond asset values have declined as debt instruments have come under pressure in the credit crisis of the second half of 2007. Nevertheless, the change in percentages has not been dramatic. These figures demonstrate that, overall, about 55% of total asset value is held in equities, about 25% in cash, and somewhat shy of 20% in bonds.

These 2004 to 2007 proportions represent the average holdings of the "average" investor across all personal financial assets held in U.S. personal accounts, either directly or indirectly through institutional holdings on their behalf. Depending upon your relative tolerance for investment risk compared to the "average investor," these average percentages are instructive concerning what an average individual investor’s asset allocation would be.

What happened to the average asset allocation during the recent credit crisis of 2008 and 2009?

While we can only hope the credit crunch, financial markets crash, recession, and near depression of 2008 and 2009, is an aberration and not the new normal, it is instructive to look at a few data points to see what happened to the apparent asset allocation percentages at certain points during this crisis. Here I will use ICI mutual fund data.

Following a grinding decline in stock market values beginning in late 2007 and culminating in the free fall collapse of equity values near the end of 2008 and beginning of 2009, the stock markets bottomed out in March of 2009. The equity markets began a recovery that was surprising to many if not most investors. (Note that this is being written in October of 2009 and thus I cannot predict (nor can anyone else) what will happen going forward.)

Measured at the end of the first quarter 2009, the ICI reported total US domiciled mutual fund assets of $9.2 trillion dollars or very close to 50% of the $18.2 trillion dollars in mutual fund assets held by investors across the globe. 4 For US mutual funds, 41% of total assets were held in cash equivalent money market mutual funds, 20% of assets were held in bond funds, and 39% of assets were held in stock or equity mutual funds.

In effect, when compared to the 2004 and 2007 figures above, there was roughly a 15 percentage point shift from stock funds to money market funds.(In aggregate the total value of US mutual fund asset almost $3 trillion lower than the total value near the end of 2007.) While only a small part of this shift in percentages can be was due to actual net redemption cash flows

out of stock funds, the real explanation was that the collapse of stock market values accounted for the vast majority of the shift in overall percentages. Assets did not have to move. Equity values had just collapsed, as expectations about the future economy contemplated a severe depression.

The recovery of 2009 reversed trends in aggregate asset allocation percentages

Now, let us take a look at the latest available figures at the time of this writing, which were for the end of September, 2009.5 The ICI reported total US domiciled mutual fund assets of $10.6 trillion dollars representing an increase in total mutual fund asset values for about $1.4 trillion in that six month period. For these US domiciled mutual funds, 34% of total assets were held in cash equivalent money market mutual funds, 21% of assets were held in bond funds, and 45% of assets were held in stock or equity mutual funds. In effect, when compared to the end of March 2009 figures above, there was roughly a 6 percentage point total value shift in favor of stock funds and a 1 percentage point shift in favor of bond funds — all away from money market funds. Again only a small part of this shift in percentages can be accounted for from actual net cash in-flows into stock funds.

The vast majority of the last six months of equity market appreciation was due simply to a recovery of equity market values and not due to cash in-flows. Those who were in the market benefited with paper gains, just as the vast majority of them had paper losses as the markets collapsed in 2008 and early 2009. The real question is whether current aggregate asset allocation percentages are the new normal, or just a transition from a severe securities market crisis back toward the historical norm. This is a critical asset allocation decision for investors.

If you were an average investor and held the average asset allocation of 2004 to 2007 and had an investment policy to retain that asset allocation through periodic re-balancing, then you would have been a net buyer of equity assets as securities market values collapsed in 2008 and early 2009. While perhaps emotionally challenging to anyone, this "buy equities into a crisis" (and "sell them into a growth cycle") strategy would have positioned you for the recovery that occurred in 2009. Most who flew to cash did so after most of the collapse in equity values had already occurred (buy high and sell low), and they were sitting in cash on the sidelines in surprise as equity market values recovered. The investment research literature has repeatedly shown that market timing is an inferior strategy. In the next few years, we will undoubtedly seem more studies that repeat this finding. Even if another maelstrom reoccurs, this will be yet another

opportunity for investors to achieve dramatically inferior portfolio performance, when they do not have a well-defined long-term asset allocation and re-balancing strategy in place and when they do not have the will to implement it consistently over time.

1) Federal Reserve Bank, Federal Reserve Z.1 Report. June 10, 2004. http://www.federalreserve.gov
2) Investment Company Institute. "2004 Mutual Fund Fact Book." Note that while the balanced or mixed mutual fund category is relatively small and usually constitutes about 5% of total mutual fund assets, this category consists mainly of bonds and stocks. For purposes of analysis, I assumed that the proportion of assets in the balanced or mixed category was 50% bonds and 50% stocks and I allocated these dollar amounts to the primary bond and stock asset categories to eliminated the mixed category.
3) Investment Company Institute. "Trends in Mutual Fund Investing, November 2007″ (The same procedure for balanced or mixed mutual fund assets as described in the note above was applied.)
4) Investment Company Institute. "Worldwide Mutual Fund Assets and Flows, First Quarter 2009″ Supplementary Table S4 (The same procedure for balanced or mixed mutual fund assets as described in the note above was applied.)
5) Investment Company Institute. "Trends in Mutual Fund Investing, August 2009″ (The same procedure for balanced or mixed mutual fund assets as described in the note above was applied.)

4.4: Tactical asset allocation and market timing

The best individual financial planning and investment rules and practices are enduring and should not change due to market cycles or a financial crisis

This section looks at individual investor asset allocation strategies in light of the recent credit crisis. The credit crisis was a systemic, global financial event that affected any financial or securities instrument influenced by debt and borrower credit worthiness. In short, the credit crisis affected everything.

During the credit crunch, many banks had to confront the fact that some of their capital was held in toxic security assets with collapsing market values. This undermined their capital ratios

and ability to lend, forcing a contraction in credit availability. Many amateur, professional, and institutional investors and speculators sought liquidity at the same time. They either had to do so to meet their cash flow obligations and/or they feared greater losses and sought "safer" places for their money.

Presto — the result was a global valuation downdraft that affected all asset classes. While some — but not all — classes of bonds did better relative to other asset classes, the real beneficiaries were those who already held bond positions before broader groups of investors got into a panic.

When it turns out that you are already invested in an asset class, it is much more likely that you are already following a passive asset allocation strategy. While tactical asset allocation strategy advocates will suggest that you can anticipate the crowd and take action, these assertions are not verified by studies of flows-of-funds into and out of investment mutual funds.

While a very, very narrow segment of investors might have some skill in anticipating trends and can actively pre-position their investments relative to the movement of the crowds, most people already have their money invested in an asset class, because they have chosen strategically to be invested in that asset class for the long-term as a buy-and-hold investor. Flow-of-funds studies show that almost all tactical asset allocation fund flows are late money flows that chase performance after valuations have already moved. On average, tactical asset allocation money is late money and these investors in motion get inferior returns.

At the end of the first decade of this new millennium, huge cash flows into bond funds still continued relative to flows into other asset classes, such as stocks. This is a trend that was many years in the making. We have not seen similar disproportionate fund flows into bonds since the 1984 to 1987 period, when interest rates were much higher than today’s paltry yields.

In succession during the past decade, we have experienced a technology bubble market crash, a housing bubble crash, a credit crunch, and a resulting global economic/business cycle crash. Barring a total global economic depression, which we seem to have skirted and avoided, what will happen to the bond markets when interest rates inevitably rise? Stay tuned for whether bonds are the next sector bubble crash.

Recently, there has been more advocacy of "tactical" asset allocation strategies by certain financial advisors

The logic goes as follows. Broad passively-managed asset class diversification strategies seemingly “did not work” during the credit crisis. Even broadly diversified investor portfolios went down, although not as much as portfolios that were more exposed to particular asset classes that had suffered the worst percentage declines. Therefore, buy-and-hold strategic asset allocation apparently did not work and should be thrown out.

As a replacement, these financial advisors now advocate that it is time to employ tactical asset allocation strategies that "could" get better risk-adjusted portfolio returns in the future. You know, start moving things around to get ahead of the crowd and be there before the crowd arrives to drive up valuations.

Unfortunately, tactical asset allocation strategy advocates do not offer anything to back up their claims that tactical investment activity will actually be superior to a passive asset allocation strategy in the future. Tactical asset allocation strategies have not been superior in the past.

Advocacy for tactical asset allocation strategies flies in the face of the broad body of investment research. This research has consistently shown that low-cost, broadly diversified, passive buy-and-hold asset allocation strategies tend to yield superior long-term risk-adjusted portfolio returns.

Broad portfolio diversification has never meant that a portfolio could not and would not experience short-term losses at the portfolio level

When you have an investment banking industry that finds clever ways to repackage smelly sub-prime mortgages as gilt-edged, investment grade derivative mortgage securities and resells these stinkers in vast quantities to other supposed "smart money" financial professionals across the banking and investment world, then we just might all have a problem. When doing this over and over got a lot of clever investment banking types some very large bonuses, then there was a lot of motivation to keep that gravy train moving along.

While you might question the ethics of these clever investment bankers, you should not forget that they sold these toxic mortgage securities to other willing professional buyers in the global banking industry. Those professional banker purchasers, in turn, tucked these gilt-edged derivative securities into their banks’ capital asset portfolios — the very capital portfolios upon which the banks ran their leveraged loan operations.

When the music stopped and all these wool suited emperors had no “superior skill” clothing, bank capital evaporated and so did their ability and willingness to make loans. Of course, this

was all compounded by tens of trillions of dollars in CDOs (credit default obligations) that tried to pass the buck on the ultimate repayment responsibility for bad debts. Hot potato. Hot potato. But, wasn't that a golden potato just yesterday? Did the investment bankers also make some sweet bonuses on the multi-trillion dollar CDO swaps market? You betcha!

Without taxpayer dollars via the TARP US bank bailout, the US and the rest of the world would all be in the financial black hole of a long-term global financial depression. In that event, most people would not have had to worry about short-term paper losses on their investment portfolios. Instead, many would have liquidated their portfolio holdings at cents on the dollar to meet living expenses after their jobs vanished.

If you have been following the chatter, you might remember hearing that most TARP funds have been paid back and some TARP loans to the banking industry have been reasonably profitable. Of course, this supposed profitability is only positive from a very narrow perspective. Taxpayers are not normally in the business of making bailout loans to the financial industry. While unfortunately necessary, it is difficult to argue that TARP loans were profitable to taxpayers, when you consider the vast global economic destruction that resulted; the job losses and the millions unemployed and under-employed; and the un-reimbursed hole that many still have in their personal investment portfolios.

So, when a huge and systemic toxic asset problem exists in the financial system, and the credit house of cards begins to fall, why would or should a diversified strategic asset allocation strategy prevent a short-term loss at the portfolio level? Moreover, why would tactical asset allocation be a superior replacement strategy?

To the contrary, higher cost, less diversified, active investment strategies will do what they always do, which is to lead on average to inferior risk-adjusted returns at the portfolio level. Even in a dire financial crisis, you should not lose sight of the long-term and forget the lessons of financial history. Broadly diversified, passive, low-cost, buy-and-hold strategies have been superior in the past, and they are much more likely to beat tactical asset allocation strategies in the future.

4.5: Assessing personal risk tolerance

All sane investors are risk averse to some degree. This is what normally keeps current securities market prices down relative to expectations about future securities values. The key

question is what kind of investor are you from an investment risk tolerance standpoint? This important answer is a direct driver of the asset allocation percentages of your personal portfolio. Your asset allocation percentages determine the greater or lesser degree of exposure that your personal investment portfolio has to investment risk and the opportunity for higher investment returns.

Trivial financial industry investment risk tolerance questionnaires often use just a few leading questions to quickly categorize you along some part of the range from "conservative investor" to "aggressive investor." Sadly, simplistic investment risk tolerance questionnaires could be just another step on the way for securities industry sales people to push you through a well-honed process of selling.

One might reasonably question whether brief risk questionnaires are really intended to measure personal risk tolerance, which academic research indicates is an elusive thing to quantify. An alternate and more cynical perspective is that quickly completed risk questionnaires are put on file to satisfy regulatory requirements, so that the sales process can proceed and you can be sold overly expensive investment securities products that will drive up sales commissions, bonuses , and the profits of financial services companies.

From the point-of-view of your best interests, however, it is very important to measure much more carefully your risk tolerance regarding the expected investment risk versus reward composition of your portfolio's asset allocation percentages.

There is an inexpensive way for you to get a detailed assessment of your risk tolerance

You can complete an investment risk tolerance assessment survey online, and you do not have to work with any financial industry intermediary or financial advisor to do so. Furthermore, by doing this investment risk tolerance analysis yourself, you can separate the process of assessing your investment risk tolerance from the financial industry's product sales process.

In doing so, you can give yourself the alternative of buying very low cost and broadly diversified index fund investments directly from low-cost mutual fund vendors. Industry intermediaries tend to sell only high cost investments that pay them high fees and/or high commissions. Often associated with high pressure securities sales efforts, these higher fees and commissions come out of your pocket and can really damage your long-term finances. You pay more and get less. See here for more articles on investment fees.

If you want to do an online survey to assess your personal investment risk tolerance, you can do so at MyRiskTolerance.com, which is a product of FinaMetrica. Their website explains FinaMetrica's process for the assessment of personal risk preferences. Their survey has some sound economic and social science behind it. In addition, they have a growing dataset of other survey respondents against which your responses are compared.

https://riskprofiling.com/Get-Started/myrisktolerance/

The objective of personal investment risk tolerance analysis is not just to measure one's desire to avoid risk, because almost all people are risk averse investors. The goal of proper investment risk tolerance analysis is to assess your personal risk preferences against the backdrop of a representative sample of other investors.

FinaMetrica has a database of over a half million other investors who have already completed the questionnaire primarily from the major developed, English speaking countries around the world, including the US, UK, Canada, New Zealand, and Australia, where they are based. A French Canadian risk tolerance questionnaire available.

Note that I have no business relationship of any kind with FinaMetrica and their MyRiskTolerance.com website, and I have not received any compensation to mention their service. At my suggestion, most of my clients have used FinaMetrica's risk tolerance survey, and each has paid the price that everyone else pays.

The personalized investment risk tolerance analysis profiles that you get after you complete the questionnaire are detailed and informative. They explain your results and compare them to the responses of others who have completed the survey before you. When the particular answers that you give differ from the responses of other investors who have a similar investment risk tolerance profile to yours, these differences are explained to you.

Your personalized survey will provide written descriptions of the risk attitudes and behaviors of the investor segment or group with which you are most closely aligned. When your survey answers deviate from that group, your answer will be noted in bold type. Just substitute your bolded answer for the corresponding sentence in the standard description to see how you differ from the group.

With your personalized risk tolerance analysis, you can do a better job of determining your portfolio asset allocation percentages. Then, you can buy the needed low cost, broadly

diversified, passively managed index funds to fill out the asset allocation of your portfolio directly from the lowest cost vendor or via a discount broker.

4.6: Target date mutual funds many not be your best choice

Most commonly, target date mutual funds are pre-fabricated retirement investment funds that are primarily designed to deliver a declining stock and increasing bond asset allocation over the years. This section provides useful information for those considering investing in target date funds.

Target date funds imply that equity allocation proportions should decline with age for everyone. Age declining equity allocations are not necessarily a given and are not appropriate to many people. As discussed in earlier chapters, the point of asset allocation is to align one's relative risk tolerance with the expected risk and return of your portfolio. While it is natural to assume that people will become increasingly risk averse with age, this is not necessarily the case. A wide variety of factors, such as stable income sources, wealth, investing knowledge, emotional control, etc. will affect whether one's risk aversion does or does not change with age.

For the rest of this section, however, let us assume that you would become more risk averse with age, and thus your investment portfolio should shift over time toward the greater stability of bonds and cash and away from the higher volatility of stocks. This is a significant presumption, because investors need to ensure that the investment funds they choose will actually implement the asset allocation strategy that they want. You should note that making this presumption implies that you have done some financial planning, and you understand the asset allocation that is appropriate in your current portfolio. It also implies that you understand your risk profile, which underlies your asset allocation strategy, and you believe that you will become more risk averse in the future.

Understand the structure of target date funds before investing

The financial crisis revealed that many investors naively had selected target date retirement funds based on the year in the fund name without understanding the concepts of "to retirement" versus "through retirement." Many investors who were close to retirement were shocked by what happened to the value of their target date funds as the stock market crashed. Despite carrying the same year in their names, some target date funds were designed with a glide path (the annually changing bond to stock ratio) that reached the most conservative level upon entering retirement, while others contained a glide path that continued throughout retirement. The equity allocation within different target date funds that had the same year in their fund names could differ by as much as 40 percentage points in their allocation to stocks. You need to do your homework when you select any investment fund, and target date funds are no exception.

Target date funds theoretically target an average investor who has an average risk tolerance. However, investors vary in their tolerance for risk and thus their optimal asset allocation would differ. This means that you should choose a target date fund based upon its expected investment risk and return profile rather than the year of retirement in the fund's name. Assuming that you were to choose a target date fund with the most personally appropriate investment risk exposure,

the correct choice of a target date fund would not necessarily be the fund with your projected retirement year in its name.

Any person believing that retirement planning requires simply choosing an investment fund with a year in its name that is close to the year that they intend to retire is not putting sufficient effort into their financial planning. While target date funds have their virtues, for many they are perhaps a bit too convenient. They should not be a license not to think clearly about your lifetime and retirement financial planning.

Choosing a target date fund vendor

Numerous mutual fund companies offer families of target date funds. Many of these target date fund families are offered only through employer retirement plans and/or are sold only via advisers. Target date funds are just combinations of assets classes and collections of investment funds with allocation percentages that change over the years, Nothing about them affects that other investment fund selection principles that are discussed in this book. The most desirable individual funds are the lowest cost, most broadly diversified, passively managed index investment funds. Therefore, the most desirable target date funds are the lowest cost, most broadly diversified, collections of passively managed index investment funds.

So how does one go about choosing a target date fund family, given that you know the risk profile of the particular fund within a target date fund family that would be most appropriate for you? Again, low cost is the dominant selection variable, which leads you to the most diversified index investment funds.

Instead of providing long lists of target date fund families that may or may not be available to you in an employer sponsored investment or IRA, this section suggests a different approach. We will look only at those low cost target date mutual fund families that you can invest in directly. If you are fortunate, you will find that your employer offers these same target date fund families in your retirement plan. If they do not, you can still evaluate whether the target date funds available to you in your employer's retirement plan are worth the extra price. The higher the cost of the target date funds available to you, the more you should complain about being denied access to lower cost target date funds.

In terms of direct investments into target date funds, until recently Vanguard was the lowest cost leader. Vanguard offers a low cost target date mutual fund family for direct purchase by investors with uniform expense ratios of .08% in 2023.

Now, let us look at the target date mutual fund families of Fidelity and Schwab, which have been the main low price competitors to Vanguard in the index fund arena. Until recent years, Fidelity and Schwab offered target date fund families with noticeably higher costs than Vanguard, and they still do offer those significantly higher cost target date fund families. However, the good news with both Fidelity and Schwab is that they both now offer index fund based target date fund families with very competitive low expenses.

Schwab now has an index fund target date family named: "Schwab Target 20**XX Index** Fund" – all with a .08% annual expense ratio in 2023. This is more of Schwab's aggressive push to lower index funds costs and to lead in this market from a lowest management fee standpoint.

(Note that Schwab still maintains its more expensive target date fund family with expense ratios as high as .59%. It is not clear the justification for these higher expense ratios. So pay close attention to the fund family names, because the addition of the word "Index" is the only difference in their names.)

You also need to pay close attention to Fidelity's target date fund names. The Fidelity various target date fund families have net expense ratios ranging up to 1.75% for it various future year funds. Fidelity target date funds are a particularly confusing word salad of "Freedom," Advisor," "Blend," "Flex," combined with purchase restriction classifications like A, C, I, K6, Z, Z6, M, etc. When you look at the composition of the underlying funds, Fidelity's more expensive target date funds can be composed of a jumble of up to a couple dozen different active and/or index funds. If you were do some more research, you would find that some of these expensive target date funds are only available through retirement plans and some are available only through advisors with much higher fees that compensate advisors. The good news is that you can entirely avoid Fidelity's high cost target date word salad naming complexity.

In contrast, the "Fidelity Freedom **Index** 20XX Fund" target date fund family in 2023 had a net expense ratio ranging from .06% to .12% for all future year funds depending upon the purchase class. Notice how much difference inserting the word "Index" into the fund family name makes in term of reduced costs – up to 1.60% annually! In contrast to the mess summarized in the previous paragraph, the much less expensive Fidelity "Index" target date fund family is composed of relatively few different underlying passively-managed index funds!

You could make your own low cost target date fund

Even if:

A) you wanted to implement an asset allocation that declines with age,

B) you understand the correct asset allocation model for yourself, and

C) you found a target date fund family to implement your model,

you should realize that the allocations in target date funds are revised only once per year. While some thought does go into the construction of a target date fund family, there is relatively little "rocket science" involved in managing these funds from year to year. As the years pass you gradually adjust the proportions among the underlying funds.

In contrast, if you have an overall asset allocation plan across all your investments, you will re-balancing at least once a year anyway. It is a relatively trivial matter to shift your overall bond and stock proportions as you age. Compared to target date funds, you should be able to implement age related adjustment much more cost effectively using separate, low cost stock and bond mutual funds. Therefore, target date funds provide relatively little value-added to a knowledgeable person.

While target date mutual funds provide some diversification across asset classes for those who lack any financial or investment plan whatsoever, they are usually not the right tool for those who do have a financial plan. When you read and understand the "asset tax location" concepts discussed elsewhere in this book, it will become clear that you should take into account the taxability of your account holdings when deciding where to hold stocks and bonds within your various investment accounts. Depending upon your taxable and tax-advantaged asset holdings, target date funds might never be an appropriate choice within any of your accounts. This is simply because you instead would split your stock and bond funds and hold them in different account types to reduce investment taxes.

Finally, concerning costs, target date funds are "fund of fund" arrangements that tend to be more expensive than choosing individual funds. Target date funds add additional fees to manage the long-term asset allocation model, while each target date fund year just varies the underlying stock, bond, and cash ratios of the underlying mutual funds. Even with the lowest cost investment fund vendors, like Vanguard and Fidelity, target date funds can still be somewhat more expense that the underlying funds. Self-assembly is almost as easy and can be cheaper these target date fund.

With a self-assembly method, a "do-it-yourself" Vanguard target date fund could cost less than .05% per year compared to the average pre-fabricated Vanguard target date retirement fund,

which charges .08%. While this .03% or greater expense difference may not sound much, with a $100,000 investment position the difference equals $300 over a decade without compounding. That could buy a mid-sized TV that would probably last a decade. The point is that even very small percentage savings on large amounts are worth paying attention to - even if you are using the lowest cost, most efficient investment funds.

However, if self-assembling target date funds seems like it is not worth the bother, think about the comparison with the industry average target date expense ratio of about .5%. At the end of 2021, Vanguard stated that "industry average expense ratio for comparable target-date funds (was) 0.49%. (All averages are asset-weighted. Industry averages exclude Vanguard. Sources: Vanguard and Morningstar, Inc., as of December 31, 2021.)"

The savings compared to this industry average would be worth well over ten times as much, without taking into account the long-term compounded value of the money you save. Instead of giving your money away to the financial industry, you could have a mid-sized TV for a decade and take a nice vacation for a week.

4.7: More reading on risk and asset allocation

This additional article that I published on the Internet may be useful to you.

Risk tolerance drives the asset allocation decision

https://www.theskilledinvestor.com/wp/your-investment-risk-tolerance-drives-your-asset-allocation-decision-105.htm

The primary cash, bond-fixed income, and stock-equity financial asset classes have different expected investment risk and return characteristics. Financial asset allocation is the apportionment of your investment portfolio into one or more of these classes of market-traded financial assets. Assessing your personal investment risk tolerance is one of the most important personal investment decisions that you will make, because this decision drives the long-term risk-return composition of your investment portfolio.

Use flexible asset allocation methods to develop

your own lifetime financial plan using VeriPlan

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

Chapter 5: Cut your investment costs and taxes to the bone

Most investors' investment cost cutting habits are very rusty

If there is one idea that is most important to individual investors, it is that they should drive all investment cost out of their portfolios and cut their investment costs to the very bone. The result of doing this would be to increase your chances of a better risk-adjusted investment return.

Simultaneously, this process would push the investments that you hold toward the most passive and most diversified end of the investment product spectrum, because the most passive and diversified investments tend to be synonymous with lowest cost investments.

However, I realize that only a minority of individual investors will ever wake up to the importance of low cost investments to their long-term financial welfare. This is because the majority of individual investors are naïve trend extrapolators, who do not understand the nature of auction securities markets and the complete uncertainty about what the future holds.

The first thing that the great majority of investor pay attention to is historical performance, which means almost nothing when it comes to choosing investments within asset classes. The movement of substantial investor assets over the past several decades from expensive active investments toward far cheaper passive index investments is encouraging. Nevertheless, there is no good reason to believe that the vast majority of investors will ever stop listening to the siren song of beating the market.

You can see bias for historical performance as an indicator of future performance in numerous ways. Some of this evidence will be elaborated upon in this chapter and elsewhere in this book. However, simply consider doing a study of Internet keyword search terms that compare the searcher interest in investment performance versus cost. For example, in a comparison of the monthly search volume for mutual fund performance versus mutual fund costs, there was much greater than a 10 to 1 interest in performance related terms compared to cost related search terms.

Sometimes, it is difficult for some people to interpret rational data and to understand how important certain factors like investment cost reduction can be. Therefore, I will also offer a visual example. Perhaps you saw the Will Farrell movie, "*Land of the Lost*." I thought that certain scenes were hysterical, and one scene is illustrative related to investment costs and your investment portfolio.

If you have not seen this movie and want to see the scene that I am referring to, just copy and paste this search phrase < "Land of the Lost" insect > into Google or whatever search engine is your favorite. You will be treated, depending upon your taste in humor, to Will Farrell playing banjo and singing the *Land of the Lost* theme while an huge alien mosquito bites him first on the neck and then on his back. Unaware of the insect on his back, he keeps singing and becomes

very pale as this alien bug sucks out much of his blood. When he falls over, the alien mosquito is the size of a basketball.

While many people thing that investment costs are just "a few percent," or comparable to the irritation of a few mosquitoes on earth, when measured against your net after tax and after inflation returns, the average person's investment costs are far more like that giant mosquito in "*Land of the Lost*."

5.1: Excessive investment costs are a huge problem

Each and every year, the average investor wastes 2% to 3% of his total assets on unproductive, but completely avoidable investment costs.

Concerning asset management fees charged by mutual funds, the average investor pays about .3% more than necessary on money market funds, about .75% more than necessary on bond funds, and about 1% more than necessary on stock funds. Additionally, individual investors pay sales charges, hidden transaction costs, marketing fees, and account holding fees that siphon away more of their assets and returns. The amount wasted is very substantial, because these seemingly small percentages are charged against trillions of dollars in assets. Paid year after year, excess management fees reduce returns and compound over the lives of investors.

Unfortunately, paying higher fees does not lead to better returns. Overall, investment management firms do not deliver higher risk-adjusted returns for their fees. In fact, the opposite is true. Higher investment costs simply drive down investor's net returns.

Investors can stop this waste, and they can either do it themselves or do it with a cost-conscious advisor. They do not need to pay overly expensive investment managers, advisors, and brokers. Excessive charges by industry distributors are part of the problem. Just as Americans have become more cost conscious in their pursuit of retail goods and services, they need to become much more cost conscious when they purchase investment products and services.

Beating the market is an illusion that has been disproved consistently and repeatedly through scientific studies of investment fund performance. The hope of beating a market return is fostered by the industry to drive sales. However, the intense competition of the securities markets tends to make everyone average over time, not some superior. Despite slick industry marketing, investment funds are commodities and luck rather than skill dominates fund performance over time. Therefore, investors need to shift their purchases to lower cost vendors and stop chasing historical performance that does not repeat.

When investment fees are stated as a percentage of one's assets, these fees might appear to be "just a few percent," but they are not. Investors' assets are just that -- their assets. They already own them. Investors pay management fees hoping for a better chance to preserve their assets and to improve their returns. To understand the true impact of these investment costs, annual charges should be compared to annual returns not to total assets.

When visible and hidden industry charges are calculated as a portion of returns rather than assets, it becomes obvious that industry costs are huge. With double-digit annual growth in the 1990s, costs seemed small. However, when total costs for actively managed investments purchased through commissioned advisors are compared to long-term historical investment rates of return, these costs consume between 1/3 and 2/3 of returns.

Investors have no control over the securities markets, but they can control investment costs and thus improve their net returns. In other business realms, individuals would not allow anyone to take their property without providing commensurate value in exchange. Why should they give away some of their investment returns?

Regrettably, in exchange for paying higher fees, the average investor will not obtain any better results than he would have with a passive, low-cost, market index investment strategy. In

fact, the typical investor will fall further behind the market return over time as higher than necessary fees and hidden costs steadily siphon away his assets.

The average investor holding individual stocks and bonds rather than mutual funds tends to under perform the market to an even greater extent. These undiversified investors expose themselves to significant additional risks that are unnecessary and avoidable. Many investors pay additional fees for the dubious privilege of being advised to utilize high turnover investment strategies that cause them to trail the market return by a wider margin on average.

In summary, each year the average investor wastes between 2% to 3% of his assets on unproductive and entirely avoidable visible and hidden investment costs. Many waste much more. On a $100,000 portfolio, this is $2,000 to $3,000 thrown away year after year without receiving commensurate value. This is $2,000 to $3,000 every year that could have been reinvested and grow over time, instead of being given to financial intermediaries. This waste increases with the size of the investment portfolio. Furthermore, when one considers that these figures are pretax, it only adds to the bad news. Less than optimal investment strategies often accelerate the unnecessary recognition of taxes, which could be paid at higher short-term capital gains tax rates.

This expensive mess is completely avoidable, and astute investors themselves can be in the driver's seat and solve this problem for themselves.

5.2: Lower investment expenses lead to higher returns

Excessive investment costs are a plague on your personal financial planning

Excessive investment expenses are one of the most significant barriers to lifelong family financial security. While financial services industry sales people tell you that you need to pay more to get more, the correct answer is the opposite. If you pay less, you are likely to get more.

In the uncertain and volatile world of financial investments, investment cost reduction is the one strategy that is most likely to improve the future value and investment performance of your bond and stock portfolio, while reducing your investment risk. When you drive your investment costs down to the bare bones minimum, you will simplify your personal finances. When you reduce you costs, you will also stop feeding the purveyors of bogus financial strategies who feed off your assets. If you are not willing to pay, they will go after someone else.

Over the long-term, passive investment strategies focused on very broadly diversified index funds tend to yield gross portfolio returns equaling the gross return of the broad securities markets. In addition, if these investment 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 fund 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 investment portfolio returns. The primary reasons are fourfold:

1) The investment securities industry offers products to make a profit. If you are willing to pay more because you think superior past performance will persist, the financial industry is willing to keep accepting your money. A large part of the amateur investing public naively chases historical performance, and the financial 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 personal investment game. However, they will always have another batch of expensive funds to sell to you, some of which happened to do better in the past. Would you now like to try one of them with your diminished portfolio assets? Many individual investors seem never to learn, and their persistent demand is why the active management industry thrives. See: The illusion of superior professional investment manager performance
2) Actively managed investment strategies require high cost professionals to manage and high trading costs to execute. The more you try to win, the more it costs. The more it costs to play the game, the harder it is to win. See: The investment industry is not your investment partner
3) The financial 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 sales loads charges and annual sales and marketing fees. On the other hand, if you are not willing to pay high investment fees, then you will not have to listen to all the wrong-headed promotional hype and rubbish that comes with this territory. See: How can individual investors trust, when so much investment information is rubbish?

4) By targeting subsets of the overall securities market, the average active strategy will incur additional investment risks without additional securities market 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. See: Asset class investment risk premiums — your reward for taking investment risk

In effect, active strategies take on more investment risk without risk compensation compared to fully diversified passive investment strategies. In the short-term, some investors will be lucky, but most others will not. Over the long-term, however, good and bad luck tends to even out, and active investors tend to fall behind, because of their higher costs and higher taxes. Meanwhile, they take a bumpier road in terms of higher portfolio price volatility or risk. See: Passive index investment strategies are superior, because they narrow the range of outcomes

As mentioned previously, a 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 the performance of the average actively managed fund mathematically must trail the performance of the average passively managed fund by the average difference in fund management costs. This article is available on Professor Sharpe's website. (*Find Professor Sharpe's website*) (*Find "The Arithmetic of Active Management"*)

While financial services industry sales people tell you that you need to pay more to get more, the correct answer is the opposite

Excessive investment costs are a plague on your personal financial planning. Excessive investment expenses are one of the most significant barriers to lifelong family financial security. If you pay less, you are likely to get more.

The scientific investment literature provides pitifully little encouragement that individual investors can:

* predict individual prices of stocks and bonds or the future value of the securities markets

* 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. Resulting from real-time competition among armies of high and low skill investors, risk-adjusted securities market prices tend to make everyone mediocre over the long-term.

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.

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 do, 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-market game entirely. Instead, the more reliable 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.

5.3: Many financial industry hands constantly in your wallet

Even with optimal risk-adjusted investment portfolio strategies, there is still substantial room to improve upon net investment performance through continued and vigilant focus on controlling investment costs and tax realization. The investment fees extracted by the financial securities industry are grossly excessive. Excessive costs imposed on "retail investors" have increased substantially during the past several decades on both a total cost and a percentage of returns basis.

At the same time industry deregulation, market innovation, and increased competition have provided many new and useful mechanisms for investors to manage their assets in a much more cost- and tax-efficient manner. It is not hard to cut your investment costs, but you have to be conscientious and vigilant. You need to remove all those hands that may currently be in your family's financial wallet.

Because most investors are fixated on performance and few on cost reduction, some might dismiss the evidence presented in this book. However, if you have an open mind, you need to understand that many wiser and more prominent members of the investment community than I have very similar thoughts to those presented in this book. Long a proponent of very low cost investing as the founder of The Vanguard Group, John C Bogle has written several compelling investment books in his retirement.

Most recently in his 2012 book "*The Clash of the Cultures: Investment vs. Speculation,*" John Bogle cited the views of David F. Swensen, chief investment officer of Yale University:

> "The fundamental market failure in the mutual fund industry involves the interaction between sophisticated, profit-seeking providers of financial services and naïve, return-seeking consumers of investment products. The powerful financial services industry exploits vulnerable individual investors.
>
> "Mutual fund investors face the greatest challenge with investment management companies that provide returns to public shareholders or that funnel profits to a corporate parent.
>
> "Investors fare best with funds managed by not-for-profit organizations, because the management firm focuses exclusively on serving investor interests.
>
> "Ultimately, a passive index fund managed by a not-for-profit investment management organization represents the combination most likely to satisfy investor aspirations." (pages 248-249)

Note that John Bogle refers to David Swenson as an investor "who has not only produced one of the most impressive investment records of the modern era but who also has an impeccable reputation for character and intellectual integrity." (page 248)

You can significantly improve your net risk-adjusted investment returns by lowering your investment fees and taxes

This very important financial planning step focuses on investors' net or realized investment returns, after investment costs, fees, and capital gains taxes are taken into account. Net investment returns are those investment returns that individual investors could actually spend on themselves and their families.

Cutting your investment costs to the bone has been, is, and always will be the single most reliable method for individual investors to increase their long-term net investment returns. The financial crisis did nothing to knock investment cost cutting out of this number one effectiveness position for individual investors. Investment cost cutting is always the first and best lever to use to improve long-term net portfolio returns. If anything, the dot com securities market implosion and the several years subsequent credit crunch crisis gave investors two more opportunities to become aware of the corrosiveness of excessive investment costs.

There is no other investment indicator as reliable as lower costs in producing better net investment performance. Unless you make a point of slapping them away, many hands will

linger in your investment wallet. They will keep taking "a little bit" here and "a little bit" there in terms of:

* sales loads to pay brokers and advisors who induce you to buy investments with higher costs,
* ongoing 12b-1 sales fees that pick your pocket year after year,
* higher fund management fees to pay for active management activities that inevitably fall short of passive benchmarks — especially as the time period increases,
* higher portfolio churning and turnover which leads to higher hidden costs,
* high percent-of-assets advisory fees that compound costs, because advisors try to beat-the-market to justify their fees — inevitably falling short over time on average, and
* a myriad of other one-time and recurring industry fees that bleed away value related to your taxable retirement asset accounts.

Millions of individual investors have started paying attention to investment costs. This has been demonstrated by massive investment asset shifts from higher cost to lower cost investment vehicles in recent years. When securities market values stagnate, people inevitably begin to look more at reducing their costs to improve their net returns.

However, they should always have been looking for the lowest cost investments — and they always should in the future. There is no credible evidence that professional investors can pick winners that do well enough to overcome their higher costs. Over and over again, the investment research literature has demonstrated the opposite: The less you pay in investment expense, the more you keep!

If you have not already done so, it is time for you to wake up about investment costs. Net investment performance short-term and long-term is a zero sum game across all investors. Long-term the global securities markets tend to reflect the value of the global economic development and growth that underlies the markets. Over the long run, securities markets act as an allocation mechanism to distribute this underlying economic value to debt holders and to enterprise shareholders.

Along the way, if you keep giving away some of your ownership share to the industry through higher investment costs, that long-term economic value will just end up somebody else’s

pocket. While the financial industry attempts valiantly to minimize and obscure the effects of their unjustified investment costs, the corrosive is always there, damaging your family's long-term welfare. If you own assets, then you are a profit center for the industry. Get real. There is no "partnership" between the industry and individual investors.

By the way, the number two investment return improvement lever for individual investors is tax-aware investing, including optimization of long-term capital gains, maximum use of tax-advantaged retirement accounts, and optimal investment "tax location" decisions regarding their asset allocation.

Where do you think a lot of those multi-billion dollar Wall Street broker bonus payments are coming from? Directly or indirectly from your taxable financial assets and retirement financial assets is the answer. In aggregate, brokers don't add value. Some clients seem to win on occasion, but most just keep losing, while the brokerage house always takes its cut of the action. In aggregate across all individual investors, these investors will get nothing in return.

Well, that is not entirely true. In exchange for paying more to engage in high tax and high cost active investment management strategies, participating investors will be taken on a much wilder investment roller coaster. Unpredictably, active investors may experience more dramatic ups and downs. On average, in addition, they will suffer inferior investment performance due excessive investment costs and unnecessary capital gains tax payments.

The cumulative long-term impact on personal investment portfolios is simply staggering. Across all investors, these excessive costs are a complete waste. In fact, excessive investment expenses are simply an incredible wealth transfer to the securities and financial services industry. The associated and unnecessary capital gains taxes are just a wealth transfer from individuals to the government.

It is difficult to identify another industry that charges so much and promises so much to their customers, and yet ends up delivering so little in terms of added value to their customers. Until individual investors wake up to the fact that they are paying far more than is necessary for so little in return, they are far more likely to have dramatically diminished investment portfolio assets during their lifetimes.

Human greed, personal investment ignorance, financial advisor compensation incentives, and the securities industry's beat-the-market sales mantra are far too strong and too well-aligned for investment performance chasing by individual investors ever to end.

Unfortunately, I have no expectation that the causes of excessive investment costs and wasted capital gains taxes will ever change. This beat-the-market investment management shell game rubbish will continue as long as individuals believe that they can get better risk-adjusted performance than the other guy does at no real cost to themselves. Naive investors will continue to use superior historical performance as a false indicator of what will happen in the future. They will be continually be disappointed, but only if they ever bother to check their results against the net investment yield of a low cost, low tax passive index investment strategy.

Naive individual investors, often abetted by their financial advisors, will continually pay excessive fees to investment money managers whom they hope will beat the securities markets for them. Yet, investment research studies indicate that there are no reliable ways for individual investors to identify, before the fact, superior active investment managers from within the crowd of mutual fund money managers.

The excessive management fees that are charged across the industry virtually guarantee that individual investors will not be able to hire money managers at a profit. The average mutual fund management expense ratio is about two times higher than the apparent value-added of the average investment fund money manager.

In addition, these excessive management expense ratios still do not include the much higher portfolio trading costs and higher capital gains taxes that go along with an actively managed mutual fund. Furthermore, most high cost actively managed mutual funds are sold through financial advisors who add no value in the selection process. Nevertheless, these investment counselors will still charge you a front-end sales load or back-end sales load and will also add an annual 12b-1 fee on top of the management expense ratio. What a deal!

Particularly during the last two decades of the 20th century, the fees extracted by the financial securities industry have increased substantially on both a total and a percentage of returns basis. What has the value-added been? In aggregate, the value has been negative. Furthermore, as a bonus, unwitting participants in active investment management strategies experienced a much more wild investment ride and took greater investment risks than were necessary.

For more information about the value of reducing your investment expenses and controlling your capital gains taxes, see these articles on:

Cost Control and Investment Performance Improvement

Total mutual fund expenses and mutual fund management expense ratios have not decreased. To cut your investment fund costs, you have to do it yourself.

If you pay attention to the statements of mutual fund industry trade groups, you may hear claims that mutual fund investment fees have come down (slightly) as a percentage of investor's assets during the last couple decades. However, what the fund industry fails to explain is that almost all of the new mutual funds that it keeps introducing have higher than average management expense ratios. If the mutual fund industry could get you to pay higher investment expense ratios, it would and it does when it can.

The mutual fund industry does this by launching numerous new mutual funds with high expense ratios. Then, after the fact, the mutual fund industry only promotes new funds and old funds that happened to have done well. The mutual fund industry knows that nothing sells better than the implication that superior past performance, as displayed in performance charts and with 4-star ratings and 5-star ratings, will continue. While this very selective marketing process hints that superior past performance will continue into the future, the legal small print always tells you not to count on it.

Even though it is just a chimera, the mutual fund industry is counting on individual investors to extrapolate superior past performance into the future. The mutual fund industry and its supposedly "independent" financial advisors, who only promote mutual funds with sales loads and four stars and five stars, both know that these funds are easier to sell to naive investors. The fee revenues are too good to do anything else instead, such as educate investors not to extrapolate past performance.

Note that the mutual fund industry will not dispute the fact that the total dollar amount of fees that they collect has risen many times over. Invested assets have increased many times over due to investor savings and new investments and to investment asset growth and appreciation. When you charge people a percentage of their appreciating assets, then total industry fees have to go up in proportion, as well.

Percent of asset fees are a revenue and profit gravy train for the financial services industry. However, you might want to stop and ask why the industry deserves a percentage of your assets each and every year. They are YOUR assets, are they not? Why just give them away without getting incremental value in return?

Mutual fund management expense ratios have only come down because some investors have shifted their assets into low cost no load mutual funds.

If you looked more carefully at the numbers, you would find that mutual industry claims of reduced management expense ratio percentages are based on aggregate data across all types of mutual funds. These aggregate data combine both: a) the much higher costs of actively managed mutual funds with sales loads and b) the much lower costs of no load index mutual funds. The primary reason why the average mutual fund expense ratio has come down in the past, albeit only slightly, is that a substantial minority of all individual investors has gotten smarter about excessive investment costs.

More cost-conscious individual investors and certain of their more helpful financial advisors and some more cost conscious institutional investors have been redirecting increasing proportions of investment assets under their control into lower cost funds. These transfers of assets into lower cost no load mutual funds pulls down the overall management expense ratio percentage for all mutual funds.

Furthermore, returns on low cost, no load index mutual funds have been better on average than actively managed funds. Therefore, these no-load mutual fund assets have appreciated more rapidly. Low cost no load mutual fund assets will also tend to be greater, because an investor's full dollar gets invested into a no-load mutual fund. Sales loads siphon away about a nickel of each dollar at the outset to pay the financial adviser through a sales load. These sales loads diminish the total amount of actively managed investment fund assets compared to no-load mutual funds.

Therefore, the actions of some investors to seek lower costs have held down the growth of management expense ratio percentages and other costs. The mutual fund industry did not cause the average mutual fund investment expense ratio to come down (ever so slightly). They have been trying to push up your costs – and their revenues and profits in the process.

If you start taking investment cost cutting much more seriously, you will not be alone. The industry will not do it for you. You have to lower your investment costs yourself.

To obtain better net investment returns, individual investors must carefully control both visible investment management fees and more hidden investment trading costs and associated capital gains taxes.

At the same time that investment management fees and costs were rising dramatically, industry deregulation, market innovation, and increased competition provided many new and useful low cost investment fund mechanisms for investors to manage their assets in a far more cost-efficient and tax-efficient manner. Just because most other individual investors and their financial advisors seem not to have a clue about optimal investment strategies does not mean that you need to be clueless, as well. You do not have to play this game. You will not be alone, if you decide to stop listening to the siren song of superior returns and then cut your costs to the bone so that you actually have a better chance of really obtaining superior returns.

Adopting investment strategies based on scientific finance is the first part of investment cost and investment tax reduction. Low cost, passive index fund investment strategies are inherently more cost-efficient and far less risky. This is not surprising, because a fundamental goal of investment research has been to discover those strategies which maximize personal economic welfare on a risk-adjusted returns basis.

It is time to pay attention to this research and to stop listening to the securities industry's siren songs about superior investment returns. Individuals can adopt very low cost passive index investment strategies and avoid the charade of paying much more to get inferior investment results.

The conflicts of interest between individual investors and the financial services industry continually threaten the investment portfolios of individuals and their families.

Focusing on investment cost reduction can also draw your attention to the potentially very negative personal financial impacts of biased and sub-optimal advice. The financial services industry offers products and services for investors to buy at prices that include the market value of the investment securities plus the costs and profits related to the sale and transaction. Often the true cost of the industry's markup is obscured or hidden.

Investors need to understand that their interactions with the financial markets through these industry intermediaries are a "zero-sum game." In and of itself, the securities industry does not create any value for you. Of course, the markets serve extremely valuable price setting and capital allocation functions within the global economy. Nevertheless, the competition between professional investors largely drives and achieves these important capital allocations functions.

Before investment costs and capital gains taxes are considered, at best, the securities markets are a "zero sum" game from the point-of-view of the interests of individual investors.

I say "at best," because the demonstrated naiveté and mistakes in personal investment management of millions of individual investors, makes it likely that their involvement in the securities markets is already a slightly "negative sum" game even before they pay such high investment fees and costs. However, when excessive "retail investor" costs and taxes are considered, then a significant portion of investors' potential returns are simply swept away by the financial securities industry.

Particularly with the abnormally high market returns of equities-based securities during the last two decades of the 20th century, many investors became very lax about managing their investment costs and capital gains tax realization. Double digit returns made costs seem like "just few percent" and not very important. Following the dot-com stock market crash and the deflating of the equity securities asset bubble, many investors need to make cost cutting and investment tax reduction a much higher priority.

The most effective strategy you have to improve your investment returns is to cut you investment costs and investment taxes down to the bare minimum. Once you commit to this mission across your lifetime, you may discover another financial miracle. When you refuse to pay more than the bare minimum needed to buy very broadly diversified investment funds, then financial advisors who add no value will figure out that you are not an easy mark and move on. Then, you might actually have a better chance of finding a financial advisor who will provide advice that is actually in your best interests!

5.4: Asset tax location strategies can significantly reduce taxes

This section discusses personal investment portfolio asset allocation and some considerations about where to hold different classes of financial assets from the standpoint of more optimal taxation.

The type of account where you hold different classes of assets affects your tax bill

As you move your cash, bond, and stock financial assets into lower cost, more broadly diversified investment mutual funds, you should also consider how to "locate" your investment

asset allocation with respect to more optimal taxation. This section will also discuss some ideas about where and how to hold your cash assets and how to make emergency cash available.

First, we presume that you have already properly assessed your investment risk tolerance. Using knowledge of your investment risk tolerance, we also presume that you have decided upon an appropriate asset allocation across the primary cash, bond, and stock asset classes. Then, the next question is how you will split your cash assets, fixed income assets, and equity assets between your taxable retirement investment accounts and your tax-advantaged retirement investment accounts, including traditional IRAs, Roth IRAs, traditional 401ks, Roth 401ks, and other such tax-advantaged retirement accounts.

You and your family's particular tolerance of or aversion to investment risk drives your long-term asset allocation strategy and your exposure to asset classes with different expected risk and return characteristics. In addition, the differential tax characteristics of various asset classes and the different treatment of taxable investment accounts versus tax-advantaged retirement investment accounts creates valuable opportunities to optimize your overall investment portfolio returns from an after-tax point-of-view.

As long as short-term capital gains tax rates and long-term capital gains tax rates differ and as long as the taxation of returns on certain types of investment securities differs, e.g. taxable bonds versus municipal bonds, then there will be opportunities to pay lower taxes overall related to your total investment portfolio. Merely by holding certain types of assets in certain types of accounts, you can reduce your overall tax payments and thus increase the value of your retained investment portfolio over time. The financial crisis has not affected the logic of this section. However, changes in tax law and in the differential tax treatment of capital assets and account taxability over time can change the long-term value of your effort to optimize your personal asset allocation from a "tax location" perspective.

Deciding where to hold different assets in taxable investment accounts versus tax-advantaged retirement accounts is known as the "asset tax location" decision

There can be substantial confusion on the part of individual investors and many investment advisors as to the best location for assets from the standpoint of taxation over the long-term. Simply put, in deciding on your investment asset location, the question is whether you should hold your stocks, bonds, and/or cash in taxable and/or tax-advantaged retirement accounts. To summarize the investment research literature, the academic consensus is that you should prefer to

hold your stock or equity assets in your taxable accounts and you should prefer to hold your cash and fixed income assets in your tax-advantaged accounts.

The primary reason for this is that long-term federal capital gains tax rates historically have been substantially lower than short-term capital gains tax rates and ordinary income tax rates. Even though stocks tend to appreciate more quickly than bonds, taxation on equities can often be deferred for a very long time. In addition, when capital gains taxes must be recognized on equity asset transactions, very often these gains will be subject to lower federal long-term capital gains tax rates.

Fixed income / bond assets and cash money assets usually yield income that must be recognized regularly and must be paid at generally higher ordinary income tax rates

Including inflation which has averaged 3% annually, stocks have returned about 10% per year over the past 80 years. Alternatively, expressed in real dollars or constant purchasing power dollars without inflation included, this means that stocks have yielded about 7% annually over the long-term. For these many decades, high grade longer duration corporate bonds have yielded about 5.5% to 6% including inflation and about 2.5% to 3% without inflation. Cash has yielded somewhat short of 4% with inflation and somewhat less than 1% in real terms without inflation. See these Market Risk Premiums articles.

For bonds, only a small part, if any, of longer duration fixed income yields are in the form of capital gains, which could be subject to more favorable long-term capital gains tax rates. Cash does not generate favorable long-term capital gains at all. Despite the lower yields of bonds and cash, their income is usually continuous and taxable in the short-term. Particularly if you have a relatively high combined state and federal marginal income tax rate, you can lose a substantial part of your bond and cash income to taxation without the tax shelter provided by tax-advantaged retirement plans.

In contrast, even though equities have substantially higher yields, a substantial proportion of these returns can be deferred, which avoids near term taxation. Furthermore, if properly managed, most often these taxable equity returns can be taxed at lower federal long-term capital gains tax rates, when needed.

Combined, these factors mean you can net more after taxes by holding your equities investment assets in taxable accounts and by holding you bond and cash assets in tax deferred retirement accounts

In the research studies that were mentioned above, investigators analyzed a wide range of portfolios with different asset allocations and different asset tax locations. The objective of these studies was to determine what is optimal from a tax location standpoint, and uniformly they reached the general conclusion to put equity assets subject to long-term capital gains into taxable accounts and bond or fixed income assets into tax-advantaged accounts.

Cash and cash equivalents, which tend to earn less than bonds are "located" in the middle from a tax location or tax optimization standpoint. If your particular asset allocation would me that any cash or bond assets would be held in your taxable accounts, the assets should be cash assets, because their taxable yields are usually lower than bonds. (See the related section below about cash holding entitled "Emergency cash management and your allocation of cash assets to tax-advantaged retirement accounts.")

Your asset allocation and the total amount of assets you have in taxable versus tax-advantaged accounts combined with your asset allocation will determine whether some of your cash, bond, and/or equity assets end up being held "less optimally" from a taxation standpoint in taxable or tax-advantaged accounts.

To be clear, however, the research demonstrates that the asset allocation decision dominates the tax location decision. This means that you do not change your asset allocation decision, because of tax considerations. Instead, you hold to your asset allocation despite tax considerations. (Note, however, there may be alternative investment vehicles that address particular needs. For example, persons with very high federal, state, and local marginal income tax rates and a relatively high allocation toward bonds may find that their bonds would fill their tax-advantaged accounts and overflows into their taxable accounts. When this happens, they might benefit from holding municipal bonds rather than taxable bonds.)

Obviously, over time your assets in taxable versus tax-advantaged accounts may grow at differential rates. In addition, over time you might decide to change your asset allocation between asset classes. However, asset allocations tend to be relatively stable because they are tied to your relative investment risk tolerance, which tends to be more stable. Therefore, you preferred asset allocation percentages do not have to change over time, although they may.

As time goes on, you may need to make rebalancing adjustments to maintain your asset allocation within the percentages and tolerances that you wish to maintain. This might cause

some shifts in which asset classes are held in accounts with different taxability. Nevertheless, your asset allocation decision still would drive everything.

Emergency cash management considerations and the allocation of cash assets to tax-advantaged retirement accounts

Some people become concerned, if their combined asset allocation decision and asset location decision means that all their cash would be held more optimally from a tax standpoint in their tax-advantaged retirement accounts versus in their taxable accounts. Furthermore, some people also may be concerned about how much cash to hold in a taxable account for "emergency" purposes, despite whether such taxable cash holdings are less optimal from a tax location standpoint.

Often these emergency cash and tax issues are of lesser importance than they would seem at first. A decision can be made simply to keep "X" expense months of cash in a taxable account and to pay the taxes, even though this allocation might less than optimal from a tax savings standpoint. In addition, real estate lines of credit or other unused and available debt lines can be taken into consideration, which perhaps might reduce the amount of emergency cash that one desires to hold in taxable accounts.

By way of example, if your monthly expenses were $6,000, you might want to hold 6 months cash or $36,000 in a taxable savings account. Assuming that you could earn the average historical pre-tax return of 4% annual interest rate on these $36,000 dollars, your taxable savings account would yield $1,440 in additional taxable income. If your total marginal federal income tax rate and state income tax rate was 26%, then you would pay about $375 more in federal and state income taxes annually to hold this cash in a taxable account versus in a tax-deferred retirement account.

To optimize your asset tax location, you could invest your cash in a tax deferred retirement accounts and use off-setting transactions to raise cash money for emergencies

If you did happen to have a major financial emergency, you could make some offsetting transactions to free up the needed emergency cash from your retirement accounts. In effect, cash can be "moved" out of your tax-deferred accounts when needed by selling taxable equity assets for the cash that was required and then "replacing" those assets in your retirement accounts. You would replace the assets that you sold in your taxable accounts by buying similar assets in tax-advantaged retirement accounts using the cash that you held in your tax-advantaged accounts.

Of course, these offsetting transactions could trigger capital gains tax recognition related to your equity asset sales from your taxable account sales. Over the long-term, the affects usually are quite small particularly since true emergencies consuming significant amounts of cash are relatively rare. Of course, you also might need to make overall adjustments to your asset allocation, given the emergency use of the cash. Furthermore, be aware of IRS wash sale tax rules that might apply, if you buy substantially identical investments in tax-advantaged retirement accounts, when you also sell them in taxable accounts.

Finally, concerning a smaller cash emergency fund, you still might chose to hold some amount of cash in a taxable account for ready access — perhaps a few thousand dollars or more. There could be other benefits to doing this. You may find a bank that will arrange for your savings account cash (earning reasonable interest we hope) to act as over-draft protection to your linked checking account. With such an arrangement the higher taxes associated with holding a small amount of emergency cash in taxable accounts might be offset sometimes by preventing those nasty overdraft events, when you make a mistake and bank charges mount rapidly.

5.5: Portfolio optimization with an asset tax location example

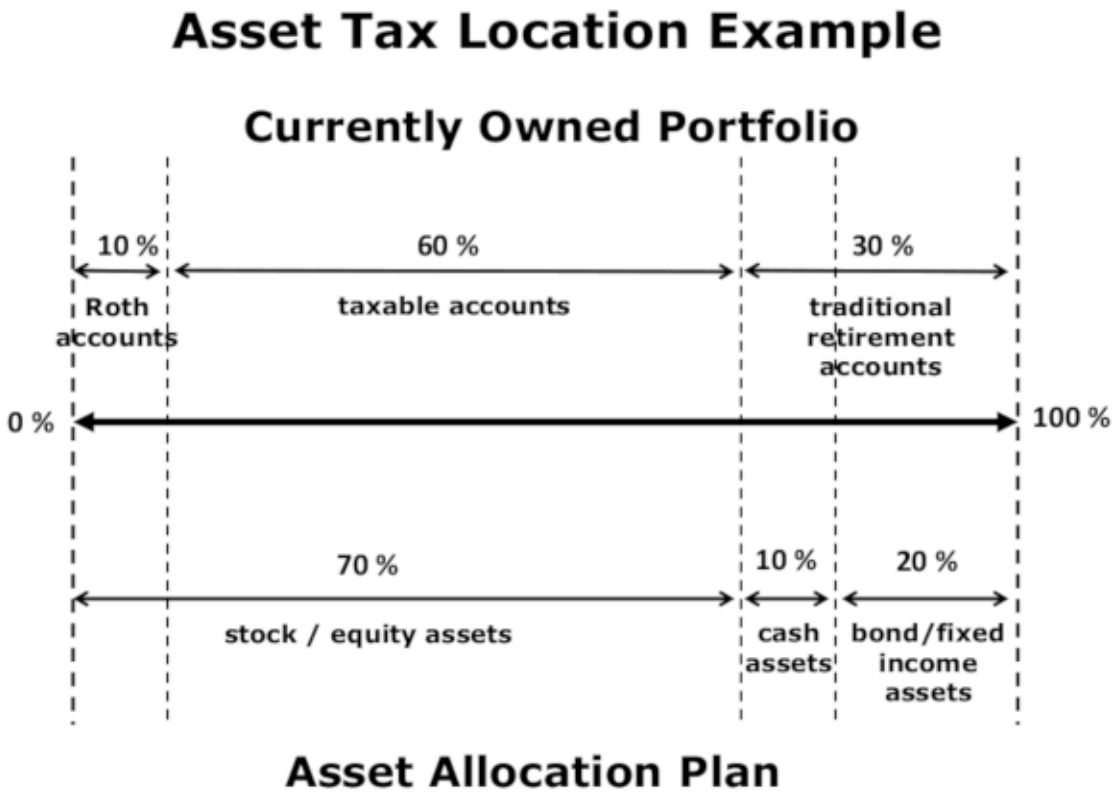
An example of how the personal asset allocation and asset location decisions are combined

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 and tax advantaged accounts, and then determine the proportions that are in taxable accounts or tax-advantaged retirement accounts.

In this example, assume that you presently hold 60% of your total cash, bond, and stock financial assets in taxable accounts. In addition, assume that 30% of your total assets are held in traditional tax-advantaged accounts, and that 10% of your total assets are held in Roth tax-advantaged accounts.

Using the 0% to 100% currently owned portfolio line illustrated in the graphic below, mark 0% to 10% as your Roth tax-advantaged retirement assets. Mark the range from 10% to 70% as your taxable account assets. Finally, mark 70% to 100% as your traditional tax-deferred retirement assets. (Below, we will discuss why we have chosen to place your Roth retirement assets before both your taxable assets and your traditional tax-deferred retirement assets, as you move up this line.)

Next, below this same line we will overlay your asset allocation. 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 and equity mutual fund 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 always assign your 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%. If you have Roth account assets, which in this case are 10% of the total, you would fill these Roth accounts with stock assets, which have a higher expected risk and return profile. Roth assets would not be taxes subsequently, so you would prefer that your Roth accounts have the highest appreciation potential. You would also prefer to hold your other stock assets in taxable accounts then you can, because when stocks are held as long term assets in taxable accounts, their qualified dividends and capital gains are taxed a significantly lower long-term capital gains tax rates at the federal level. Finally, your cash would fill in the space in the middle that remains

between equities and bonds. In this case, you cash would be "located" from 70% to 80% along this line.

Why would equities be allocated into Roth retirement accounts versus into traditional tax-advantaged retirement accounts?

If your equity asset allocation is sufficiently high that some of your equity assets would be held in tax-advantaged accounts, then they would be invested in Roth accounts, if you have Roth account assets. 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. Since traditional tax-advantaged accounts eventually would be taxed at ordinary income tax rates, you would prefer that these accounts would grow more slowly, while you would prefer that your Roth accounts would grow more quickly in relative terms.

There are other estate planning reasons that could favor placing higher growth assets into Roth retirement accounts. Roth retirement accounts have some very significant advantages over traditional tax-advantaged accounts for estate planning purposes. If a family's financial model indicates that there is a good possibility that they will still have some tax-advantaged account assets at death, then those should be Roth tax-advantaged account assets, whenever possible.

Given the SECURE Act "2.0" of 2022, US tax laws and IRS regulations require mandatory withdrawals from traditional retirement accounts (not Roth accounts) starting at age 73 or age 75, depending upon your current age. These mandatory traditional account withdrawals might be adequate to meet your expense needs in retirement without you having to touch your Roth retirement account assets. During your retirement, your Roth accounts would not have mandatory withdrawal requirements. (Obviously, in retirement you would still have the option to withdraw either traditional retirement account assets and/or Roth retirement assets.)

Furthermore, your Roth accounts could be inherited by your adult children, and these inherited Roth assets could also grow tax free within the inherited Roth account for 10 years when they are specified as beneficiaries. After ten years they would need to be withdrawn from the inherited Roth account. This means, for example, that an adult child inheriting a Roth account at age 40 could perhaps enjoy another 10 years of tax-free investment growth before taking a tax free distribution and reinvesting those assets in a taxable account.

5.6: Municipal bonds and marginal income tax rates

Some high income persons, who are faced higher marginal federal, state, and sometimes local income tax rates, may benefit from holding municipal bonds in an attempt to reduce their tax burden. This section makes several points about tax-exempt municipal bonds, marginal tax rates, and investment asset tax location.

> (Note that one should first implement an optimal asset tax location strategy as described in the sections above, before deciding whether to own taxable bonds versus municipal bonds. For example, if an investor has the capacity to place their entire bond asset allocation into their tax-advantaged retirement accounts, they have no need to purchase municipal bonds. Since their retirement accounts provide a tax shield and since taxable bonds normally are expected to yield more than comparable municipal bonds, that investor would select taxable bonds for these retirement accounts. Since these tax-advantaged retirement accounts would hold the full allocation to bonds their is no need to hold any municipal bonds in taxable accounts. Currently taxable ordinary income will be reduced because bond yields are not realized within taxable accounts.)

An investor's marginal tax rate is important, when making tax-related investment portfolio decisions. By combining your federal, state, and local marginal income tax rates, you can value the "tax shield" that you obtain from an incremental dollar of non-taxable bond investment income versus and incremental dollar of taxable bond income. The higher the combined marginal income tax rate, the higher the potential benefit from investments that yield non-taxable income.

Using combined federal and state marginal income tax rates, here are two examples with married couples who are California residents:

1) "Couple A" has $100,000 in taxable income after deductions and exemptions, which would put them into the 25% federal marginal income tax bracket and into the 9.55% state marginal income tax bracket, for a combined marginal income tax rate of 34.55%.
2) "Couple B" has $250,000 in taxable income after deductions and exemptions, which would put them into the 33% federal marginal income tax bracket and into the 9.55% state marginal income tax bracket, for a combined marginal income tax rate of 42.55%.

For an extra dollar of taxable income, Couple A would pay 34.55 cents in state and federal income taxes, while Couple B would pay 42.55 cents. Both could avoid these taxes on an extra dollar of income, if they held a tax-exempt bond investment that was not taxed at the federal and state levels. California municipal bonds could shield them from these taxes and provide such savings. However, the question is whether the tax savings would be sufficient for one or both of these couples.

The credit markets set differential investment yields on taxable versus tax-exempt assets. The spread between these yields is influenced by bond investor supply and demand on an after-tax basis. Investors in higher marginal tax brackets have a greater incentive to own tax-exempt bonds. Those who benefit the most from tax avoidance tend to gravitate toward tax-exempt bonds and the opposite is true for those who do not.

To compare after-tax yields on taxable and tax-exempt investments, multiply the percentage yield on the taxable bond by one minus the marginal tax rate expressed as a decimal. Then, compare this result with the market yield on the tax-exempt bond. (Obviously, this comparison presumes that otherwise these taxable and tax-exempt bonds have similar maturities, likelihoods of default, and other provisions and characteristics.)

* Assuming a taxable bond yield of 7%, Couple A with the combined marginal tax rate of 34.55%, would require that an equivalent tax-exempt bond would yield at least 4.5815% for the tax-exempt bond to be more desirable on an after-tax basis. [(7% times (1 minus .3455) = 4.5815%)]
* Assuming a taxable bond yield of 7%, Couple B with the combined marginal tax rate of 42.55%, would require that an equivalent tax-exempt bond would yield at least 4.0215% for the tax-exempt bond to be more desirable on an after-tax basis. [(7% times (1 minus .4255) = 4.0215%)]

Clearly, the investor with the highest combined marginal tax rate has a stronger preference for holding tax-exempt municipal bonds. Investors in the highest total federal and state marginal income tax rate brackets get the most benefit, because the after-tax value to them could exceed significantly the actual market yield spread between taxable and tax-exempt bonds.

The lower one's marginal income tax rates, then the lower ones potential tax shield benefit. At some point, municipal bond yields become disadvantageous for those who have lower marginal income tax rates, when compared to owning taxable fixed income investments.

Whether or not to invest in a municipal bond versus taxable bond, of course, depends upon a variety of factors. These include one's marginal tax rate, the spread at the time, the tax status of the account holding the asset, the concern for potential default, the duration, etc.

This analysis also demonstrates why municipal bonds should never be held in a tax-advantaged retirement account. With a tax-advantaged retirement account, the current marginal tax rate on both taxable and tax-exempt bonds would be zero. Tax driven bond market supply and demand forces taxable yields upward or tax-exempt yields downward – whichever might be your perspective. Therefore, only taxable bonds should be held in tax-advantaged retirement accounts because of taxable bond yields would tend to be higher than tax-exempt yields on otherwise equivalent bonds.

Given the factors discussed here regarding marginal income tax rates, bond market taxable versus tax-exempt yield spreads, and the optimal asset location decision between taxable and tax-advantaged accounts, there is a "sweet spot" for certain investors to hold municipal bonds. Those who are more likely to benefit from municipal bonds have the following characteristics.

These investors tend to have an asset allocation that more heavily skewed toward bonds, and they tend to have far more assets in taxable rather than tax-advantaged accounts. Furthermore, they have relatively high current earned income. Investors with this profile, "fill up" their tax-advantaged accounts with taxable bonds. Next, their heavy allocation to fixed income assets then "spills over" into their taxable accounts. In this circumstance, their very high marginal income tax rates might make owning tax-exempt municipal bonds a more advantageous proposition. Nevertheless, an analysis should always be performed using current bond market yields and total marginal tax rates to confirm that tax-exempt municipal bond investments would be more advantageous.

5.7: More reading on investment costs

I have published these additional articles, which may be useful to you.

How much do hidden mutual fund trading expenses cost you?

https://www.theskilledinvestor.com/financial/How-much-hidden-mutual-fund-trading-expenses-cost_64.html

The average mutual fund paid .27% of net assets in hidden commissions in 2001. When measured on a capitalization-weighted basis, the average hidden commission cost was .19% of net assets. The effective trading costs related to the bid/ask spread and the temporary shifting of these spreads added .36% more annually in the hidden costs of the average fund. For funds with the highest turnover, hidden commission and bid/ask spread expenses exceeded 3% of assets annually.

Beware of large and hidden mutual fund costs

https://www.theskilledinvestor.com/financial/Beware-of-large-hidden-mutual-fund-costs_56.html

In pursuit of better returns, many investors sensibly seek out no load mutual funds with low annual expense ratios. However, loads and published expense ratios are only part of the mutual fund cost story. Other costs for individual investors to consider concern "hidden" mutual fund expenses that directly reduce the net asset value of the fund. These hidden expenses include trading commissions that a fund pays to brokers and the cost or market impact of fund trading.

Invest in fixed income securities through bond mutual funds with low investment fees

https://www.theskilledinvestor.com/financial/Invest-in-fixed-income-securities-low-fee-bond-funds_88.html

Bond investing is a complex process that individual investors should leave to professional fund managers. By selecting among lower cost bond funds, investors can achieve higher returns. Bond funds also can provide a high degree of fixed income investment diversification very economically.

Is it worth paying higher bond mutual fund management fees?

https://www.theskilledinvestor.com/financial/Is-it-worth-paying-higher-bond-mutual-fund-fees_47.html

Higher bond mutual fund management fees tend to be a "deadweight" loss to you. Choose only low-cost bond funds.

Pay less to get more (Part 1 of 2)

https://www.theskilledinvestor.com/financial/Pay-less-to-get-more-Part-1_66.html

In the uncertain and volatile world of financial investments, investment cost reduction is the one strategy that is most likely to improve the future value and investment performance of your bond and stock portfolio, while reducing your investment risk. When you drive your investment costs down to the bare bones minimum, you will simplify your personal finances. When you reduce you costs, you will also stop feeding the purveyors of bogus financial strategies who feed off your assets. If you are not willing to pay, they will go after someone else.

Pay less to get more (Part 2 of 2)

https://www.theskilledinvestor.com/financial/Pay-less-to-get-more-Part-2_77.html

The scientific investment literature provides pitifully little encouragement that individual investors can: A) predict individual prices of stocks and bonds or the future course of the securities markets, B) select a securities portfolio that will beat the market consistently, and/or C) identify and hire investment managers who will deliver superior performance net of their added costs.

The heavy burden of recurring investment fees (Part 1 of 2)

https://www.theskilledinvestor.com/financial/The-heavy-burden-of-recurring-investment-fees-Part-1_66.html

Recurring fees, such as asset management fees, 12b-1 marketing fees, and advisory/asset custody fees are charged periodically, as a percent of your investment assets. Recurring investment costs can significantly impact the long-term value of your retained investment portfolio assets.

The heavy burden of recurring investment fees (Part 2 of 2)

https://www.theskilledinvestor.com/financial/The-heavy-burden-of-recurring-investment-fees-Part-2_68.html

By charging fees as a percent of your assets, the investment industry can make their recurring fees seem small -- like they are "just a few" percent. Furthermore, by charging fees against your assets the industry can still bill you every year, even if the value of your investment portfolio declines.

However, if investment managers were to charge against your returns and not your assets, then the percentage of your returns would have to be a huge proportion of your annual returns. In

fact, to equal the fees they charge as "just a few percent" against your total asset portfolio, they would have to extract in the range of 1/3 to 2/3 of your annual portfolio returns every year.

Understanding one-time investment fees, such as sales loads

https://www.theskilledinvestor.com/financial/Understanding-one-time-investment-fees-such-as-sales-loads_90.html

Sales load charges and commissions on investment purchases differ from the financial service industry's numerous other recurring methods of charging fees to their retail consumers. Sales loads are less straightforward to analyze for investment lifetime cost-effectiveness, compared to annually recurring charges.

Unlike recurring charges against current assets, front-end sales loads represent assets that did not get into your investment portfolio in the first place. They disappear before the process of calculating future investment returns and asset values can even begin. Therefore, your financial modeling software needs to remember that you lost or will lose these assets, and it needs to calculate the cumulative value of these "phantom' assets over your lifetime.

VeriPlan automatically tracks returns lost to investment sales loads

https://www.theskilledinvestor.com/financial/VeriPlan-automatically-tracks-returns-lost-to-investment-sales-loads_88.html

Many justifications for loads might be offered by financial advisors 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. However, VeriPlan will not forget about the loads you have paid and will pay in the future. VeriPlan does not forget these phantom lost assets and it automatically calculates their value across your lifetime.

Chapter 6: Investment fund illusions

Beforehand – when it counts, you cannot reliably identify those professional investment managers who will deliver superior risk-adjusted investment performance at a reasonable price in the future. Even if you could identify them, it is highly unlikely that you could hire them at a price that is lower than their potential value-added net of their added costs and your associated taxes. Once you understand this, then you will realize that the only sensible choice is to choose very low cost, broadly diversified market index mutual funds.

6.1: Own investment funds and not individual securities

Owning individual securities is just a big waste of your time and money. Individuals tend to be terrible investment portfolio managers. Anyone can hire an index fund manager to do a much better job for far less time, money, risk, and consternation.

Own cash, bond, and stock mutual funds, and avoid owning individual stocks and bonds. Funds automatically provide a higher level of diversification -- usually at lower cost, when investment expenses, taxes and the value of your time are considered. The securities industry pushes individual investors to buy and sell individual securities to earn commissions, but the markets tend not to compensate individuals to taking these undiversified risks. Under-diversified investors subject themselves to higher volatility without any reasonable expectation of better returns.

The average individual is an atrocious investment portfolio manager. Overall, the average individual portfolio self- manager probably loses about 2% each year relative to a low-cost, passive index investment strategy.

Numerous factors cause the poor results that the average individual investors achieve through portfolio self- management. The reasons vary from person to person. An incomplete list of the causes includes:

A) His costs are much higher.

B) He trades far too frequently and often without any real information to justify a trade.

C) His screening and analysis methods are rudimentary at best.

D) He only buys companies locally visible or featured in positive media stories.

E) He endlessly and fruitlessly chases past performance.

F) He fails to diversify and bears substantial uncompensated enterprise risks.

G) He maintains overly concentrated and thus more risky positions.

H) Often, he holds concentrated investment positions in the same entity that issues his paycheck.

I) He holds on to his losers for too long, and he sells his winners too soon.

J) He remembers his wins and may brag about them. He tries to put his losers out of his mind, yet often still holds and ignores them. After he finally sells them or they go bankrupt, he removes them from his records to eliminate any reminders.

K) He pays more in taxes, usually at higher short-term rather than long-term capital gains tax rates.

L) He does not accurately track his performance against any appropriate market benchmark, and therefore he does not learn how relatively poorly he has done.

M) He tries to time the business cycle and the popularity of industry sectors.

Competently managed investment firms would dismiss any professional who exhibited similar behaviors.

The easy way to avoid all these problems is just to stop trying to do what professional index fund managers can do far better for you with much lower costs and with greater economies of scale. Buy only money market, bond, and equity mutual funds.

In most cases, you should methodically liquidate your individual stock and bond holdings over time, as you rebalance or have other reasons to dispose of them in a cost- and tax-efficient manner.

There are some limited circumstances where one might continue to hold individual stocks and bonds. For example, elderly persons with substantially appreciated stocks may believe that the potential to reset the tax basis of these securities, when transferred upon death, will outweigh the diversification risk. Another example would be an executive who is required by employment contract to hold the securities of his firm.

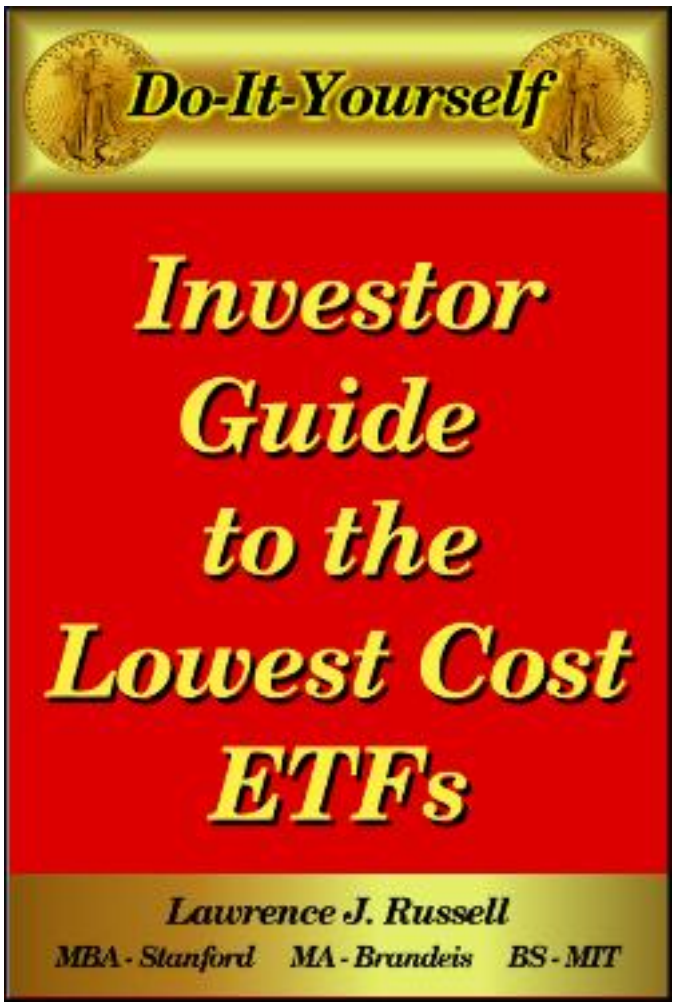
I have researched and written two objective books

that can help you cut your investment expenses and increase your wealth.

They are both FREE to download at this web address:

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


Buyers Guide
to the
Lowest Cost
No Load
Mutual
Funds
Lawrence J. Russell
MBA - Stanford MA - Brandeis BS - MIT



6.2: Never invest solely because of superior past performance

Only very poor past performance tends to be a slight predictor of poor future performance. (Excessive cost is the probable culprit.) The investment industry understands that people naively buy because of superior historical performance. Therefore, the industry markets only successful funds, while they leave laggard funds out of their ads.

Many individual investors rush around buying securities and funds that did better than average in the past. This practice demonstrates a naïve hope that such investments will deliver better returns in the future. The industry feeds this frenzy by selectively advertising funds with better than average past performance.

At best, superior past performance is only a mirage. At worst, chasing it will waste your time and can entice you to pay excessive fees for future performance that is likely just to be

mediocre. In general, higher fees tend to lead to lower performance. Very low cost index mutual funds track the broad markets and tend to deliver better performance after costs and taxes. They do not have "superior" performance, because their objective is to track the market return.

Everyone naturally avoids inferior performance, which in its worst form can be a very slight indicator of inferior future performance. Again, excessive costs are the likely culprit, when highly inferior historical performance persists.

Finally, beware of any recently discovered alternative "asset class" that is being promoted to you. These include hedge funds, managed futures, and other "new asset classes." Typically, with past hot streak value appreciation as bait, investors are encouraged to allocate a portion of their portfolio to these supposedly new asset classes to earn higher returns with presumably lower portfolio risk. Again, the high cost of investing in this new asset class will often be a tip off. Furthermore, when you look more closely at the data, past superior performance data often will be highly suspect and the true risks will be understated substantially. For more on this topic, see the article entitled "Screen only for significantly inferior fund performance" in the "Rational investment fund selection" chapter.

6.3: Performance charts - How to lie with statistics

Darrell Huff wrote a short, informative, and very funny book, *How to Lie with Statistics*, which was first published in 1954 and was illustrated amusingly by Irving Geis. This book is still in print and remains very popular (recent Amazon book rank of around #1,000). *How to Lie with Statistics* plainly and humorously discusses how statistics can be distorted and misused to serve the self-interest of the presenter.

The financial services industry has a surplus of Pinocchios

Historical investment performance charts for investment funds are a case in point about how the financial industry has raised lying with statistics to a marketing art form. While the numbers that historical investment charts present may be historically accurate, their presentation in advertising, on line, and in printed materials can amount to lies from several important perspectives.

Performance charts of actively managed investment funds are used to lure gullible individual investors with an implied promise that superior past performance will continue into the future. The financial research literature tells us clearly that this is a promise that cannot be kept. Performance charts of broadly diversified passive index funds do not necessarily contain a similar lie. You would expect them to track the market benchmark less small expenses and reveal the historical tracking error of that fund.

At the outset, historical performance charts of actively managed funds are a veiled lie. They may report factual information, but their purpose is to sell. The performance they are selling tends not to persist, which introduces the lie. The fact that on average performance charts invariably sell higher cost funds that make. Since each actively managed funds would have a performance chart, it is not the individual chart that does the lying. In aggregate, actively managed funds would track the general market index, but show a substantially larger tracking error to account for the various sales, trading, and management expenses associated with actively managed funds.

Instead, the lies and deceptions of actively managed funds can be found in the following areas.

Statistical lie #1: Selecting only current "winners" to promote

When selling to you, securities industry sales people and the fund companies that advertise performance most often select only those historical investment fund performance charts that show superior historical performance. The industry sells its winners, and it ignores or hides its losers. Charts for their loser funds are available, but sales representatives are not eager to present them. You have to dig them out yourself on the web. Or, these inferior or average performance charts will be mailed to you after you have bought what you thought was a "superior" fund, but, gosh, things may not have remained so superior with the passage of time.

Except for very, very poor historical performance, which tends to be an indicator of excessive costs, the financial research literature tells us that historical fund performance is meaningless. The industry knows that many investors naively project past performance into the future. Yet the scientific finance literature simply does not support such assumptions. If investing were this easy, then those who buy based on past performance would be consistent winners in the future and would grow relatively richer and richer. The opposite turns out to be true.

For your amusement when you are being sold to by a securities industry sales person, ask to see an asset-weighted chart that combines the entire historical performance of all the funds for a fund family. Good luck in getting to see that one! I could list a dozen reasons why you will be told that such a fund family chart does not exist. However, the real reason is that this aggregate historical performance chart would likely show that the entire fund family trails a very broad market index by almost as much as the fund family charges in fees.

I use the word "almost," because professionally managed funds may have shown a slight positive ability to pick individual securities. Unfortunately, this slightly positive gross returns advantage is more than wiped out by management fees and transactions costs, which are several times greater than this small gross returns gain. Even then, this possible evidence of a slight amount of professional fund manager might also be a mirage.

Much of the academic research on investment manager skill or the lack thereof has reached the conclusion that professional investment managers lack any demonstrable skill versus a low cost, passive index investment strategy. Nevertheless, a notable portion of the academic research demonstrating positive investment management skill has been provided by Wermers, et. al. in a

range of research papers. Russell Wermers, who is Associate Professor of Finance at the University of Maryland, provides on his website numerous research papers. Over the years, he and others have concluded that some investment managers apparently have some skill, which may indeed exceed their added costs.

However, in a prior research papers Wermers, et. al. suggested that apparent investment manager skill could have been due to herding among investment managers who bought and bid up the same stocks. More recently, some of the optimism that superior managers can be identified before the fact as resurfaced. For example, the conclusion of a more recent research paper stated:

"We apply the FDR (false discovery rate) technique to show that the proportion of skilled fund managers has diminished rapidly over the past 20 years, while the proportion of unskilled fund managers has increased substantially. Our paper also shows that the long-standing puzzle of actively managed mutual fund underperformance is due to the long-term survival of a minority of truly underperforming funds. Most actively managed funds provide either positive or zero net-of expense alphas, putting them at least on par with passive funds. Still, it is puzzling why investors seem to increasingly tolerate the existence of a large minority of funds that produce negative alphas, when an increasing array of passively managed funds have become available ... With our approach, controlling for luck in multiple testing is trivial: The only input required is a vector of p-values, one for each individual test." (1)

1) Barras, Scaillet, and Wermers, "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas," The Journal of Finance, February 2010, p. 179-216

The conclusions of this 2010 research paper might seem to offer some hope that there are reliable methods to discover superior investment fund managers who might earn their keep. However, earlier in this research paper they also stated that "Our previous analysis reveals that only 2.4% of the funds are skilled over the short term. Can we detect these skilled funds over time, in order to capture their superior alphas?" The methods they proceed to describe in this paper that could identify managers with longer-term superior skill are not something that the average do-it-yourself fund investor would be able to implement.

Most individual investors do not have the data set, computational resources, and understanding to develop "a vector of p-values, one for each individual test" that might enable

them to be successful in identifying superior active investment managers beforehand – if indeed such managers do exist at an affordable price. They would have to rely upon the industry to act in their best interests and find those managers for them. Unfortunately, this is another weak link in the advisory chain where the interests of individual investors breaks down.

Since over 75% of mutual fund shares are sold through brokers and other financial advisors, what are the chances that these advisors will do a good job of selecting superior funds for their clients. Unfortunately, these chances are not very good.

Before we leave this particular topic of being able to identify that minority of active investment managers who can consistently deliver superior investment returns, consider that almost invariably actively managed funds are sold with either a front-end or back-end sales load. Otherwise, they may have their loads "waived" because they are sold within some kind of fee based account that takes perhaps a full percentage or two or more of portfolio asset value each and every year. Most people who pay a percent of assets fee expect their adviser to earn it and that usually means investing in actively managed funds, because passively managed funds "only" target a market return. Therefore, from a risk-adjusted standpoint the risk profile of your portfolio certainly increases for some rather small chance you might beat the market, but never with any guarantee that you will.

And furthermore, a close reading of the Wermers, et. al. paper above shows that while their data set included ongoing 12b-1 fees, their performance data did not take into account those investors who pay a front-end sales load for the privilege of having a supposedly knowledgeable commissioned broker or advisor pick a supposedly superior actively-managed investment fund for them (but again, without any guarantee).

Here is why this matters a great deal. Wermers, et. al. provide research reporting that only a small portion of active investment managers may have sustained superior performance. Many others seem to be comparable to index funds, so why take the risk of picking a loser? Moreover, many investment funds are persistent losers, but Wermers, et. al. lament that individual investors do not seem to catch on.

Yet, since the overwhelming majority of these funds are advisor sold, who is making the decision to hold funds that are supposedly inferior, and predictively so? Might this just be that advisors will just lament the fact that a fund is a laggard, when clients complain? Then, they will just switch clients into another fund. Meanwhile, they will spend a large part of their time

chasing new client prospects, when current clients do not pay enough attention and do not complain about laggards?

Here is the problem of missing front-end loads in the Wermers, et. al. analysis. When you pay a front-end load on a stock fund, you give the advisor a dollar and typically he or she and the firm keep about a nickel. Only ninety-five cents gets invested on your behalf. However, that ninety-five cents becomes the basis upon which performance comparisons are made going forward. If the fund earns seven percent before inflation in the first year and inflation is the long term average, it will look like you earned 7% before inflation and 4% after inflation. But, what about the 5% you gave away to your broker at the outset? If you sell the fund at the end of the first year, you are up 2% before inflation and down 1% after inflation rather than being up 7% and 4%, respectively. If you hold the fund for multiple years, you could spread (amortize) the load over the holding period, but you still have 5% of your original dollar to recover before you start moving ahead.

If superior active managers do exist, but they take some relatively difficult work to identify is your financial advisor really trying? Or, is your broker or investment adviser is just waving 4 star and 5 star funds in your face, motivated in by their need to capture that 5% sales load? These stars are not predictive and mean nothing about future performance. Is your broker and investment advisor doing you a service or a disservice by only pushing selected active funds with "superior" performance charts and higher costs, rather than offering very low cost, broadly diversified index funds?

Statistical lie #2: Easy index benchmarking

Historical performance charts will compare a particular fund's performance against some index benchmark. An index is an index, isn't it? The question that individual investors should ask is whether the index benchmark really is appropriate. All index benchmarks are not the same, and there can be very significant differences between index benchmarks — even when indexes seem to match the particular investment style of the fund in question.

When you look at a performance chart, do you investigate whether the fund company picked a challenging index or an easy hurdle that they could more easily stumble over? For more about the variations between index benchmarks, see Craig L. Israelsen's article, "Variance Among Indexes: Don't judge an index by its title" in the May/June 2007 issue of the *Journal of Indexes* (Pages 26 to 29) Dr. Israelsen analyzes the various indexes published by the six major U.S. index

providers (Standard & Poors, Russell, MSCI, Morningstar, Lipper, and Dow Jones). He finds very wide performance variations even with indexes that supposedly represent the same "style" of investing.

Dr. Israelsen concluded his article by commenting: "It is important to recognize that significant performance differentials among prominent indexes can lead to misleading conclusions about mutual fund performance. Funds with mediocre performance histories can be made to look better by being compared to a prominent benchmark with a weaker performance history. At the very least, the industry needs to recognize the existence of potentially sizable performance differentials among various U.S. equity indexes, and therefore view performance comparisons between Mutual Fund A and Index B for what they are: marketing materials."

Statistical lie #3: Hard to interpret cumulative historical performance charts

For humor, let us assume for a moment that historical performance charts actually do have some useful information for individual investors.

> (This might not actually be very funny to many investors who have been lured into lousy and expensive investments because of historical performance charts. It can be hard to see humor, when the securities industry siphons away your assets through high fees using the siren song of superior historical performance charts. The cover-your-ass small legal print in the footnote of the performance chart is actually right. Essentially, it says, "Don't count on it." And, you should not.)

Interpreting rates of change from a cumulative performance chart is a challenge for many people. Visually, cumulative historical performance charts are just very difficult to interpret. Most people would only look at the most recent values to see whether the fund's cumulative performance to date is above or below the index. Well, of course, if you are being sold to or advertised to, then the most recent cumulative performance will always be above the benchmark, because of selectivity (#1 above, "Selecting only "winners" to promote). This is the easiest kind of fund to sell to naive individual investors — you know, "good" funds with "better" performance.

However, a fund's performance history that would truly exhibit investment management skill (or just a sting of good luck) is the relative rate of change in fund versus benchmark asset valuation. The rate of change between the fund's historical performance and the benchmark index is what counts. A consistently superior fund would have a cumulative performance line

that increasingly and consistently diverges from the benchmark index. Visually, the wedge between the two lines should just keep widening. (On the other hand, a widening wedge could also describe the situation of an overly easy benchmark comparison and mediocre fund performance. (#2 above, "Easy index benchmarking)

Rarely do you see historical performance charts with increasingly widening lines — particularly since luck is a major factor and high fees and high trading costs tend to drag fund performance down relative to appropriate benchmarks. If, for example, the lines diverged quickly ten years ago and then they maintained a relatively constant gap thereafter, that could mean that a very small and immature fund got lucky and/or it had a riskier investment portfolio profile. Then, money from performance chasing individual investors flowed in, and the fund got much larger. If the gap between the lines on the chart does not increasingly widen, then this means that subsequent performance has just been mediocre. If the lines tend to narrow that demonstrates subsequent inferior performance. Cumulative performance could still be above the index due to a selectivity bias and/or an easy index benchmark, but the fund might really have been exhibiting mediocre or inferior performance for years.

By the way, any web connected investor can see this graphical phenomenon in practice right now for free. Go to the Morningstar dot com website and type the ticker symbol of any mutual fund into the quote box at the top. Notice that just below the graph of historical fund performance versus benchmarks, there are two little vertical bars with left and right arrows. Drag these little vertical bars around and the graph will adjust to reflect the revised historical period that you have chosen.

You will see very quickly that the default 10 year graphs might not tell the full story. For example, you might find that a four or five star rated fund gets that rating for "out-performance" that occurred years ago, but not recently. Unless you owned the fund throughout this longer period you would not have received the benefit that the standard chart implies. If you are thinking of buying this fund now based upon what looked like superior 10 year out-performance, are you hesitating because the more recent chart shows mediocre or sub-par performance over the past few years? Are you maybe starting to wonder whether charts and past performance are really the best ways to select mutual funds? (Hint: You are on the right track. See the following chapter on fund selection criteria.)

Industry cynicism about unsophisticated individual investors

The securities industry knows that chasing historical performance is bad for individual investors, but they encourage this behavior by publishing historical performance charts and 4 star and 5 star Morningstar Ratings, which are also largely meaningless. For the industry not to know would imply that many very smart professional investment managers have had their heads in the sand about decades of financial research. Concerning Morningstar Ratings, see articles in this category on my *The Skilled Investor* website: *Ratings Services: Morningstar* and "*Investment astrology – should you pick investments according to the Morningstars?*"

The securities industry and many of its brokers and investment advisors know that low cost index strategies are better for individual investors. However, the "active-management-beat-the-market" industry crowd will not make any money off you, if they tell you that. They have to push the "we deliver superior performance" mantra, because that is the justification for their excessively high and performance killing fees. Since market realities make it virtually impossible for actively managed funds to beat consistently the market after their fees, they have to resort to promises, deceptions, and what Darrel Huff would call "statistical" lies. These lies include: #1 selecting only winners to promote, #2 easy index benchmarking, and #3 hard to interpret cumulative historical performance charts.

Those in the industry who do not understand this have not bothered to do their homework. And, why should they? If these superior performance hustlers learned what is good for individual investors, they might also realize that they should find another career that adds some genuine value to our society.

How one investment fund family solves this problem — They refuse to play the historical performance game.

In the same issue of the *Journal of Indexes*, which published the Israelsen article referenced above about variance among index benchmarks, there was a "Straight Talk" interview with John Brennan, CEO of the Vanguard Group, who succeeded John Bogle in 1996 and who retired in 2012. (Pages 24-25, 50) When asked about performance chasing, Brennan said the following:

> "The way(s) you mitigate against it are several. One, you never — in our view — never promote performance. You just never run a performance ad. I think that is endemic to our business, and I think it's a shame for our industry. When you read a performance ad, there is an assumption that the strong performance will continue. And that is not necessarily true. The second thing is … when you call Vanguard to

> talk about our funds, or when you read our literature, you won't find a Morningstar Star Rating. … The third way to mitigate is with communication. When you read our annual reports after a terrific year, you can be sure that we will tell investors, "please don't assume that this will continue." … Finally, you also have to be willing and able to close a fund and have a cooling off period. That's bad for business, and it always inspires some nasty letters. But it's how you build a performance track record. I have never once regretted closing a fund. At the end of the day, firms that promote performance do so at their own peril." And, I will add — at your peril too!
>
> Note: I have no business relationship with the Vanguard Group and do not receive compensation from Vanguard for discussing them here.

You should also note that Vanguard is the only major mutual fund company that does not operate for the benefit of the common stock shareholders of the overall fund company. Instead, Vanguard is owned by the Vanguard funds, which in turn are owned by the investors in those funds. Profits from Vanguard funds are returned to these funds and not to any third-party owners or competing common stock shareholders.

The lack of a Vanguard company level profit objective for external shareholders eliminates conflicts of interest and allows Vanguard to keep the cost of investing lower than at other investment fund companies. With this investment fund investor-friendly structure, Vanguard has grown to become one of the world's largest investment management companies managing well over $1 trillion in assets and closing in on $2 trillion.

6.4: Superior fund managers cannot be identified beforehand

Professional investment fund manager costs and taxes substantially exceed any added-value

Some full-time professional investment managers and professional securities analysts might be able to discern when a security is more likely to be under-valued or over-valued. Before their added costs and taxes are considered, active professional mutual fund managers have been shown to deliver performance that is only modestly better than passive index benchmarks. However, after their added costs and higher taxes are taken into consideration, there is no compelling evidence that professions can consistently beat the markets enough to justify their substantial added costs.

The costs of trying to beat the market simply overwhelm any professional value-added. Through increased investment fees, costs, and taxes, the average professional investment fund manager charges several times the average value that might be added. The effort to identify and hire only "superior investment managers" is highly uncertain, usually futile, and subject to a great deal of error and dumb luck. In reality, except for cost reduction, there are no reliable metrics to predict superior investment fund performance and to identify superior money managers before the fact.

So, where are all the perennially superior traditional money managers who can be hired economically to manage your money and that of thousands of others for a superior return? They are not to be found. Individual investors spend an excessive amount of time and money looking for investment mutual fund managers who will almost all turn out not to be the next Warren Buffett in the long run.

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

Those investment managers who seemingly had superior performance in the past based on skill predominantly were just lucky in securities selection. Superior past investment fund performance does not predict superior future investment performance. Nobody has proven that there is any reliable way to identify beforehand which managers will have superior future performance. If you cannot predict better future performance based on past results, how could you predict them based on manager characteristics? Paying attention to managers of funds is just a useless financial celebrity sideshow, which is focused on the past and not the future. Do not waste your time.

Investing is not a matter of being smarter. A huge number of very smart investors play the global securities markets constantly. In aggregate, all investors set market values, and their competition makes relative skill largely unimportant in the long-term. Skill negates skill in auction markets, when the whole world is watching and playing. Those who seemingly had superior performance in the past base on skill predominantly were just lucky -- no matter how they score on an IQ test or how much education they have. See How stable have Morningstar Ratings for mutual funds been over time?

However, professional investment portfolio managers tend to do somewhat better than amateur portfolio managers do. The scientific investment literature indicates that, generally, this is not because professionals are more intelligent or significantly better than amateurs are at predicting the unpredictable future related to the securities they select. It seems instead to be more a matter of error control. Individual investors tend to perpetuate their investment management errors, while professionals seem to correct errors more quickly and systematically.

Securities professionals usually are well educated and experienced, and they work full-time in groups using globally networked real-time information and analytic applications. Generally, they have a significant edge over amateur investors. While professional competence can vary rather widely, the experience, competence, and profit motive within professional organizations tends to correct errors rather than to perpetuate them.

Do not waste time evaluating fund managers

Searching for superior investment fund managers wastes your money and time. Unfortunately, amateurs cannot exploit this rather narrow professional versus amateur performance differential. You cannot identify, reliably beforehand, professionals who will turn out to be better in the future using any method that is associated with the characteristics of the managers themselves.

Professionals' education, years of experience, time in a position, and other personal attributes have not been demonstrated to predict performance. Paying attention to the background of investment manager is just a waste of your valuable time.

All that matters is the investment result for the portfolio managed by a professional, and the only reliable predictive variable tends to be investment management costs. When professional management costs are higher, then net returns tend to be lower and vice versa.

Because you cannot reliably predict which investment professionals will have superior performance in the future and because you cannot hire active professionals at a cost that is lower than their value-added, the only solution is to sidestep the game. By buying only low-cost, passively managed index funds, you do not need to play the futile and time consuming "pick a superior manager" game.

6.5: Where's Waldo? - The superior manager illusion

If investment mutual fund managers were truly skilled at beating the market, then you would expect mutual fund manager performance prowess to persist over time. Luck dominates skill, and superior performance tends not to persist.

Unfortunately, the evidence indicates that superior past professional performance among mutual fund managers tends not to persist. Past superior mutual fund performance is simply not a predictor of future superior mutual fund performance.

Over time, securities prices change, because risk and return expectations change. Older concerns are resolved and new risks arise. As time and events roll forward, new information becomes available, that influences whether investors find a particular security to be more or less attractive. A vast array of financial, competitive, managerial, political, natural, technological, and numerous other factors will influence the evolution of securities market values.

Securities market prices are risk adjusted or risk weighted forecasts of unknowable future events

Just because the price of an investment security changes over time does not mean that investors were right or wrong before when they purchased or sold short a security. It simply means that the future did not unfold according to the projected risk-adjusted market consensus that existed when the security was acquired. See: True investment skill versus luck

Securities prices are bound to change and there will be supposed "winners" and "losers." Winners will take credit and boast of their supposed wisdom, while losers will tend to keep quiet and lick their wounds. The problem is that rarely do either winners or losers actually win or lose because they made a precise and accurate prediction of future events that actually did occur. See: Chance creates the illusion that investors can beat the stock market

When the investment portfolio performance of money managers is measured on a risk-adjusted basis, winners are judged to have captured positive "alpha" (a statistical performance comparison to a benchmark) and losers will have negative "alpha". However, the term alpha is only a one-way performance judgment. Alpha only applies to superior returns never applies to inferior returns. Nobody will ever get hired intentionally to deliver inferior returns. Are these positive and negative deviations from the average the result of skill, or are they just due to random price fluctuations?

If mutual fund managers were truly skilled at beating the market, then one would expect their excess investment returns performance to persist over time

Most individual investors have long-term financial objectives and hope that money managers who are entrusted with their assets will deliver relatively high future performance. Unfortunately, the scientific finance literature does not support this expectation. The evidence indicates that superior past professional performance tends not to persist and is not a predictor of future performance. The most reasonable conclusion to reach is that relatively competitive and efficient financial markets are not reliably "beatable" on a long run, risk-adjusted basis.

The absurdity of the "positive alpha, superior mutual fund manager" assertion increases with the fees charged and the excess taxation resulting from over-active professional portfolio management. From the point-of-view of the individual investor, affordable alpha simply does not exist. Before costs and taxation, on average an investor can only expect to match the market return. Some will exceed the market return and some will fall short. However, it will tend to be luck rather than skill that will determine who wins and who loses. Once costs and taxation are factored in, the average investor will under-perform the market index.

The effort to find those few supposedly superior money managers willing to sell their services sufficiently cheaply is a costly, time consuming, and futile, "*Where's Waldo?*,"* searching exercise for the individual investor

* "Where's Waldo" by Martin Handford is a series of illustrated children's books. The objective is to locate Waldo wearing his little red cap within drawings that contain many, many hundreds of other people. Finding Waldo is often challenging and time consuming. As opposed to searching for superior mutual fund managers, you actually can find Waldo with enough time.

Many money managers will claim to be superior and few or none actually will be. If such superior money managers did exist, then there should be dozens or hundreds of them who prove their superiority year after year after year. Unfortunately, the scientific finance literature indicates that this is not the case. This year's star money manager tends to be next year's average or laggard money manager.

Individual investors need to understand that proper evaluation of the potential skill of investment managers is not a trivial exercise. Institutions with assets to invest must select and monitor investment managers. They have fiduciary obligations to hire the best and the brightest

of portfolio managers, who will in turn select and manage the actual investment portfolio. The scientific finance literature on investment manager selection is very extensive, goes back roughly four decades, and provides no easy, surefire answers.

6.6: Why only one Warren Buffett?

Instead of highlighting dozens or even hundreds of perennially superior mutual fund money managers, the media conversation has become a repetitive chant about Warren Buffett

While highly successful and very worthy of respect, it is interesting that the "Sage of Omaha" gets so much press as a successful money manager. Warren Buffett is not a traditional money manager, because he tends not to buy small positions across a large number of securities like those that a mutual fund portfolio manager does. Instead, he often buys significant minority and controlling interests in firms and directly influences their management and thus the outcome. While managers of open-ended investment funds take in investor deposits continuously, it has been a very, very long time since Berkshire Hathaway Inc. has tapped the public markets for equity capital!

Concerning Mr. Buffett's Berkshire Hathaway conglomerate, you may find some studies of its equity holdings, as if it were managed as an entirely independent equity mutual fund. Yes, the numbers do seem to indicate that Warren Buffett and his key lieutenants have demonstrated skill over time. Warren Buffett has generated so much cash over the long-term that he could not just keep it all in cash under a mattress.

Back in 2005, I took an overall look of the enterprises and investment assets under Warren Buffett's control. As of mid-2005, both Berkshire Hathaway's cash positions and its equity positions were close to $50 billion each. In addition to that, it held substantial positions in bonds and wholly owned businesses. The overall percentage distributions were about 30% cash, 16% bonds, 29% publicly traded equities, and 25% in businesses owned outright. The equity portion was invested in about 30 firms with 10 accounting for more than 90% of the equity valuation.

Within the rules of law and its prospectus, which mutual fund would be allowed to play Warren Buffett's game? The answer is none.

Shrewdly buy companies at bargain prices … fix them up and manage them for the long run … let them spin off barrels of cash … invest some of the cash in equities and bonds … buy more

companies and fix them up … hold on to a huge amount of cash under the mattress for very long periods because bargains are cyclical and sometimes impossible to find … keep repeating the cycle…

What mutual fund could sit on as much cash as it had in equities waiting for an opportunity to buy another firm outright? They simply would not be allowed legally to do so. In addition, if they sat on huge cash positions, shareholders would hammer them for not deploying their money, deviating from the benchmark index, etc. Warren Buffett's game only works when the whole picture is taken into account — successful acquisitions, majority control, investing some of the cash flow in marketable securities, keeping a large amount of dry powder (cash) for when the opportunity arises, etc. These are not the tools available to a mutual fund portfolio manager.

So, where are all the other perennially superior traditional money managers who can be hired economically to manage your money and that of thousands of others for a superior return? They are not to be found. Individual investors spend an excessive amount of time and money looking for investment mutual fund managers who will all turn out NOT to be the next Warren Buffett in the long run. Mutual fund managers simply are not allowed to play his game.

Individual investors chase past superior mutual fund performance in the futile hope that past investment fund performance will predict superior future mutual fund performance

This strategy is just a mirage, but the mutual fund industry willingly reinforces it. If a mutual fund family opens and promotes enough funds, random portfolio fluctuations will allow almost any fund family to brag selectively about only those of their funds that were past winners. Simultaneously, they quietly ignore their laggard funds. After investors repeatedly search the crowd for Waldo, after they have put their money into past winners, and after time has passed, only then do a few of these investors realize that Waldo was never there to found in the first place.

Given this bleak assessment of the chances of finding affordable, risk-adjusted, and sustained mutual fund money manager performance, I have concluded that all forms of active management that cannot be cost justified should be mercilessly driven out of individual investors' investment strategies. Individuals first need to decide on investment strategies that are risk preference appropriate. Then, they need to choose very low-cost and very low-tax investments that they can let run over time. Maintenance should always be very minimal and

very low-cost, and the urge to chase performance mirages should be heavily restrained. It is just a fool's waste of money and time.

6.7: True investment skill versus luck

How to distinguish between true investment skill and luck

Even if an investor has obtained superior results over an extended period, is this sufficient proof that these investment results were actually due to skill rather than just a lucky streak? No, these investment results could still be due to chance. For example, take a large population, such as all individual investors in the U.S., and have each person perform a random chance operation like flipping a coin repeatedly. After many repetitions, a small portion of the population could appear to have remarkable results.

After 10 consecutive coin flips, some investors probably would have flipped 10 heads in a row (HHHHHHHHHH). If each head were to indicate a consecutive win in the stock market, that person might seem like an investment genius. However, ten heads in a row is no more or less likely than any other particular sequence of heads and tails. The person who flipped THTTHTTHHH has a sequence that is just as unique as 10 heads in a row. The person who

flipped THTTHHTHHH, which is different only on the sixth coin toss, also has an equally unique sequence. However, to many people, these sequences of heads and tails would not appear to be nearly as exceptional as 10 heads in a row, even though they really are.

Repeated investment success may still be the result of luck rather than skill.

While it may appear that the person who got 10 heads in a row did something remarkable, it just appears to be more unusual, because the results were all the same. In a similar vein, if a large population of investors were each to choose investment securities at random and were to do this repeatedly, the results will be purely accidental. However, those who happened to pick securities with better results might seem like geniuses.

Given human propensities, you could almost guarantee that the longer the sequence of their accidental winners, the more the chests of these lucky winners would inflate with pride. They would probably also become increasingly vocal. The fact that they are no more or less likely to be a winner in the next round than any other participant, might be lost on them and anyone who hears their story, until the results of the next round are known. In addition, even if they lose the next round, they may conveniently not report their loss. Too many lucky throws of the investment dice and these persons could be absolutely insufferable at cocktail parties.

Only if an investor makes numerous specific predictions over time about WHY the prices of various securities will move in particular directions and those predictions come true far more often than not, can investment skill rather than dumb luck be demonstrated

Because long-term success may still be due to random chance, there needs to be more stringent criteria for judging true investment skill. True skill might be demonstrated by two methods:

1) An investor with superior skill could have a better understanding of what known information means and could use trading strategies to capitalize upon that better understanding. For example, such an investor might be better at using published accounting information to identify companies whose default risks would in fact turn out to be different from what others judge them to be. If such an investor made a large majority of such accurate selections, then it would be more probable that this analyst demonstrated superior skill.
2) An investor with superior skill might be a better prognosticator of what is likely to happen in the future. In this case, the investor would make specific prior

predictions about things that would happen. A higher degree of accuracy on specific predictions would be a way to identify an investor with skill.

Both of these potential sources of verifiable skill have a common element, which is the specificity of their predictions. Not only must an investor with skill call the direction of price movements, he must also predict why the price will move with a reasonably high degree of factual precision. If an investor predicts that a security will perform exceptionally well for specific reasons, and it does perform well, but for reasons that have nothing to do with his predictions, then this is still a chance result and not skill.

The future unfolds unpredictably, and just because it turns out one way or another does not make an individual investor a genius or a fool

An investor can only properly claim to be an investment genius when the proof is indisputable over a very long history of precise predictions of what would happen. Moreover, as with soothsayers and charlatans, it does not count to predict accurately a few times in the midst of a very large number of inaccurate predictions. Certain investors have received substantial acclaim because they once accurately called and acted upon a turn in the market, while their other erroneous predictions were forgotten.

Note also that an investor is not necessarily a fool if the future happens to unfold differently than he predicted. His assessment of opportunities and risks may have been reasonable at the time he made his judgment. However, what he may have been concerned about might not have materialized because other factors became more dominant. An investor is only a fool, if he convinces himself that he can predict the future, when he does not have a specific record of accomplishment as evidence. Investors who have been lucky and become over confident because of their past luck can become very dangerous to their own future financial welfare.

6.8: More reading on investment funds

I have published on the Internet these additional articles, which may be useful to you.

Can you really beat the securities markets?

https://www.theskilledinvestor.com/financial/Can-you-really-beat-the-securities-markets_76.html

Despite it being such a prevalent notion that is feed by the financial media and industry, you are not likely to beat the market. If you try to beat the market, you are more likely to trail the market's return, because of costs, taxes, and investment mistakes.

Chance creates the illusion that investors can beat the stock market

https://www.theskilledinvestor.com/financial/Chance-creates-the-illusion-that-investors-can-beat-the-stock-market_67.html

"Market efficiency" makes it very difficult for individual investors to "beat the market." Left to their own decisions, individual investors perform so poorly that on average their investment returns lag behind the returns that one would expect from a completely random stock selection process. The average professional trader does somewhat better than amateurs do and, in part, probably does so at the expense of the amateurs. On average, any actual performance advantage delivered by professionals is significantly less than the average fees they charge for their services.

Do the new Morningstar star ratings predict superior mutual fund performance?

https://www.theskilledinvestor.com/financial/Do-Morningstar-Ratings-predict-risk-adjusted-equity-mutual-fund-performance_63.html

Compared to its old system, early data indicates that Morningstar's new star ratings system may have some performance predictability. However, the new stars may just be a proxy for fund costs. Instead of using the stars, investors should use costs to screen funds, which are a more direct and proven indicator of future fund performance.

How stable have Morningstar Ratings for mutual funds been over time?

https://www.theskilledinvestor.com/financial/How-stable-have-Morningstar-Ratings-for-mutual-funds-been-over-time_34.html

Morningstar Ratings have been quite unstable over time. If an investor buys a 4- or 5-star rated fund and expects it to stay that way, he is likely to be surprised.

What the instability of mutual fund Morningstar Ratings means for long-term investors – a commentary

https://www.theskilledinvestor.com/financial/What-the-instability-of-mutual-fund-Morningstar-Ratings-means-for-long-term-investors-a-commentary_88.html

If an investor expects the Morningstar star ratings to be stable, long-term indicators for long-term investing, then he probably will be quite disappointed by their lack of ratings persistence. Instead of the stars, investors should give much higher priority to alternate metrics to screen mutual funds.

Do Morningstar Ratings predict risk-adjusted equity mutual fund performance?

https://www.theskilledinvestor.com/financial/Do-Morningstar-Ratings-predict-risk-adjusted-equity-mutual-fund-performance_63.html

Morningstar Ratings have demonstrated some modest predictive information about performance. However, most individual investors will probably be very surprised about what kind of predictive information the stars provide. The stars have been a mild predictor of inferior performance. However, investors act as if the stars predict superior future performance, when in reality they seem to contain no such information.

What might be wrong with buying a mutual fund with a 4 or 5 star Morningstar Rating?

https://www.theskilledinvestor.com/financial/What-might-be-wrong-with-buying-a-mutual-fund-with-a-4-or-5-star-Morningstar-Rating_55.html

The star ratings are oversimplified. Many investors and their advisors use the stars as their primary decision criterion and as shorthand for fund selection. Alternate, more sophisticated approaches are available, which are more likely to lead to optimal returns.

High Morningstar Ratings can lure you into mutual funds with costly sales loads

https://www.theskilledinvestor.com/financial/High-Morningstar-Ratings-can-lure-you-into-mutual-funds-with-costly-sale-loads_98.html

A loaded fund with a high star rating can cloud an investor's judgment. A loaded fund with a 4- or 5- star rating is not likely to retain its high rating in the future. While loaded funds with high star ratings are good for sales advisor/agents on commission, they may not be the best funds for you.

Do mutual fund Morningstar Ratings changes influence individual investors?

https://www.theskilledinvestor.com/financial/Do-mutual-fund-Morningstar-Ratings-changes-influence-individual-investors_54.html

An analysis of the flow of investments into and out of mutual funds demonstrated a direct relationship between Morningstar Rating changes and investor reactions. Morningstar ratings upgrades resulted in positive abnormal mutual fund investment inflows, and downgrades caused lower than normal inflows or increased outflows. The dollar effects of ratings involving 4 and 5 stars we the strongest.

Does it pay to trade when the Morningstar Rating of a mutual fund changes?

https://www.theskilledinvestor.com/financial/Does-it-pay-to-trade-when-the-Morningstar-Rating-of-a-mutual-fund-changes_56.html

A study found that active trading when Morningstar Ratings changed lead to positive pre-expense returns at all levels of star ratings changes. However, the "excess" returns to these strategies did not hold up once associated expenses were considered. Expenses for monitoring, trading, and paying taxes and loads easily outweighed any positive returns to these strategies.

Investment astrology – should you pick investments according to the Morningstars?

https://www.theskilledinvestor.com/financial/Investment-astrology-should-you-pick-investments-according-to-the-Morningstars_44.html

Morningstar, Inc. first introduced its five star Morningstar Rating* system for funds in 1985. Individual investors and their advisors appear to make investment decisions that are heavily influenced by the Morningstar Rating system. Because the stars are very widely used and often misunderstood, The Skilled Investor has published a variety of articles to help investors make more rational decisions about the stars.

How the new Morningstar Ratings for mutual funds have been determined since mid-2002

https://www.theskilledinvestor.com/financial/How-the-new-Morningstar-Ratings-for-mutual-funds-have-been-determined-since-mid-2002_57.html

As of June 30, 2002, Morningstar, Inc. began to use significantly revised methods to define its star ratings for mutual funds. This article summarizes Morningstar's new Morningstar Rating* methods as defined in its publications.

Morningstar Ratings should be used with caution

https://www.theskilledinvestor.com/financial/Morningstar-Ratings-should-be-used-with-caution_84.html

Investors appear to use the five-star Morningstar Rating system as a shorthand metric to identify supposedly superior funds. Unfortunately, the stars do not seem to identify funds with persistently superior future performance. However, the stars may help to identify inferior funds that are more likely to continue to perform poorly in the future.

The quality of the old mutual fund Morningstar Ratings prior to mid-2002

https://www.theskilledinvestor.com/financial/The-quality-of-the-old-mutual-fund-Morningstar-Rating-prior-to-mid-2002_76.html

From 1985 to 2002, increasingly large numbers of individual investors directed billions of their investments dollars into funds that scored higher according to the old Morningstar Rating system. Morningstar has said that its old star ratings system had serious flaws.

What does Morningstar Inc. say its mutual fund stars can do?

https://www.theskilledinvestor.com/financial/What-does-Morningstar-Inc-say-its-mutual-fund-stars-can-do_65.html

Morningstar has stated variously that its stars can help investors: a) to diversify, b) to identify fund managers who add value, c) to distinguish between similar funds, d) to easily interpret past fund performance, e) to make it easier to build a portfolio, and f) to provide a more intuitive measure of historical risk adjusted returns.

How Morningstar Ratings for mutual funds are used as a marketing tool

https://www.theskilledinvestor.com/financial/How-Morningstar-Ratings-for-mutual-funds-are-used-as-a-marketing-tool_58.html

Mutual fund companies seem to exploit "four- and five-star only" investor beliefs. Advertising practices by mutual fund families are selective concerning which mutual fund star ratings they will advertise. You would be challenged to find any mutual fund family that advertises its one- or two-star rated funds, and the advertisement of a three-star fund is infrequent.

What does Morningstar Inc say its mutual fund stars cannot do?

https://www.theskilledinvestor.com/financial/What-does-Morningstar-Inc-say-its-mutual-fund-stars-cannot-do_76.html

Morningstar has stated that its stars cannot provide a single fund screening and selection measurement nor predict future mutual fund performance. Morningstar's position on performance prediction contrasts with the actions of many mutual fund investors who apparently believe that the star rating system has predictive powers.

Simplifying investment decision making can be taken too far

https://www.theskilledinvestor.com/financial/Simplifying-investment-decision-making-can-be-taken-too-far_64.html

Individual investors are challenged to select among thousands of mutual funds. Investment decision simplification is a laudable goal, but only if it is done in a way that is more likely to enhance expected risk-adjusted investment returns.

Chapter 7: Low cost lifetime investing on autopilot

7.1: The most sensible and sound investment strategy

The best investment strategy is a more simple investment strategy

The complexity of personal investment management is driven by the nature of investing in securities that have uncertain and unknowable future values. Nobody — amateur or professional — has a working crystal ball that can predict future asset values. Anyone can have a more or less well-informed outlook and operate with an evolving set of theories as to what might happen.

As the future unfolds, positive and negative economic, technological, competitive, political, and other developments determine the evolution of securities values. And, even as new information becomes known in the future, the value of a particular securities will be always be an amalgamation of currently known information and a forward-looking market consensus about the murky future.

In general, it is this very uncertainty that provides investors with opportunities (however unpredictable) to earn over time more or less than a market return on their invested assets. Investing involves varying degrees of risk and participants in real time securities markets buy securities at what they perceive to be a discount against their expectations for higher future values. They sell when they think current market prices exceed the future opportunity.

Thus, the uncertainty about the future drives much of the inherent complexity of investing. Everybody wants a magic system to beat the market and to do better than the other guy, but when you take the time to think about it, you realize that the future cannot be known until it arrives and that there can be no magic bullets, reliable systems, or sure bets with investing.

Nevertheless, the inherent complexity of investing is exacerbated greatly by the proliferation of investment products and services aggressively promoted by a securities and financial services industry that purports to serve your best interests. However, this proliferation of complex investment products most often seems only to serve the financial self-interests of the securities industry itself. Averaged across all retail investors, the high fees of the financial service industry dramatically reduce rather than help to increase retail investors' net assets.

Personal investing can be simplified greatly by focusing only on valid strategies that have support in the investment research literature. This personal investment planning summary is

intended to help you to understand that you can manage your investments using strategies that have a demonstrated basis in the research literature.

When one pursues strategies that are designed to focus solely on the fiduciary interests of individual investors, the vast majority of investment products promoted by the industry can simply and easily be eliminated from consideration. They cost far more than they are worth. Aggressive investment cost control is not a magic bullet to beat the market, but it is a very effective way to avoid being the rube who gets fleeced by the fast talking slick suit.

Once you have committed to a durable long-term investment strategy, you can manage by yourself relatively easily the details of investment implementation. You do not need to pay high costs for something you can do yourself.

Use an easy-to-manage, do-it-yourself lifetime investment strategy based upon valid principles

To improve your long-term investment returns, move fully toward the completely passive, globally diversified, and extremely low cost end of the investment securities products spectrum. Invest only in a variety of passive, very broadly diversified, and low cost investment funds.

Understand better your investment risk tolerance relative to the larger population of investors and decide how much you are willing to be exposed to investment risk. Your investment risk tolerance leads to your asset allocation strategy, which sets the balance of overall expected investment risk and return in your personal portfolio.

Get invested and stay invested in the global securities markets according to your asset allocation — through thick and thin. Never attempt to second-guess the markets or to time the markets by moving assets around hoping to beat the markets. When you hold securities with an asset allocation that is commensurate with your tolerance for risk, you can ride out market panics without panicking, so you will also be in the markets when they rise toward new highs. The academic research shows clearly that nobody really knows how to time the markets and jumping in/out when you are confident/scared usually leads to inferior results.

Buy and hold and hold and hold some more

Buy and hold and hold and hold. When you own broadly diversified, passive index investment funds, professional investment portfolio managers will make all the needed adjustments within these funds for you over time.

Maintain your asset allocation within the percentage policy variance that you have pre-determined. Do so in as low cost a manner as is reasonably possible. Use asset purchases during your accumulation periods and asset sales during your divestment periods to maintain your target asset allocation. This reduces the need to make changes and incur costs solely to maintain your asset allocation percentages.

Only buy investment mutual funds from mutual fund companies that deal directly with the public. Only a small fraction of mutual funds are low cost, broadly diversified, passive funds with low turnover. Buy them and ignore the rest with middling or higher fees.

Never pay any broker or any other commissioned financial advisor another dime during your lifetime to tell you what funds you should buy. They do not know what will happen to future asset values, because they have no information to make such judgments. Instead, their high advisory costs will be extracted from your assets up front and along the way. Purchasing investment funds through an advisor is far more likely to reduce rather than increase your wealth. Investment cost are not "just a few percent." For the average investor, average investment costs consume about one-third of average annual investment returns — year after year after year after year. The cumulative losses with even average investment costs are huge and simply horrendous across the lifetime of the average investor.

Improve your overall net investment portfolio returns by consciously managing the asset "tax location" of your investment assets, which can reduce the investment taxes that you pay. Federal capital gains investment tax rates vary by holding period and different types of assets have returns that are treated differently under the federal tax code. Take advantage of the opportunities that you have to arrange your assets for minimal taxation.

Focus the time that you spend on financial affairs during your lifetime on increasing your income and/or managing your consumption to increase your savings rate. In addition to reducing your investment costs, saving more is the single most effective way to accumulate assets for retirement and other personal finance goals.

Enjoy your life and resist the compulsion to act as an amateur investment portfolio manager. By ceasing their amateur investment management activities, most people can free up substantial amounts of time to spend on far more pleasurable activities. Don’t you have other things you would rather do than spend your life playing futile investment games?

Most people waste a great deal of time on activities that are more likely to reduce rather than increase their investment portfolios

Very low cost, professional index fund managers can manage your money far more efficiently in terms of much lower costs, far greater diversification, better returns, lower taxes, and significantly less time than you can ever realistically hope to do as a personal investment portfolio manager. Do yourself a favor and decide to fire yourself as a personal investment manager in favor of a handful of index fund managers running very broadly diversified, low cost funds.

Despite these factors, some people just cannot resist the personal investment management game. If you simply cannot resist the temptation to play personal investment portfolio manager, then understand clearly that this is likely to be one of the most costly hobbies that you could have. If you are anything like the average investor (and you probably are), then your self-managed personal investment portfolio is highly likely to cost you money through inferior returns, higher costs, and inadequate diversification. Moreover, this hobby is extremely likely to waste a significant amount of your valuable time over your lifespan.

However, if you must play investment manager, then never play with the rent money, the baby's milk money, or the money that you are relying upon for your retirement, your kids' education, or other important obligations. Since investment portfolio self-management is not likely to be a value-added activity, never allocate more than 10% of your overall investment assets to this hobby. Invest the remaining 90+% in accordance with the investment methods summarized above.

In addition, learn how to track carefully and accurately your investment performance relative to appropriate passive benchmarks, so that you do not fool yourself into thinking you have more skill than you actually do. Everybody is an investment genius in a rising market, if they do not track performance relative to appropriate passive market benchmarks. Academic research clearly demonstrates that individuals most often achieve significantly sub-optimal investment results relative to passive benchmarks, while simultaneously they carry higher and unnecessarily risks due to non-diversified self-managed portfolios.

You investments should work for you rather than you working for them. Avoid all the financial industry games designed to make money off of your assets and to keep you moving assets around chasing performance gains that have already passed you by. Instead, simplify your

investment program, and use your financial assets to enrich and protect your life and the lives of those you love.

7.2: Fifteen value-added investor activities

Determine first whether your strategies target optimal risk-adjusted investment returns

Even if an individual investor feels a substantial amount of confusion about investing, he or she usually holds on to the hope that spending more time will increase investment returns. This is only true if the strategies implemented actually add investment value rather than diminish portfolio value. Value generating strategies can positively offset the opportunity cost of the time you spend. If not, more time spent on poor strategies will just increase your shortfall.

15 activities that are more likely to increase returns, lower costs, reduce taxes, and/or reduce risk

These 15 guidelines summarize personal financial planning and investment management practices that are more likely to benefit you and your family in the end.

1) Spend much more of your time on managing your career and controlling your living expenses. These are the two most powerful levers that any individual

controls related to the success of an investment program. The most successful investment programs always involve continuing additions from savings.

2) Become fully diversified (yes, FULLY diversified and ALWAYS diversified) by owning the very broader market possible in your portfolio

3) Drive out all forms of investment activity designed to beat the market. Target a market return and be very happy if you get close to it. Most individual investors fall well short of earning a market return, because they chase past performance that does not repeat, and they pay much higher investment costs as they chase the mirage of superior investment performance.

4) Learn about and adopt optimal risk-adjusted investment strategies. Understand the risks that financial markets tend to reward and those risks that you can take without any likely reward.

5) Use rational investment selection criteria that have been validated by the scientific investment literature. Use only those criteria to pick your investments

6) Look for efficient, long-term investment vehicles, buy them, and hold them, and then hold them some more. Save your time and money. Stop all this short-term flopping around, because it is counter-productive.

7) Track your investment progress periodically, but do not chase performance. Supposedly "superior" past performance is overwhelmingly due to luck rather than skill, and in practice, it is impossible to detect before the fact the tiny minority of professional managers with true skill from among the vast majority who will just be lucky and not so lucky.

8)Understand the incredibly high price to you of excessive investment costs and buy the lowest cost investments through the lowest cost channel consistent with your strategy

9) Be conscious, rational, and pro-active about taxes related to your investments. Taxes should never be ignored, but at the same time, they should NEVER be the dominant consideration in any investment decision.

10) Understand your tolerance for risk in comparison to other investors and make sure that your portfolio asset allocation properly reflects your relative risk

tolerance. Avoid being overly conservative or overly aggressive relative to your risk comfort zone. Errors either way are potentially very costly.

11) Stop twiddling with things, and adhere to your passive strategy. Let it run. Go do something else with your time that is more rewarding financially and/or more emotionally and spiritually fulfilling. Do not listen to people who tell you to twiddle, especially if they are industry professionals who will make money from you, when they do the twiddling for you.
12) Develop an understanding of the things that investors tend to do wrong, and monitor yourself so that you do not do the same things.
13) Find advisers who will truly put your interests first and who will give you full attention and comprehensive and reasoned advice. Advisers should more than pay for themselves, but many times (if not most of the time) they are actually a net cost to you. Managing your advisers is the ONLY place in investing where you really should be active rather than passive.
14) Shop around for advisors and be a critical, cost-conscious consumer. If you do not do some independent checking and critical thinking and just follow a friend's advice about whom to use as an adviser, then you may simply be just as wrong as your friend is. Just because you like and advisor's personality and feel that you can trust an advisor, this does not mean that you are getting enough value to justify his or her cost. Advisers are expensive. Pay attention to their "value to cost" ratio.
15) Understand insurable risks and economical ways to reduce them. Being focused only on investment risk can leave you unnecessarily exposed in other risk areas that could wreck your financial plans.

This list of value-added investment factors is not exhaustive. It also does not attempt to list the myriad of things that investors should not do.

In summary, if you have a reasonable sense that you truly understand investing and have kept accurate performance records to verify your prowess versus the appropriate market benchmarks, then you may actually be adding value by spending time on investing. If not or if your practices are contrary to the strategies listed above, then the more time you spend with your investments, the more likely you are to come up short — very short.

7.3: Passive strategies are simply superior

Passive index investment strategies lower risk and narrow the range of outcomes

Passive, index-oriented investment strategies tend to be superior, because they narrow the range of outcomes, and thus, they reduce the total investment risk associated with your portfolio. The superiority of "passive" over "active" investment strategies was established decades ago. Two things are wrong with active strategies:

1) They increase your risk without increasing your expected gross return, and

2) They cost more and thus lower your expected net return.

The only way the active strategies could be superior is if you could reliably pick superior active managers who will deliver risk-adjusted results net of additional costs and taxes that are better than a passive strategy. Gosh, wouldn't that be great?! Unfortunately, superior investment manager identification before the fact is just another industry chimera.

Most often, those who argue for passive investing do so by arguing that on average the lower implementation costs of passive investment strategies will increase net investment returns. The most succinct presentation of this lower-cost-higher-returns argument is Professor William F. Sharpe's elegant two-page paper, "*The Arithmetic of Active Management*" published in 1991 in *The Financial Analysts Journal*.

While the relative costs of active and passive strategies are very important, the higher risk and higher uncertainties of active strategies are just as important. Unpredictably, active strategies can lead either to significantly higher or to significantly lower returns. The key issue is that active strategy outcomes are more unpredictable even before any higher costs are considered. Active strategies introduce a very large and completely unnecessary element of added lifetime personal financial planning risk. To the contrary, passive strategies narrow the range of your outcomes. Because passive strategies target a market return, the expected variance around the market return tends to be much narrower than the variance around more active strategies.

Studies of actively managed equity growth mutual funds illustrate this point. (See "*How many mutual funds are needed for a well-diversified portfolio? - a commentary*") which discusses a study by Professor Edward O'Neal that showed a 12 to 1 ratio for the best performing equity growth mutual fund compared to the worst performing equity growth mutual fund over a 19-year period from 1976 to 1994. If you make the wrong choices in fund selection,

then this wider variability of returns can subject you to far greater risks when compared to a passive market index strategy. You cannot get rid of overall market risk, but you do not have to take on additional active risks that could doom your lifetime financial plan to failure.

Of course, you might figure that you will be lucky and only choose higher performing mutual funds for your investment portfolio. Guess again. Millions of naive investors chase performance, get in late, pay higher costs, and fall full farther and farther behind a market return.

Also, see "*Can a limited number of stocks provide complete portfolio diversification?*" which discusses a study by William J. Bernstein, who demonstrated that most randomly chosen stock portfolios will under-perform the market return. The primary reason is that stocks with stellar long-term performance records are relatively few in number and are not obvious choices before the fact. Therefore, more portfolios will not contain them and thus will under-perform the market average.

Those who perpetuate this un-ending "active management debate" in front of individual investors are predominantly the same professionals who make money from the millions of individual investors whom they can draw into their active investment strategies. The proponents of active management will never really go away or stop talking, but you do not have to listen to them or believe them. Just ignore them.

The scientific finance literature provides miniscule support for active strategies and instead provides a very large body of evidence favoring passive strategies. While academics constantly test whether certain strategies are likely to "beat the market," the academic consensus is that active strategies are inferior to passive strategies. Considering that reliable methods to select supposedly superior managers beforehand are lacking and that proper comparisons of strategy returns should always be net of all investment costs, taxes, and implementation time commitments, the case for active strategies evaporates completely.

Active strategies arrive in a multitude of polished guises. However, they usually are easy to spot, simply because they promise higher returns and they cost a lot more to implement. Directly or through intimation, promoters will always promise to be better, but there will be no performance warranty. While performance variations for active strategies are much wider and some may deliver superior results, the average active strategy will tend to trail the market return to the extent of its higher costs. The under-performance of some active strategies will be ghastly. If your personal financial plan relies on active strategies and it comes up short, you will find that

the warrantee on any direct or implied promise of better performance expired the day, hour, minute, and second that you bought your investment.

Concerning the selection of better investments, the primary variable that tends to predict better investment performance is lower costs. On average, the lower the cost of an investment, then the better the net performance will be. The more professional investment management fees you pay directly or indirectly, the lower your net return.

Generally, passive and therefore lower-cost strategies allow you to ride the market's return with the lowest fare ticket. More often than not, you are likely to have a fatter wallet when you reach your destination. On an after-risk, after-cost, after-tax, and after-your-valuable-time basis, passive strategies have proven superior. On occasion, some roads in life are both better and easier. Passive index investing is one of these roads. Think about how you invest and evaluate whether there is a better way.

My The Skilled Investor website provides numerous articles on active and passive investment strategies.

Find my Luck versus Skill articles on The Skilled Investor website

Passive investors are "free riders"

Passive investors become what economists call "free riders." They benefit from the competition between active investors without bearing the extra costs and taxes associated with activist trading, research, portfolio management, time commitment, etc. Securities market free ridership is why a passive rather than active strategy is superior for the average individual investor.

https://www.theskilledinvestor.com/financial/Passive-investors-are-free-riders-who-allow-active-traders-to-pay-bills_99.html

Passive, "free rider" investors benefit from the higher costs of active traders. The inexhaustible supply of active traders provides an opportunity for investors simply not to play the active game and pay the higher price of greater activity. By accepting the current market price as the best relative price, passive investors can target a market return and drive both their costs and taxes down. They can benefit from efficient risk-adjusted prices and market liquidity without bearing the higher costs borne by active market participants.

The global securities markets provide significant value to the world's market-based economies and to investors. By providing liquid, real-time forums to trade securities at

constantly evolving fair market values, the securities markets provide vital capital services. At any point in time, the constant competition among active market participants results in relatively efficient current prices that investors can rely upon as the best current estimate of the risk-adjusted fair market value of a security. This competition is endless and imposes significant costs to active traders.

Passive investors ride investment waves at much lower costs

Investors have a significant choice to make about the securities markets regarding their direct and indirect trading strategy. First, they could choose to be passive and accept the current price as the best price. In doing so, they could trade infrequently and pay the lowest costs and taxes, as possible.

Second and alternatively, they could be active believing that the current market price can be beaten through some form of cleverness that will outsmart other market opponents who tend to be pretty smart, as well. In doing so, they must accept higher costs and taxes, which they believe their higher risk-adjusted returns will more than cover.

The securities markets have always had a more than ample supply of active traders who will follow this second strategy. We have every reason to believe that this will be the case in the future. The supply of active traders seems always to be inexhaustible. Meanwhile, a passive investor can be reasonably certain that all these market activists will squeeze almost all pricing inefficiencies out of the markets.

The choice is stark between the two strategies above. Either join in the active, competitive fray and take your chances on winning higher returns in excess of your higher costs and taxes. Alternatively, you can follow a passive strategy, target a market return, and focus on cost-reduction and tax-minimization. The research literature strongly favors the later approach. The financial industry does not.

7.4: Do not waste both your money and your time

Spending your valuable time on the wrong financial activities is just plain bad for you

Time in life is the most precious and perishable asset anyone has, and it ought to be spent wisely, efficiently, and enjoyably. Do not ignore the value of your time, when you assess how

you are doing with your personal finances. The value of the time you spend on personal financial planning should be part of your calculations, when you evaluate your financial efficiency.

You have valuable alternative work and leisure uses for your time. Putting in place and sustaining a well-defined financial and investment plan should require only a moderate amount of your time. If you use poor financial planning and investing strategies, you shot yourself in one foot. When you spend a lot of time on these bad strategies, you shoot yourself in both feet.

When you decide to spend more time on your finances and investments, you need to ensure that you are working on value-added rather than value-diminishing activities. Many people spend large amounts of time on uncompensated, counterproductive, and money-losing activities, such as day trading and portfolio self-management.

Securities markets are relatively price efficient and are extremely hard to "beat" consistently – particularly after your costs, taxes, and time are considered. Given a choice, most people should do something else rather than work on their investments. When informed that they are likely to lose more money, if they spend more time on investing, most people would be happy to find something else to do with their time.

Improved time efficiency is a side benefit of choosing a broadly diversified, market investment strategy that you implemented through low cost index mutual funds.

Passive investment strategies are more time efficient and cost-efficient. It is highly questionable whether the vast majority of individual investors should own any individual common stocks or bonds at all versus owning only investment funds. When they own passively managed index mutual funds, individual investors can achieve similar expected returns with less time, lower risk, lower cost, and lower taxes.

Index mutual funds require far less personal attention. Selecting and tracking a portfolio of equity and fixed income securities is a task that can be more profitably delegated to professionally managed index funds. If you chose broadly diversified, cost and tax efficient funds, you let full-time career professionals manage your money far more efficiently than you could ever hope to do. Not owning individual securities means that individual investors do not have to keep up with and decide on a myriad of minutia about dozens or hundreds of companies.

If you buy and sell individual stocks and bonds, do yourself a favor and fire yourself as an investment manager of your own portfolio. Adopt a low-cost, globally diversified, direct purchase, index investment fund strategy and then leave it alone. Instead, spend your time doing

something else that you really do enjoy doing. By not wasting your time most probably under performing a passive index fund portfolio, you will instead actually be paying yourself to pursue some other activity that you really do enjoy.

Appendix: Personalized lifetime financial planning software

To enhance the lifetime financial planning process for my clients, I have designed and developed VeriPlan during the past decade. VeriPlan is a sophisticated and automated personal lifetime financial planning application for individuals and families.

This Appendix explains VeriPlan's features, capabilities, and applications toward personal lifetime financial planning and investing. I use VeriPlan with clients who want to develop a comprehensive picture of their financial affairs projected across their lifetimes.

Individuals can buy a copy of VeriPlan and do their own lifetime personal financial planning. For do-it-yourselfers, I make VeriPlan available for a very modest licensing fee through one of my websites:

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

If you go to the link above, look in the left hand sidebar for the blue link titled; "Download the free VeriPlan User Guide in PDF format." When you click that link, you will get an instant download of the latest VeriPlan User Guide, which is extensive and detailed.

1.1 A tool to improve your lifetime financial planning

VeriPlan projects fully integrated scenarios about your income, expense budget, debts, investment portfolio assets, investment returns, and investment costs within the context of the U.S. federal, state, and local income taxes that apply to you. VeriPlan presents all your personal lifetime financial modeling information in clear graphics and data tables.

VeriPlan is a self-learning lifetime financial planning and investment projection application. VeriPlan gives you significant personal insight into your most important personal finance and investment portfolio decisions. Through comprehensive and customized lifetime projections,

VeriPlan's fully integrated financial and investment calculators model your particular financial situation across your adult lifetime.

You can easily customize any of your personal data and settings in VeriPlan. After you make any modification, VeriPlan automatically and instantaneously revises your complete lifetime projection. When you use VeriPlan's rich set of fully integrated "what if" financial modeling tools, you can take control of your own financial, investment, and retirement planning.

VeriPlan helps you analyze important personal finance questions.

Here are some examples of the kinds of questions VeriPlan can help you to answer:

A) Career planning:

* What are the long-term economic benefits of changing positions or employers?
* Would it make economic sense to return to school and improve my skills?

B) Debt management:

* What tradeoffs are associated with accelerating mortgage loan payments or other debt repayments?

C) Education expenses:

* Will I be have enough college savings to pay for my children's education while saving for retirement?

D) Estate planning:

* How could my savings rate and investment strategy affect the size of my estate?
* After my expenses, how much could I give or bequeath to family and charities?

E) Insurance budgeting:

* How large might my exposures to insurable financial risks be over time?
* How might different budgets for insurance premiums affect my financial plan?

F) Investment cost reduction:

* What investment returns might I earn net of investment costs?
* How much could I waste on unproductive investment costs?
* How might I improve my investment returns by keeping costs to a minimum?

G) Investment returns:

* How does my current investment strategy compare to a passive strategy focused on long-term, risk-adjusted returns net of investment costs and taxes?

H) Investment risk management:

* What returns might I expect from the balance of expected asset class investment returns and risks that I have chosen?
* Am I saving enough to stay within my investment risk and return comfort zone and still reach my financial planning goals?
* If I were to lose income in the future, how long would my liquid investment portfolio assets cover my projected expense budget?

I) New business ventures:

* What are the likely long-term benefits and risks, if I forego current income to start a business?
* Could I self-fund my business venture or would I need external capital?

J) Real estate planning:

* When will I have sufficient capital to buy real estate?
* How does mortgage debt affect my investment portfolio and financial goals?

K) Retirement planning:

* Would I have sufficient investment assets to retire early?
* Would my investment assets cover my expenses, if I live a very long time?
* What is a relatively safe asset portfolio withdrawal plan?

L) Saving goals:

* Am I saving at a sufficient rate to fund all my future financial planning goals?
* How much benefit might I expect from increasing my income and/or reducing my expense budget?
* What is the long-term value of saving some or all of my bonuses?

M) Tax reduction:

* Am I managing my investments from an income tax efficiency standpoint?
* How much should I put into either taxable, traditional retirement accounts, or Roth retirement accounts?
* Would my retirement portfolio assets be adequate after income taxes and other taxes are paid in retirement?

1.2: Executive Summary of VeriPlan

Organization, Graphics, and Data

VeriPlan provides 34 user worksheets organized into groups. VeriPlan is a lifetime projection model for 1 or 2 earners from 18 to 100 years old. Projections can begin at any age from 18 to 99 and continue through age 100. VeriPlan automatically provides 18 graphics and a consolidated worksheet with the data for these graphics. All VeriPlan projections extract inflation and use real or non-inflationary dollars with constant purchasing power over your life.

Earned and Other Income

Regular employment and/or self-employment income can be projected for either earner. You can also enter separate information about other income sources that you expect to have.

Pensions, Annuities, Deferred Compensation, and Social Security Income

VeriPlan projects up to 10 separate pension, deferred compensation, and annuity payouts. For each pension or annuity, VeriPlan automatically projects: a) the dollar amount of the monthly payment, b) separate real dollar growth rates before and after the first payment, c) whether payments begin at a specific age or at either user's retirement, d) duration of payments, and e) taxability of payments. Concerning your Social Security retirement payments, you can set current dollar levels for your entitlements, adjust the age to begin to receiving payments, and scale back the amount of your projected payments, if you wish.

Debts

VeriPlan automatically projects the pay-off of up to 25 current debts. You can plan for the accelerated repayment of any or all debts. Interest on selected debts can be tax-deductible. Also, VeriPlan automatically manages mortgage repayments on your planned future purchases of up to three homes.

Financial Assets, Real Estate, and Property

VeriPlan projects your asset holdings in five asset classes. Individually and automatically, VeriPlan will manage separately up to 24 cash assets, 24 bond and fixed income assets, 99 stock and equity assets, and 20 property, real estate, and other assets. For each of your asset holdings, VeriPlan collects information about share ownership, values per share, investment costs, and account taxability.

VeriPlan's integrated, automated, and high performance asset projection facilities enable the rapid evaluation of a wide range of customized financial plans. Growth of your projected "centerline" investment asset values are based on 85-year historical risk-adjusted and inflation-adjusted asset class growth rates. Asset class growth rates are fully user-adjustable using either VeriPlan's systematic and/or judgmental growth rate adjustment tools.

For each of your financial asset holdings, VeriPlan separately and automatically projects annual returns, return variability, taxes, and investment costs. VeriPlan automatically projects your net annual holdings by asset class, including new investments from future positive annual net earnings, reallocations, and withdrawals due to projected negative net earnings. VeriPlan automatically assesses your overall annual net portfolio returns, tax-efficiency, and investment cost-efficiency.

VeriPlan can project these asset class aggregates, even though the net valuation of your individual financial asset holdings may change at different rates due to return adjustments you make, varying investment costs, uneven taxable distributions, and legal differences in account taxability. VeriPlan can provide significantly more personalized insight, because its projections focus on your particular projected financial life situation, instead of relying upon arbitrary averages across a general population.

Taxes

VeriPlan automatically projects your lifetime tax obligations in eight separate tax categories. It automatically projects your particular federal, state, and local income tax rates and limitations; your tax exemptions, adjustments, and deductions; and your property and other taxes. VeriPlan supports the 'Single' and "Married, Filing Jointly' federal income filing statuses and automatically applies the tax rates and limits associated with these filing statuses. To prevent obsolescence, you can change VeriPlan's tax rates and limits, if laws change.

VeriPlan applies current variable U.S. federal ordinary income tax rates and limits. It contains tax rate information for the 50 United States and Washington, D.C. and automatically applies either variable, flat, or no income tax for any state that you choose. VeriPlan can automatically apply any local ordinary income taxes. Furthermore, it can develop projections using different levels of federal, state, and local taxable income.

VeriPlan automatically projects annual tax exemptions and their phase-outs for up to 10 dependents and up to 6 different adjustments to your taxable income. VeriPlan automatically projects your federal income tax deductions and applies the more favorable of either the standard deduction or your itemized deductions. VeriPlan automatically applies Social Security (FICA) and Medicare taxes, and projects either employee or self-employment tax rates, as appropriate.

Concerning your assets, VeriPlan automatically applies long-term capital gains tax rates on capital appreciation and qualified dividend distributions including asset withdrawals net of your accumulated asset tax basis. Over your lifetime projections, VeriPlan will automatically track your cumulative cash, bond, and stock asset class tax basis. VeriPlan also automatically projects your property, real estate, and other assessment taxes.

Traditional and Roth Tax-advantaged Retirement Plans

VeriPlan has automated your lifetime projections regarding employer retirement plans and personal IRA accounts that allow you to defer taxation or to avoid future taxation altogether. VeriPlan automatically projects separate values for your taxable accounts, traditional retirement accounts, and Roth retirement accounts. For traditional and Roth IRA and employer-sponsored retirement accounts, VeriPlan automates the projection of your lifetime contributions, deductions, asset growth, withdrawals, and taxation. It automatically assesses federal and state early withdrawal penalties, as required.

Updates and enhancements

VeriPlan has been updated and enhanced at least once each year for almost twenty years. However, since VeriPlan is designed to be user updatable, there is no requirement that you purchase an enhanced version of VeriPlan and there is no requirement that you purchase a support contract. Your initial, very modest license fee is the only charge for VeriPlan.

VeriPlan has been fully functional and robust since 2006. Each year since then some additional functionality has been added, but VeriPlan's core functionality has been very complete for many years.

The primary reason for annual updates to VeriPlan are to update:

* US Federal and 50 state + DC tax rates, limits, phase-outs, and other tax parameters, including retirement plan rule changes, and
* historical asset class returns, inflation, and volatility data for 1928 through the most recent year

Because facilities are provided within VeriPlan for current licensees to update these parameters in their own copy with more recent information, it is not necessary to upgrade.

If you would like to understand the updates and enhancements that have been made to VeriPlan in the past several years, go to this web page:

VeriPlan Lifetime Financial Planner - Annual Version Enhancements

or

https://www.theskilledinvestor.com/VeriPlan/1915/veriplan-lifetime-financial-planner/

Documentation

VeriPlan's worksheets provide extensive, integrated documentation. VeriPlan is designed to be self-training, and you do not need a user manual. Just read and follow the instructions on the spreadsheets.

Nevertheless, a separate and free *VeriPlan User Guide* with additional information is also available. The *VeriPlan User Guide* is free to anyone – whether or not you have a license to the VeriPlan software. You can find where to download this user guide in PDF format by going to this web page. (Look for the green book cover and click it to download the free PDF.)

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

To download this VeriPlan User Guide in PDF, MOBI, EPUB, and other formats go to this web page:

https://www.smashwords.com/books/view/372828

Systems Platforms

VeriPlan is a fully self-contained Microsoft Excel spreadsheet application that runs in a standalone configuration with local data storage. To operate, VeriPlan requires a Microsoft

Windows PC or Apple Macintosh with ANY Microsoft Excel version from 2002 up to the most recent version release. VeriPlan will run on your Windows PC or Mac with Excel, even if you have a relatively "ancient" system.

License and Purchase Information

VeriPlan is licensed and is for personal, non-commercial use by one (1) household. Buyers receive an unconditional thirty-day (30 day) satisfaction guarantee.

The price for VeriPlan is lower than all other full featured cash flow projection modeling tools. You can learn all the details about it and order it from this web page:

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

1.3: VeriPlan's lifetime financial planning decision tool sets

Asset Allocation Tools

Your asset allocation strategy allows you to align the risk of your investment portfolio with your risk tolerance. VeriPlan provides five user selectable and adjustable asset allocation methods for your lifetime projections. Fixed, variable, and age-based allocation mechanisms are provided. Reallocations are performed automatically at the beginning of all subsequent projection years.

Cost-Effectiveness Tools

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) purchase fees and loads, 2) management fees, 3) marketing fees, 4) transactions

costs, and 5) account custody fees. VeriPlan fully automates the comparison of lifetime investment costs between the investment costs of your current financial asset portfolio and the costs that you believe are reasonable to pay.

Expense and Savings Tools

VeriPlan allows you to set you annual expenses, and change your future expense levels and expense growth rates. VeriPlan also allows you to enter major planned expenses year by year and change growth rates relative to average inflation. You can enter positive and negative expense adjustments and growth rates in any projection year.

VeriPlan's expense planning tools can be used as a "Children's Education Expenditure Planning Tool", and as a "Mid-Career Education Planning Tool" to model tradeoffs associated with returning to school for career advancement.

VeriPlan also provides a 24-month household expense tracking, budget planning, and expense versus budget variance analysis tool. This optional use budget tool includes both standard expense categories and user defined expense categories. If you already use another budgeting tool, you are not required to use VeriPlan's budgeting tools. Instead, you can use the budgeting system that you already have to derive the expense numbers that you would enter into VeriPlan.

Current and Future Debt Tools

Regarding any current debts that you have, VeriPlan automatically repays interest and principal as you specify. You can use VeriPlan’s debt management facilities to analyze and plan for the accelerated repayment of any or all of your current debts.

In addition, excess consumption and the cost of associated debt can be very destructive, when you do not live within your means. This tool allows you to set a debt interest rate for future unfunded consumption. When your projected expenses exceed your projected income, VeriPlan automatically accumulates excess consumption debt and unpaid interest, after your cash, bond-fixed income, and stock-equity financial assets would be depleted. If subsequent positive net income becomes available, VeriPlan will automatically retire some or all of this unfunded consumption debt.

Historical Asset Class Returns

VeriPlan's automated "centerline" projections are based on the very long-term, historical securities market rates of return that have been achieved in the cash, bond-fixed income, and stock-equity asset classes over the past 95+ years. You can adjust these projected rates of return, using VeriPlan's various portfolio risk tools.

VeriPlan's projections automatically deduct your taxes and investment costs from your financial asset class returns. Furthermore, across your lifetime, VeriPlan will automatically project the value of your real estate, property, and other assets, which are not priced currently on real-time securities markets. VeriPlan uses the current fair market value and future growth rate assumptions that you set for these real estate, property, and other assets.

Home Purchase Tool

VeriPlan provides this tool for users who plan to purchase from 1 to 5 homes at various years in the future, as well as up to10 rental real estate properties.. For such future home purchases, this tool automatically takes into account: a) the planned purchase price, b) closing costs, c) settlement cash required, d) mortgage debt to be assumed, and e) expected interim and subsequent price changes.

Portfolio Asset Class Rebalancing Tools

VeriPlan aids in reallocating currently held financial assets, according to both the asset allocation and the asset tax location models chosen. Thus, it simultaneously takes into account the distribution of cash, bond, and stock assets across taxable accounts, traditional tax-advantaged retirement accounts, and Roth tax-advantaged retirement accounts.

Portfolio Risk Tools

VeriPlan provides several combinable methods to develop projections automatically using asset class return assumptions that differ positively and/or negatively from VeriPlan's "centerline" historical assumptions:

1) The Projection Variance Tool allows you to vary asset class returns upward or downward automatically in proportion to their historical volatility or risk.
2) The Asset Class Return Adjuster allows you to vary financial asset growth rates automatically on a one-by-one judgmental basis.

3) The Current Portfolio Revaluation Tool to help users understand the potential effects of substantial changes in near-term portfolio asset values.

Portfolio Safety Tools

Individual investors 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 your portfolio assets might evolve across your lifecycle. VeriPlan's Portfolio Safety Tools automatically project how long your cash and shorter-term fixed income assets would cover your projected expenses, if all your expected income sources ceased at any point. It automatically measures your projected financial capacity to weather future financial risks.

Retirement Planning Tools

With this tool, you can set individual retirement ages for either earner. You can select whether or not to retire simultaneously. You can also adjust your expected ordinary living expenses in retirement and the growth rate of those expenses. Concerning Social Security retirement payments, you can set the levels of your entitlements and adjust the age at which you would first begin to receive Social Security payments. Furthermore, you can scale back the amount of your projected Social Security payments, if you wish. Finally, because much older workers can face significant erosion of real dollar wage rates, you can adjust VeriPlan's assumptions about real dollar wage erosion for earnings at ages over 65.

Tax-Advantaged Plan Tool

VeriPlan has automated your lifetime projections regarding employer retirement plans and personal IRA accounts that allow you to defer taxation or to avoid future taxation altogether. VeriPlan automatically projects separate values for your taxable accounts, traditional retirement accounts, and Roth retirement accounts. For traditional and Roth IRA and employer-sponsored retirement accounts, VeriPlan automates the projection of your lifetime contributions, deductions, asset growth, withdrawals, and taxation. It automatically assesses federal and state early withdrawal penalties, as required.

Your settings on this tool control your projected tax-advantaged plan contributions funded from your future positive net income and/or from your future taxable financial assets, up to

current legal annual contribution limits. This tool allows you to determine the portion of your projected annual contributions that would be deposited automatically into either traditional tax-deferred accounts or Roth accounts.

1) The Total Contribution Limitation Tool allows you to set your personal limitation on overall tax-advantaged account deposits, as a percent of your future annual positive net cash flows.
2) The Roth Contribution Limitation Tool allows you to set the percentage that Roth contributions would be of your total annual contributions into both traditional and Roth accounts.
3) The Roth year-by-year Conversion Planning 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. VeriPlan's Roth conversion tool also allows you to understand the current and future impact of annual conversions on Social Security retirement income subject to taxation and on any IRMAA Medicare insurance premium subsidy reductions related to relatively high income in retirement.

1.4: VeriPlan’s Comparison Tool highlights differences between projection models

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, and runs on any Windows PC or Mac with any version of Excel. In spreadsheets, normally any change that you make to one cell 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, model comparisons are possible, if you first lock or "save the state" of a projection model, before making further revisions.

The VeriPlan Comparison Tool allows you to lock the state of any of your projection models. This is achieved by following some simple procedures to copy all of VeriPlan's output data and paste them into another spreadsheet as values only. Doing this will lock the "state" of the data values from your prior baseline model. Then, you continue to revise one or more assumptions and/or data inputs within VeriPlan to reflect any alternative personal financial strategy. VeriPlan's Plans Compared worksheet will then automatically subtract the "live" data being output from the revised model from the "locked" data values of the prior baseline model. This allows you easily to evaluate the differences between two lifetime projection models.

There is also another use for VeriPlan's Comparison Tool features. Some spreadsheet users might wish to develop external spreadsheets for specialized purposes and link those spreadsheets to VeriPlan's projection data output. VeriPlan Comparison Tool allows external copying and live linking of all VeriPlan output data.

1.5: VeriPlan’s graphics and data outputs

Overview of VeriPlan's graphics and data outputs

VeriPlan's graphics and data tables allow easy comparison of projection scenarios. VeriPlan presents your projections in 25 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 "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 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.

The unit of time on the horizontal axis of every graphic is one year, and all graphics cover ages 18 to 100. Your particular projections will begin with the initial age of Earner #1. All graphics lines begin with the initial age of Earner #1.

VeriPlan's automated financial projection graphics

This numbered list of VeriPlan's graphics is current as of 2023. Following this numbered listing are sections that correspond to each of these graphics and that provide a description of each graphic with an example.

The sample graphics below with a gray background are from an earlier version of VeriPlan. They have been retained here, because each of these graphics presents a particular projection scenario that is described in the text along with the graphic. These prior graphics are the same in the latest version of VeriPlan, except that the background are white rather than gray. If you see a graphic with a white background, these graphics were more recently added to VeriPlan.

1) INCOME: Non-Asset Income -- Earned, Pension, Annuity, Social Security & Other
2) EXPENSES: Ordinary Living Expenses with Other Planned & Adjusted Expenses
3) DEBT PAYMENTS: Debt Payments
4) PERSONAL TAXES: Tax Payments
5) RENTALS+PROPERTY: Income, expenses, debt payments, taxes, and cash flow from for rentals and other properties
6) CASH FLOW: Non-Asset Cash Flow
7) SAVINGS RATES: Pre-Retirement Savings Rates with Investment Debt Repayments
8) HUMAN CAPITAL: Expected Income and Savings Before Retirement
9) ALLOCATION: Financial Asset Allocation
10) TOTAL ASSETS: Financial Assets, Property, and Debts with Assets Lost to Excessive Investment Costs
11) ASSET FLOWS: Non-Asset Cash Flow with Cash, Bond, and Stock Financial Asset Returns
12) DEBT OWED: Personal, real estate, and business debt principal owed

13) ASSET TAXABILITY: Taxable, Traditional & Roth Tax-Advantaged Financial Assets
14) TRANSACTIONS: Taxable & Tax-Advantaged Deposit & Withdrawal Transactions
15) RETIREMENT INCOME: Retirement income sources and pre-tax Required Minimum Distributions (RMDs) after Earner #1 retires
16) WITHDRAWALS: Withdrawal Rates from Cash, Bond & Stock Assets
17) RETIREMENT SHORTFALLS: Cash flow shortfalls after Earner #1 retires including RMDs
18) SAFETY MARGIN: Emergency asset coverage of expenses without other income
19) VALUE OF TIME: Hourly wage equivalent value of income, expenses, and financial assets
20) COST-EFFICIENCY %: Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs
21) COST-EFFICIENCY $: Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs
22) SALES LOADS: Lost Returns on Past and Future Financial Asset Sales Load Purchase Fees
23) LIFE EXPECTANCY: Average U.S. male and female total life expectancy and remaining life expectancy by current age
24) HISTORICAL RETURNS: U.S. Financial Asset Class Returns from 1928 to the present
25) ROLLING RETURNS: Annualized U.S. Financial Asset Class rolling 5-year real dollar asset class returns and CPI inflation from 1928 to the most recent year

VeriPlan's graphics provide an integrated projection of your lifetime finances. Summaries of each are provided below

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 solves 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.

1) INCOME Graphic

Non-Asset 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, and Social Security income from the retirement worksheet
* Other income with adjustments from the income worksheet

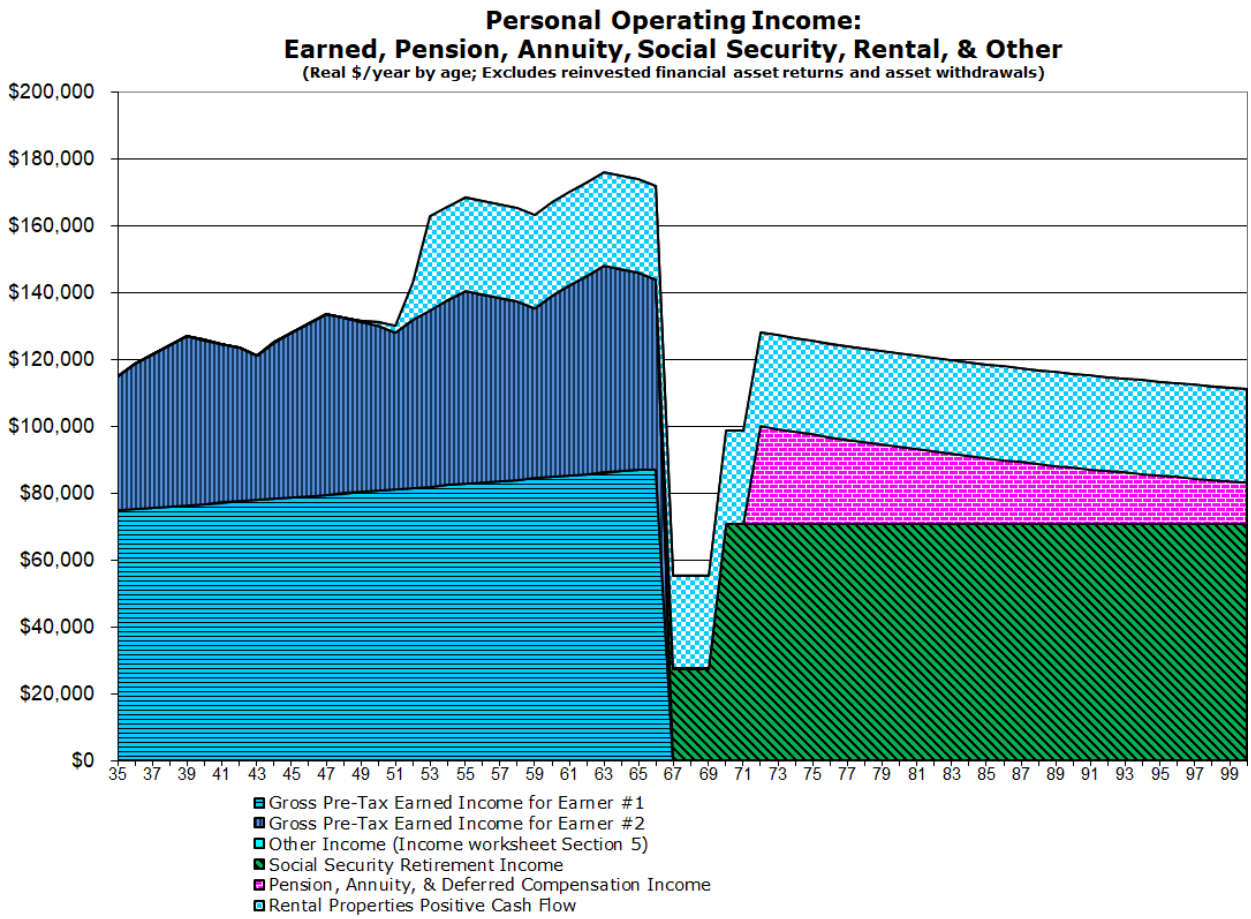
No income from assets nor any capital appreciation is represented on this graphic, because this information is provided on other asset related graphics. Asset income is assumed to be taxed and reinvested. Assets would be withdrawn only in years when you are projected to have a cash expense-to-earned 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.

2) EXPENSES Graphic

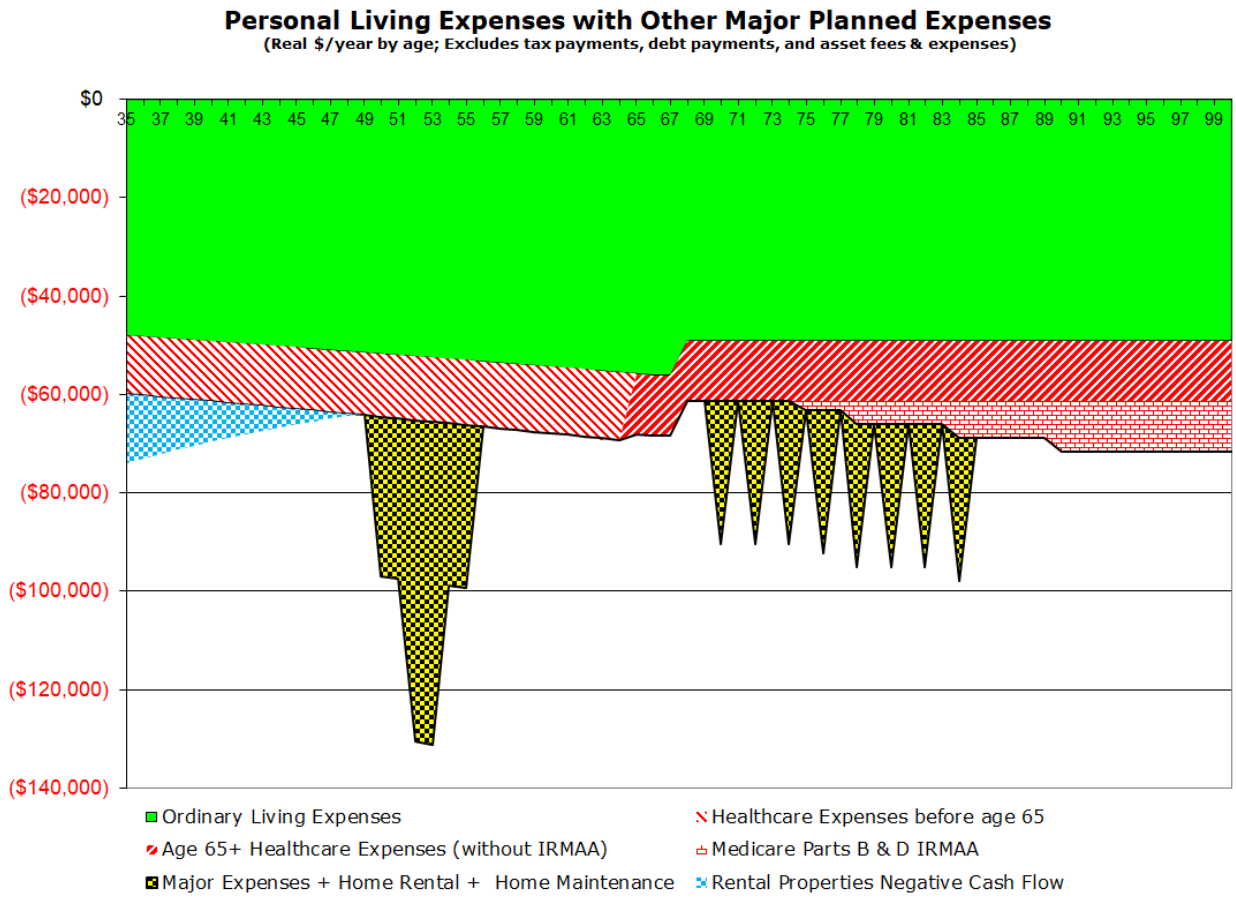
Ordinary Living Expenses with Other Planned & Adjusted Expenses

(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 ag 36 to 48. This represents the negative cash flow related 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.

3) DEBT PAYMEBTS Graphic

Debt Payments

(Real $/year by age; Nominal dollar debt payments are converted to real dollars with a 3% inflation adjustment.)

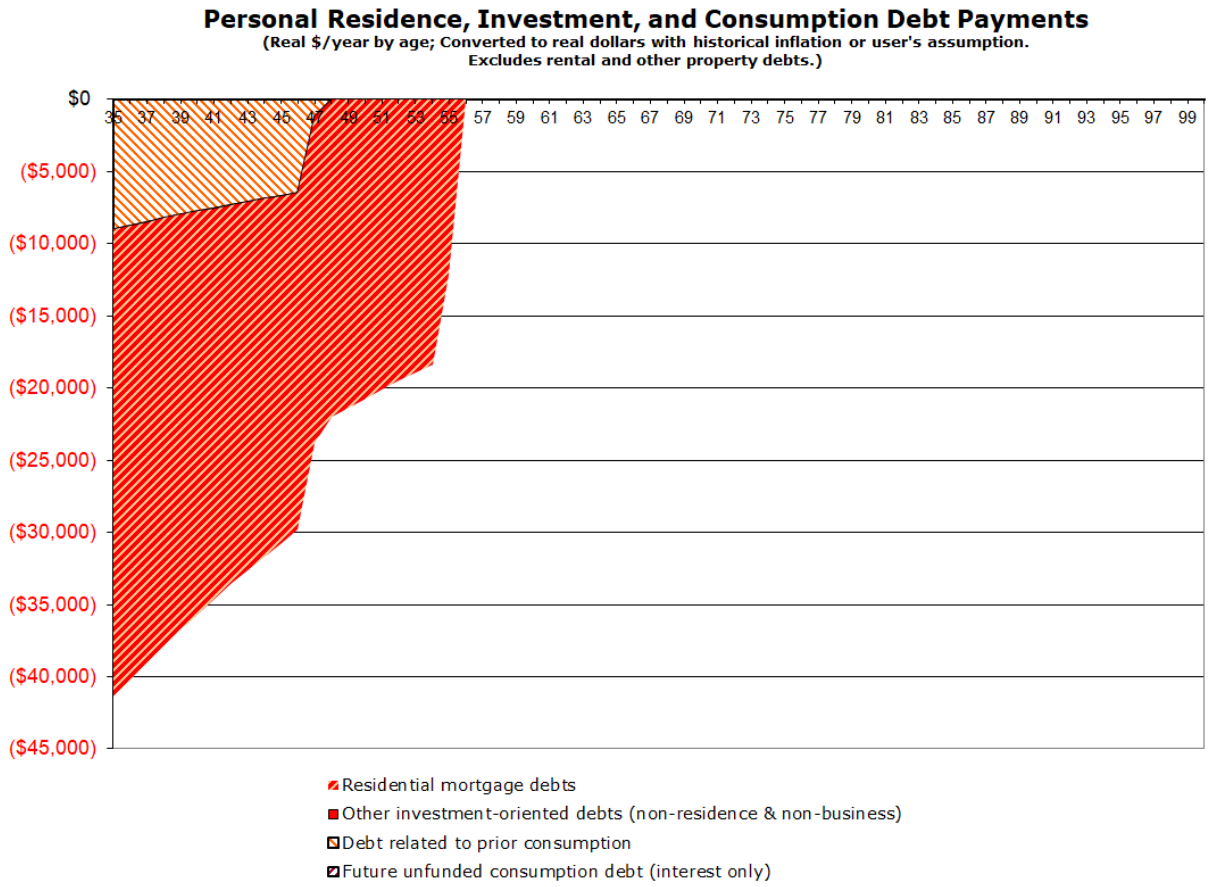
This DEBT PAYMENTS graphic projects your annual debt repayment obligations according to your settings on the debts worksheet. On the debts worksheet, you can classify your debts as consumption-oriented or investment-oriented. Consumption-oriented debts represent past consumption that you have financed. 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.



4) PERSONAL TAX PAYMENTS Graphic

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:

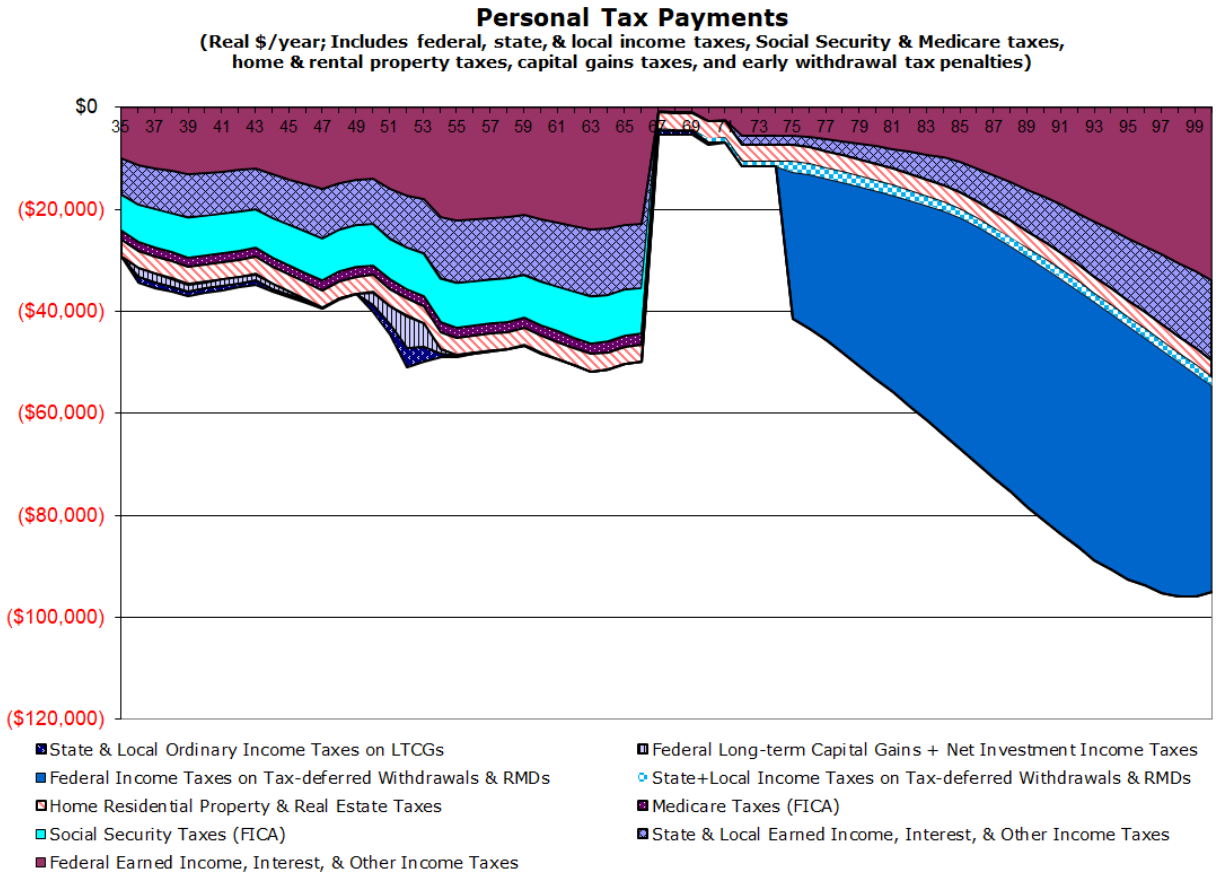
* Federal, State and Local ordinary income taxes on earned, interest, retirement and other income calculated with the marginal or flat rate taxes that apply to single or married taxpayers filing jointly
* FICA/Social Security and Medicare taxes for both salaried and self-employed workers

* 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.

5) RENTALS+PROPERTY: Income, expenses, debt payments, taxes, and cash flow from for rentals and other properties

Net Cash Flow from Rental Real Estate and Other Investment Properties (Excludes residential real estate; Real $/year by age)

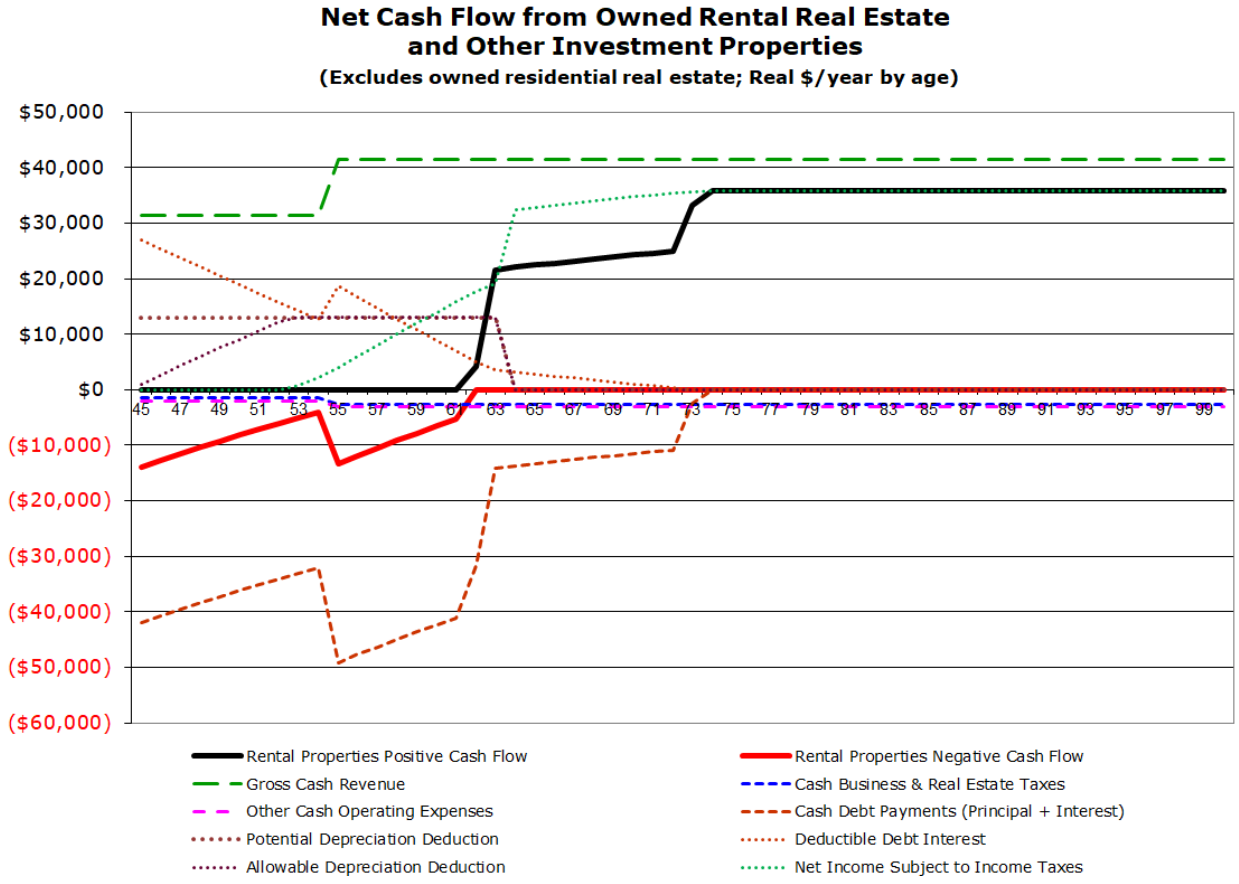
VeriPlan's yellow-tabbed Property+Debts worksheet allows you to enter information concerning up to 10 rental properties and up to 10 other investment properties, including information about asset values, income, operating expenses, taxes, depreciation, and debt payments. In addition, it allows you to 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.



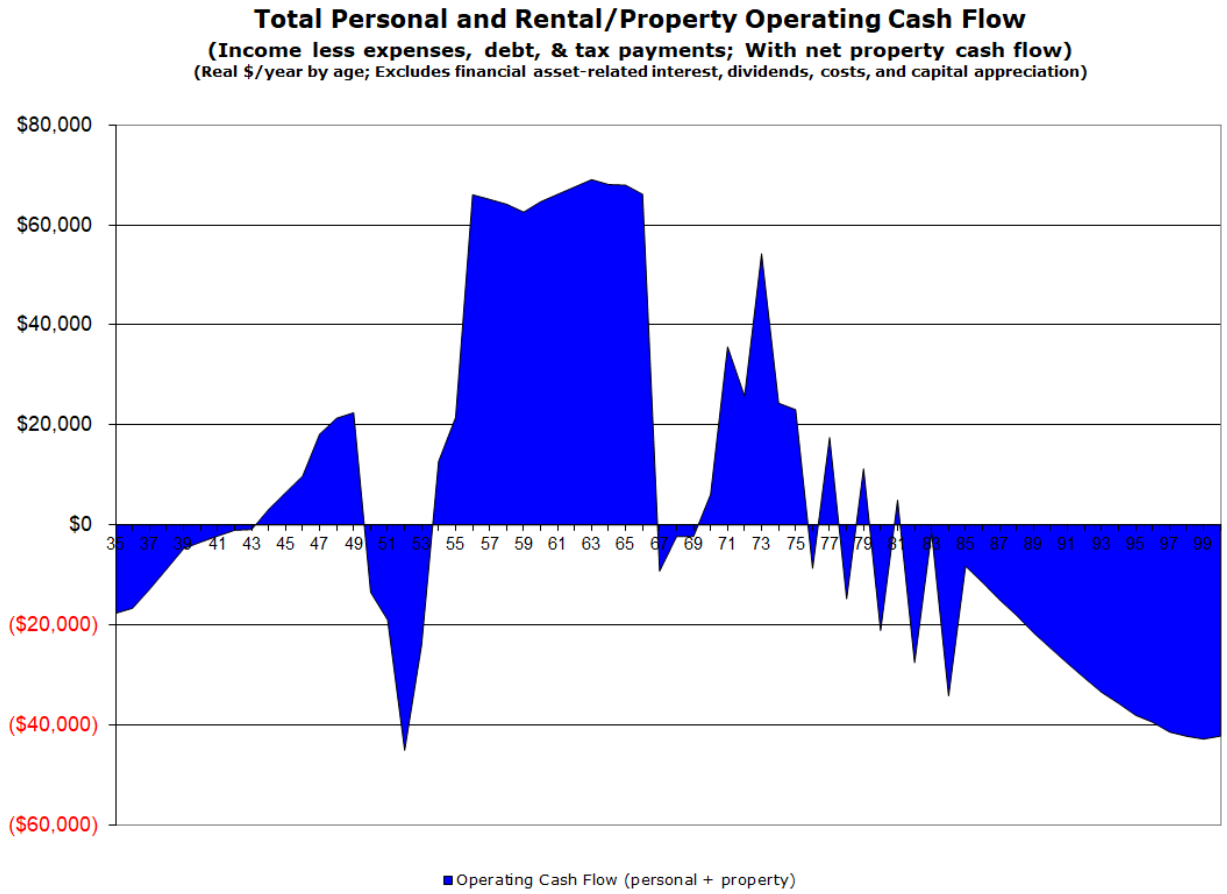
6) CASH FLOW Graphic

Non-Asset Cash Flow – 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.)

7) SAVINGS RATES Graphic

Pre-Retirement Savings Rates with Investment-Oriented Debt Repayments

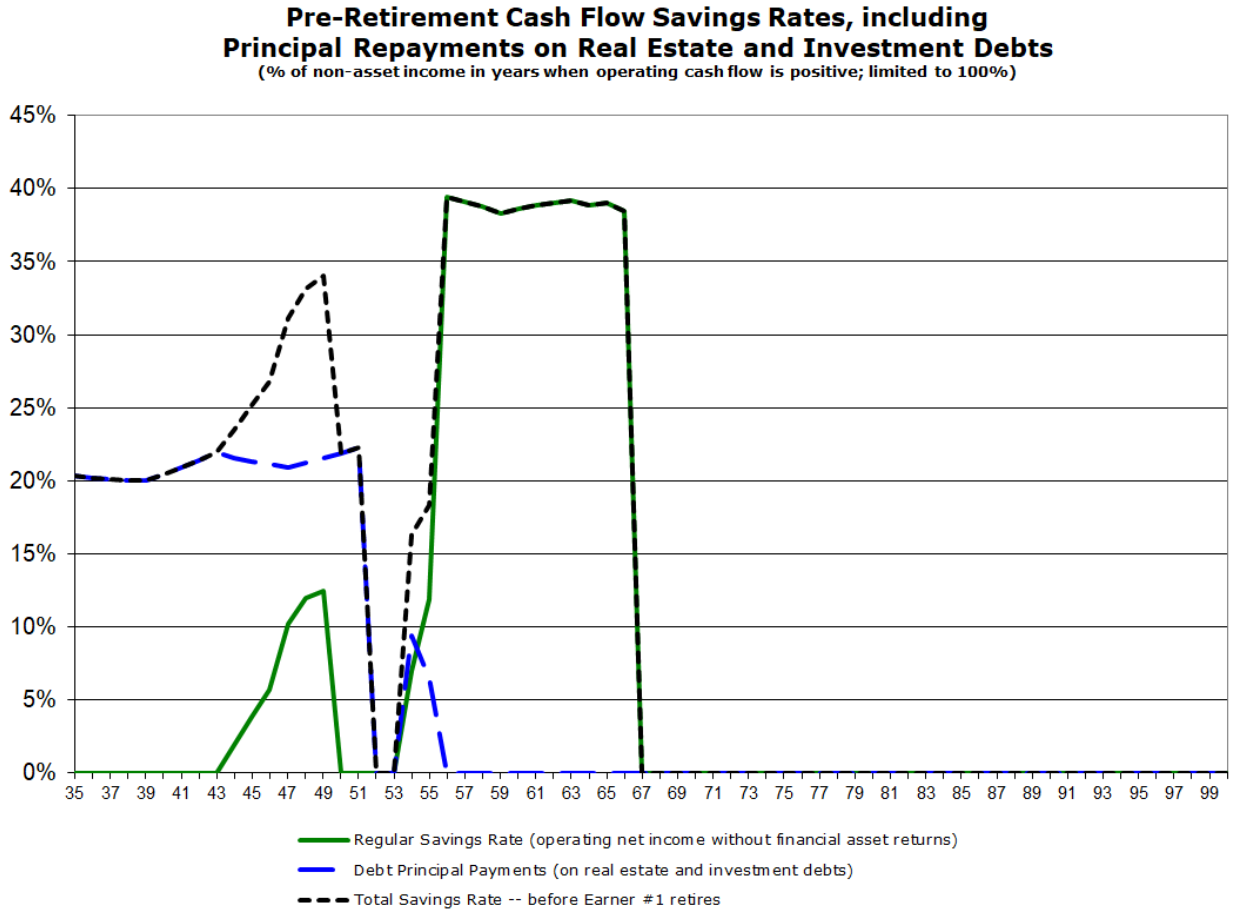
(%/year by age; % of non-asset income in years when non-asset cash flow is positive.)

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



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."

8) HUMAN CAPITAL Graphic

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 converted into earned income to

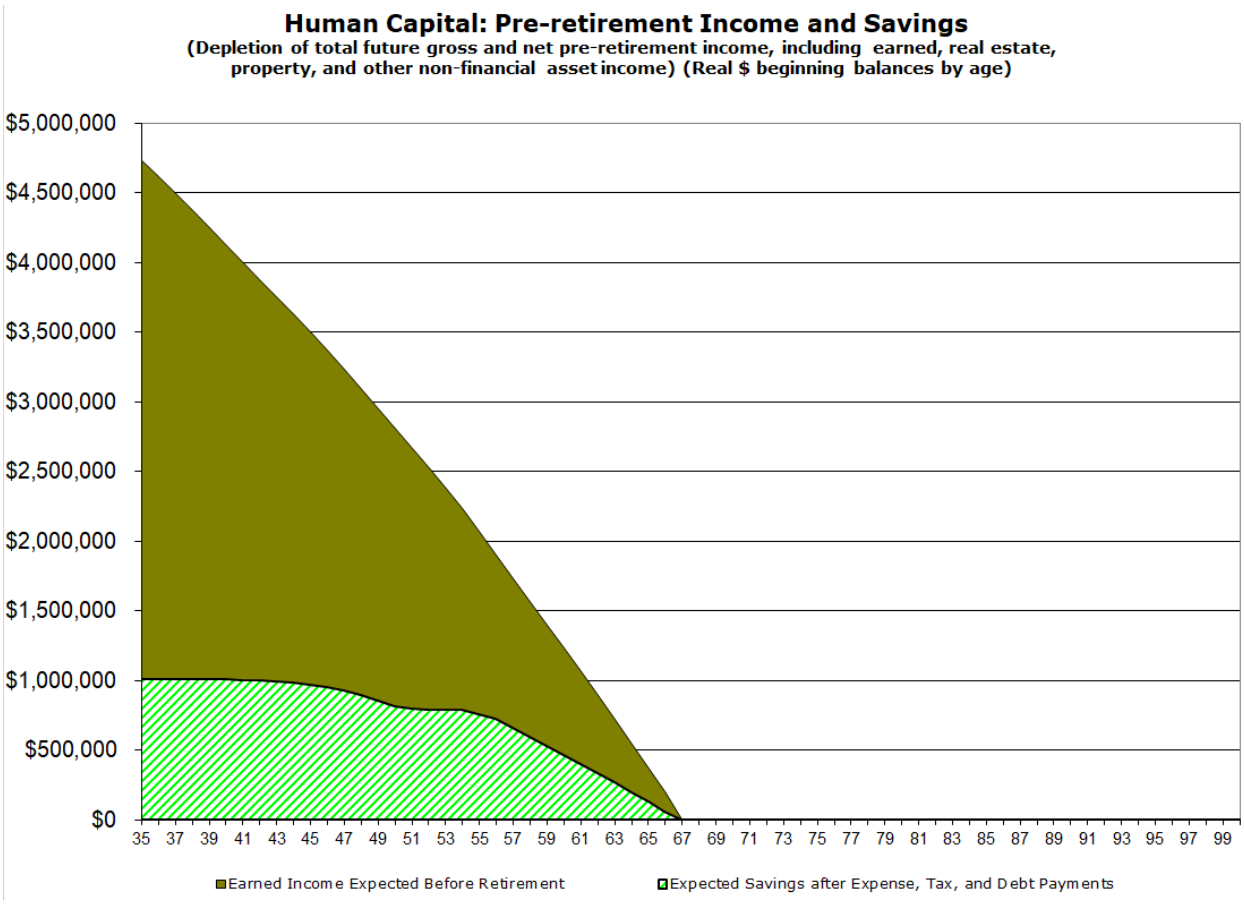
pay ongoing expenses. Some of it must also be saved and converted into valuable assets, if one is to have assets to live on after human capital is gone.

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.

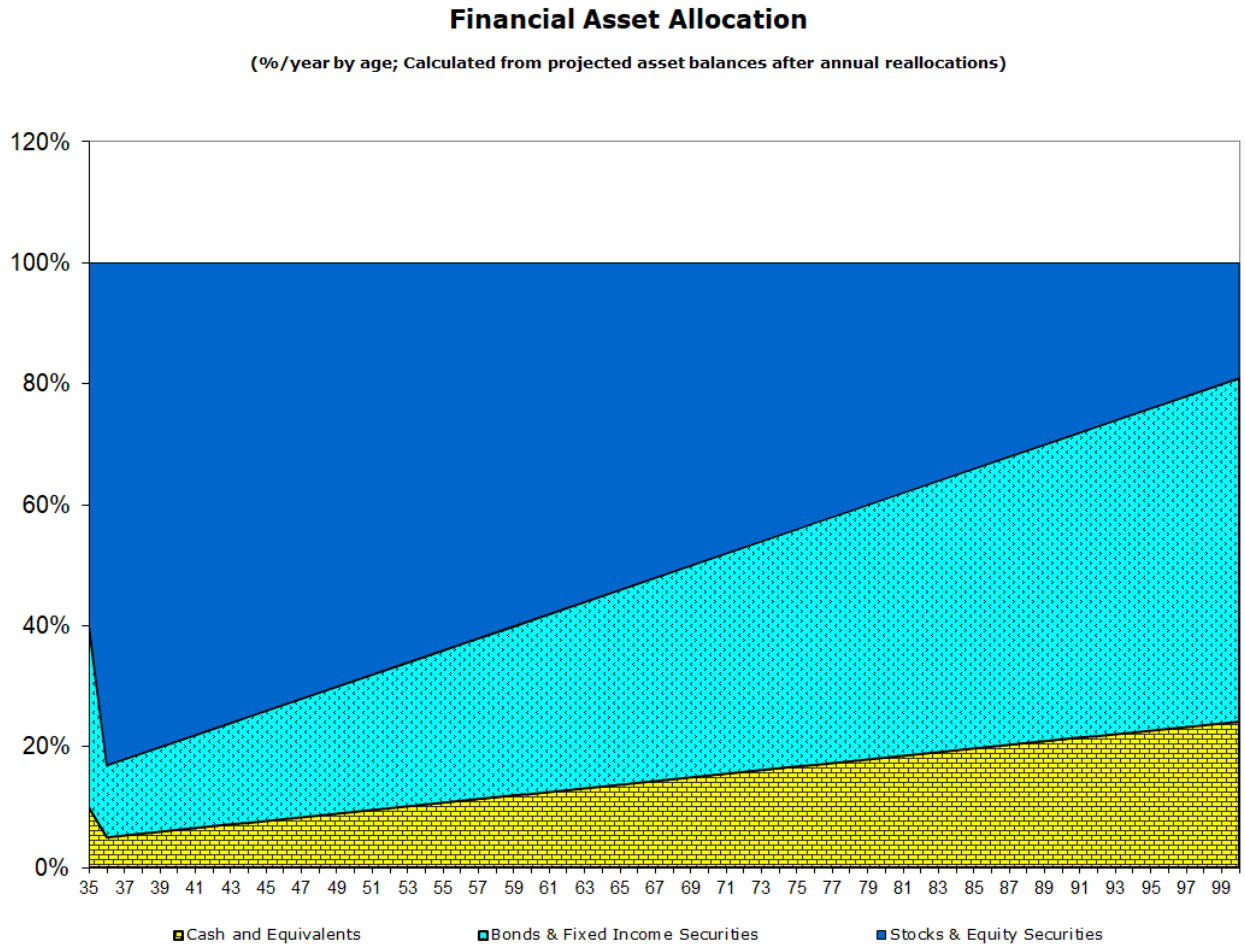
9) ALLOCATION Graphic

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.

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)

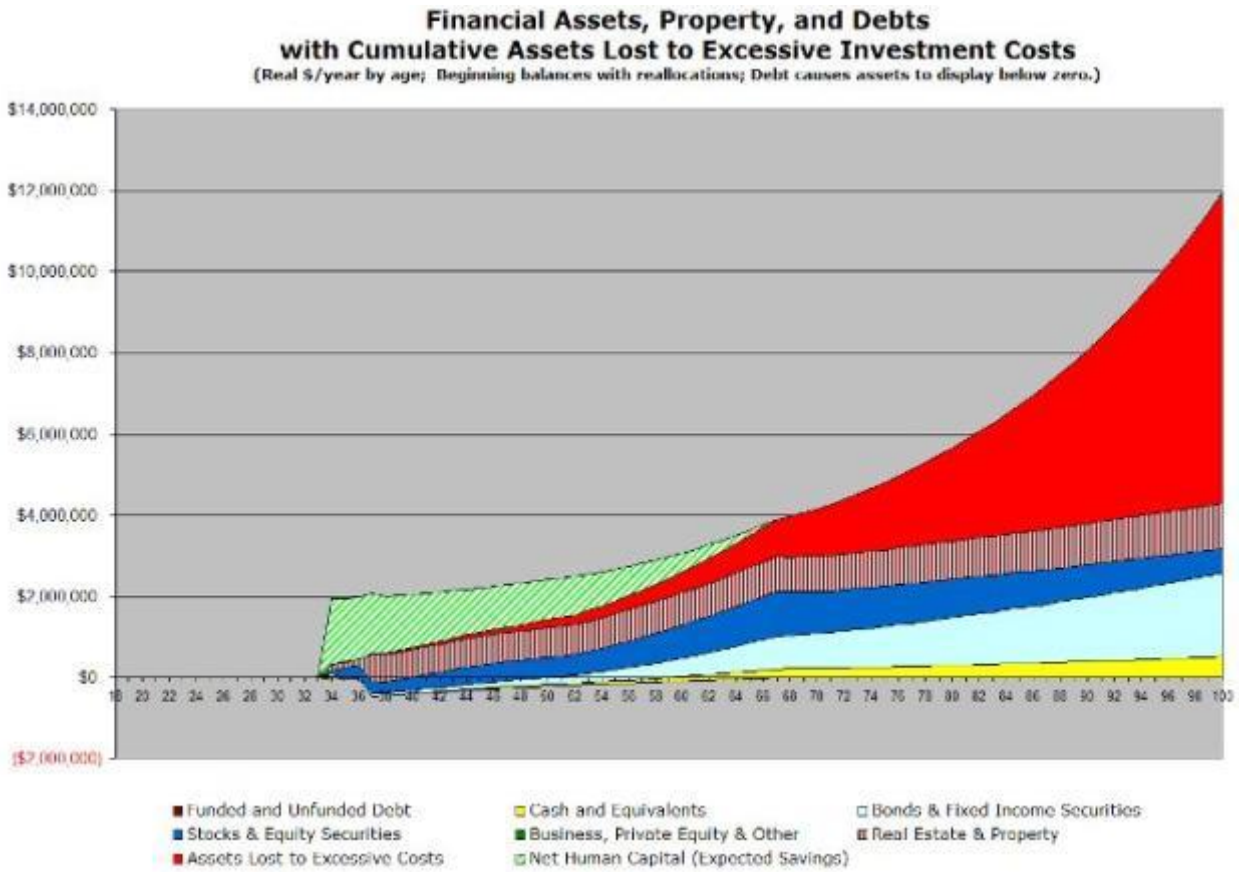
This TOTAL ASSETS graphic shows your projected cash, bond/fixed income, and stock/equity financial assets and property. Your net human capital is also shown to illustrate the conversion of your net earned income into financial assets through your savings. Cash, bond/fixed income, and stock/equity financial 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.

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.

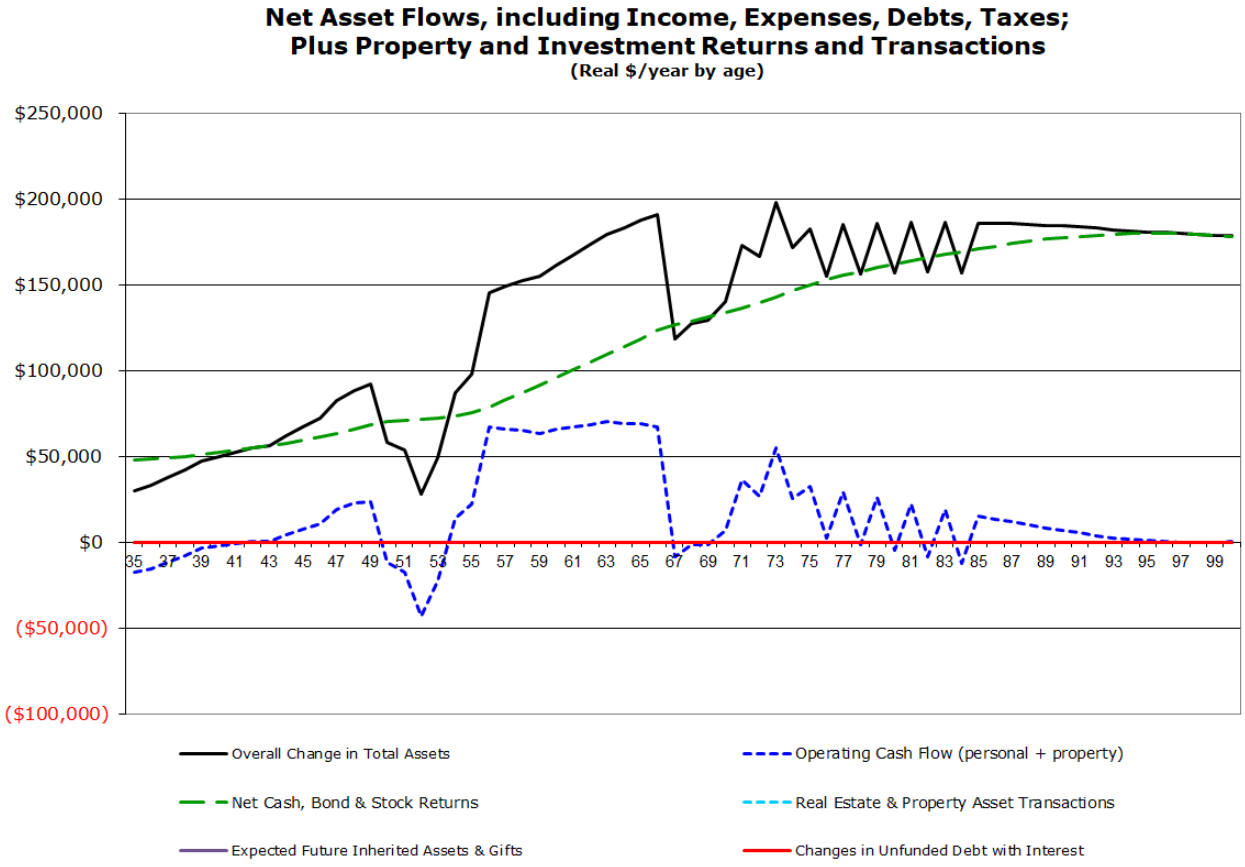
This ASSET FLOWS graphic also indicates total projections annual Required Minimum Distributions (RMDs) from traditional tax-advantaged retirement accounts. Finally, it graphs unfunded consumption expenses, if and when projected cash, bond, and stock financial assets are exhausted. These unfunded consumptions 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.)



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.

12) DEBT OWED Graphic: Personal, real estate, and business debt principal owed

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,

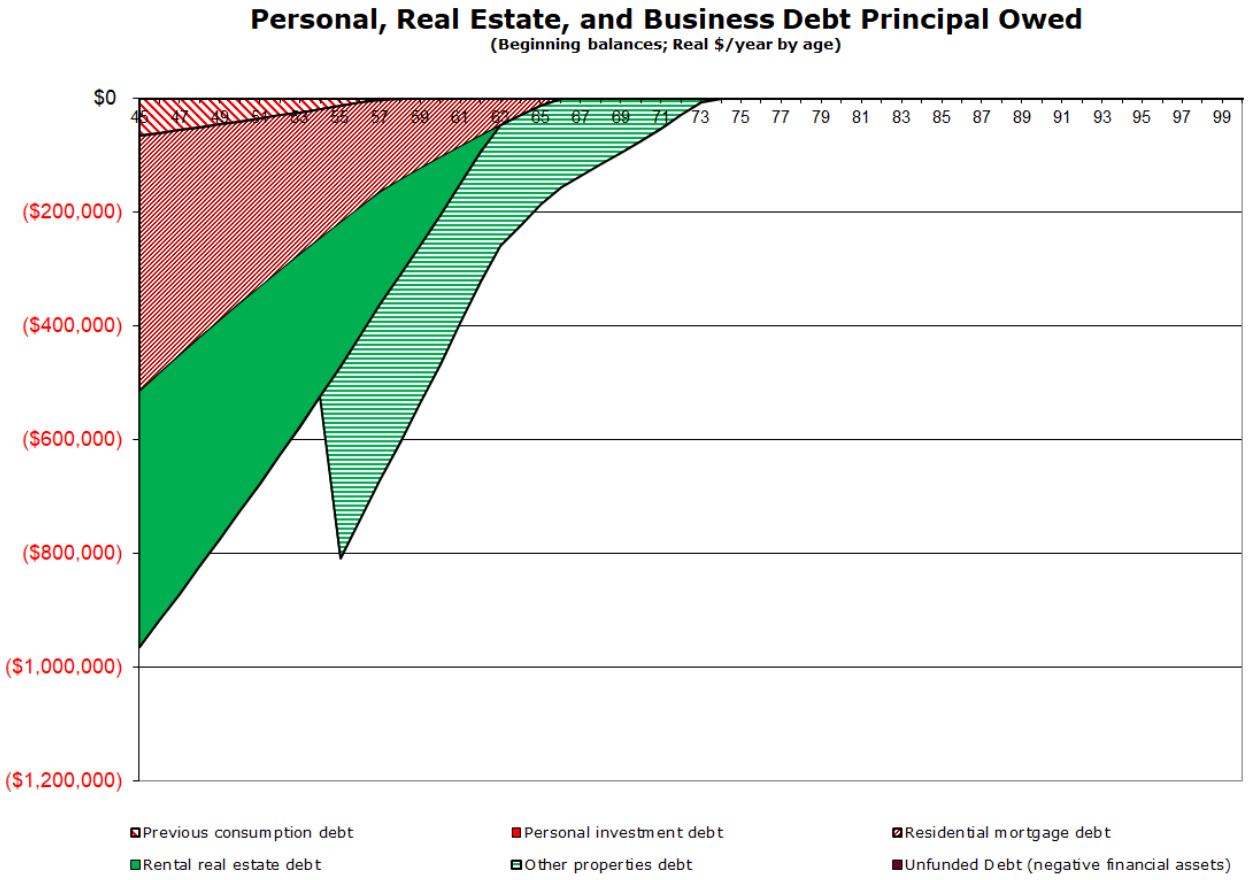
e) other properties debt, and

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.



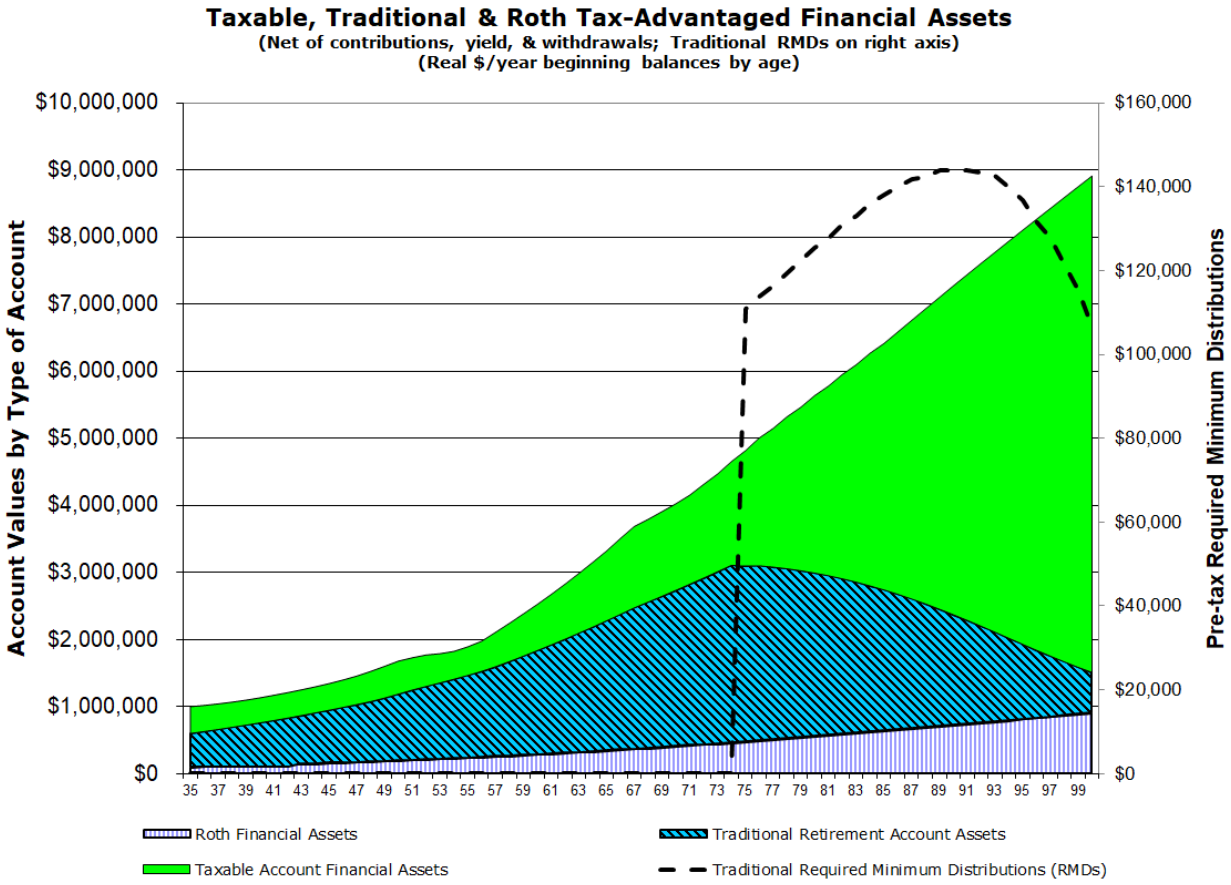
13) ASSET TAXABILITY Graphic

Taxable, Traditional & Roth Tax-Advantaged Financial Assets

(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.

14) ASSET TRANSACTIONS Graphic

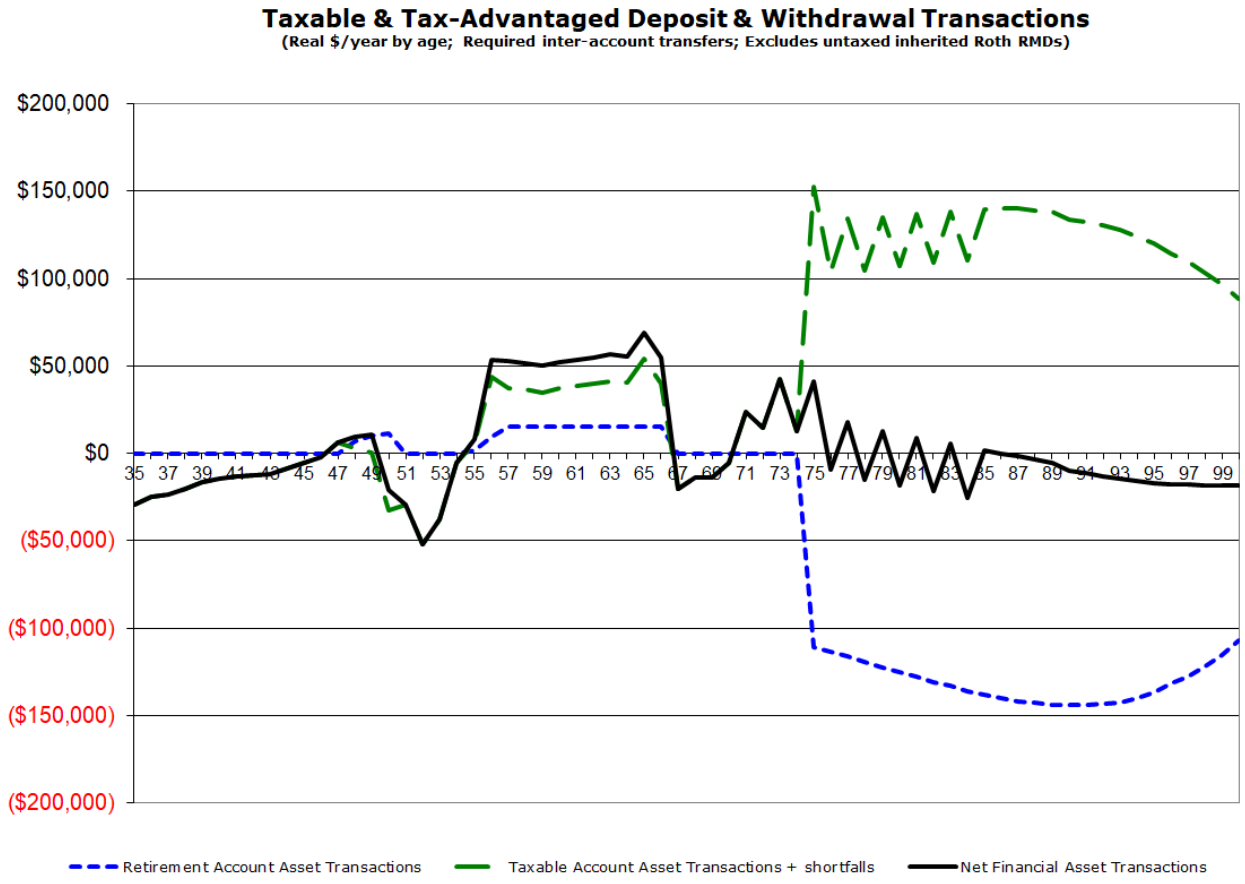
Taxable & Tax-Advantaged Deposit & Withdrawal Transactions

(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.

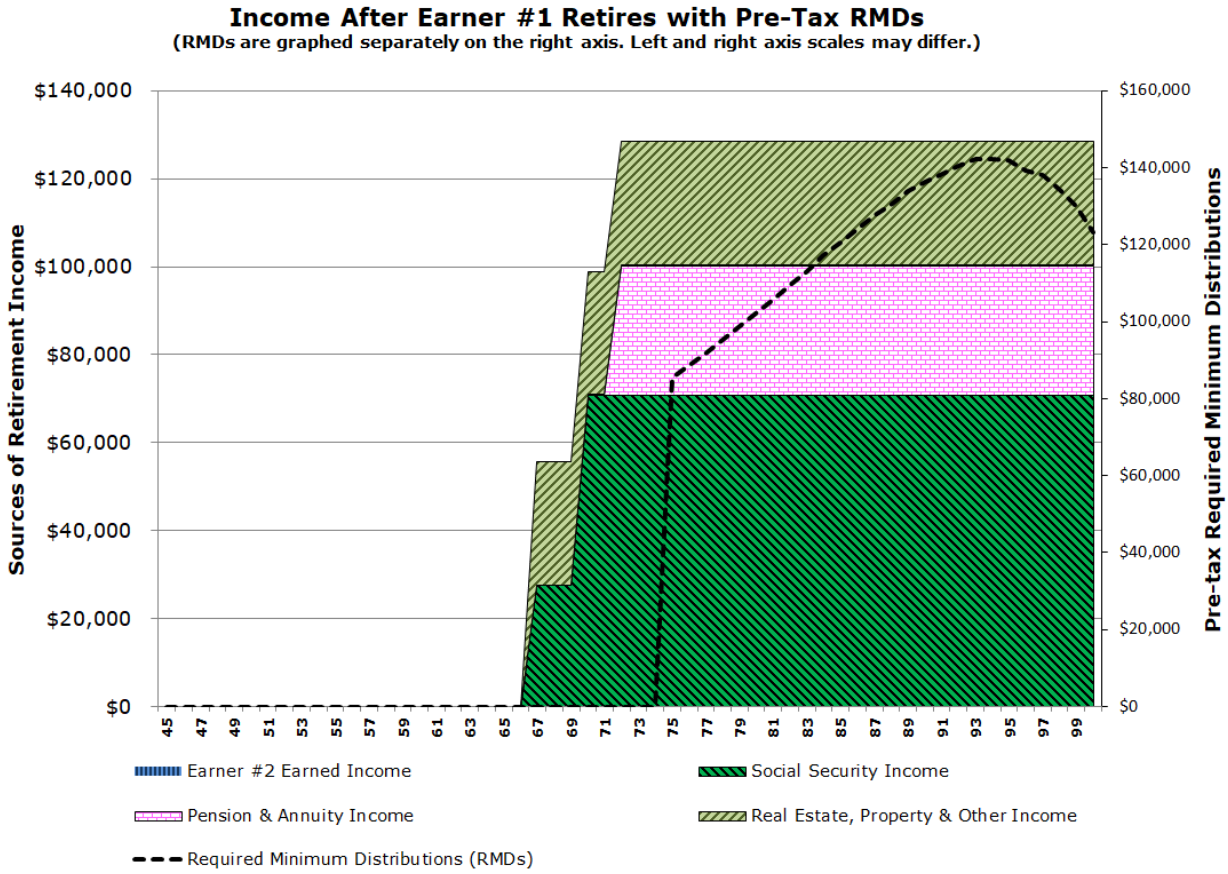
TRANSACTIONS graphic example



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.

15) RETIREMENT INCOME Graphic: Retirement income sources and pre-tax Required Minimum Distributions (RMDs) after Earner #1 retires

RETIREMENT INCOME graphic example



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, deferred compensation, and/or 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 73, these could be associated with inherited traditional retirement accounts. Alternatively, if the Earner #2 spouse is older than Earner #1, they could represent RMDs associated with the spouse's 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.

16) ASSET WITHDRAWALS Graphic

Withdrawal Rates from Cash, Bond & Stock Financial Assets

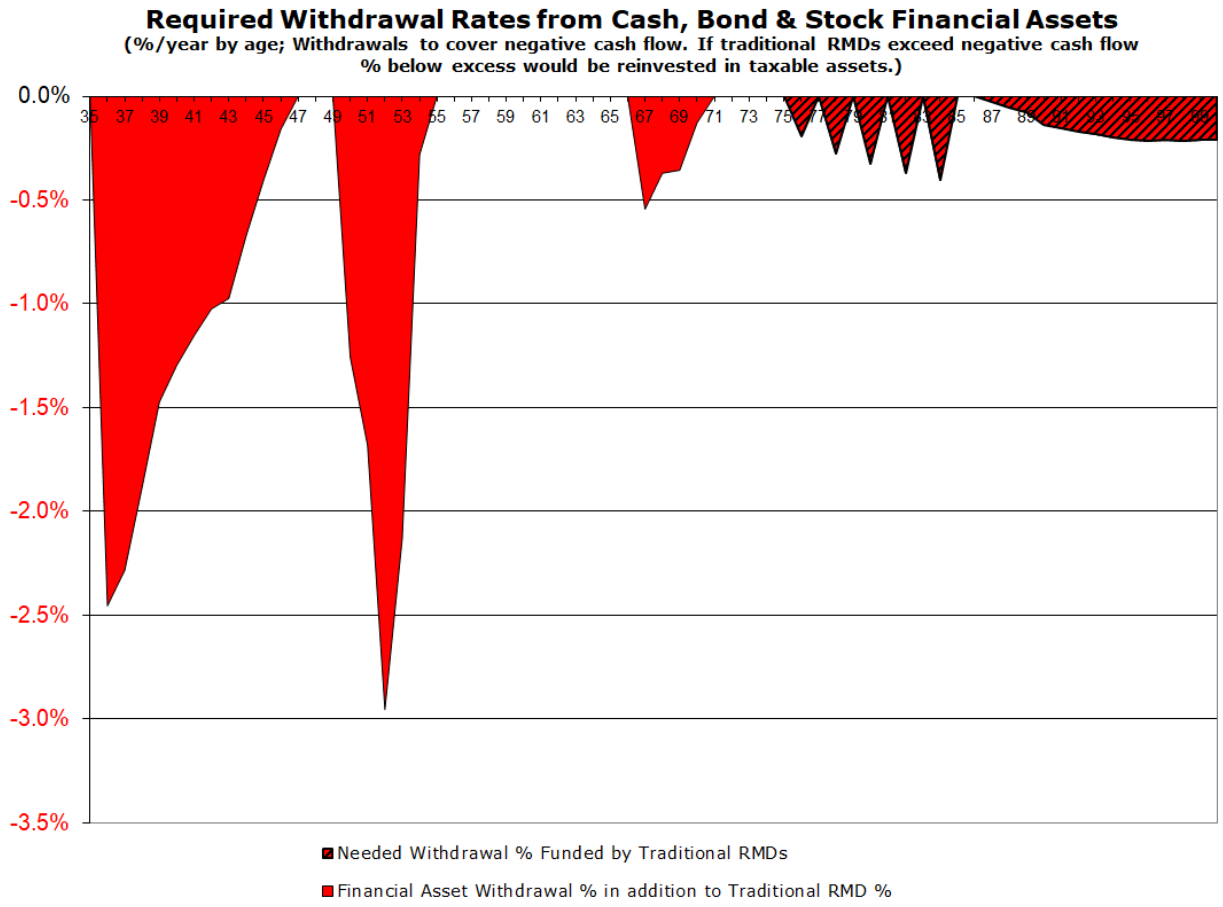
(%/year by age; Withdrawals for net cash flow shortfalls, RMDs, & associated taxes)

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 with 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.

17) RETIREMENT SHORTFALLS Graphic: Cash flow shortfalls after Earner #1 retires including RMDs

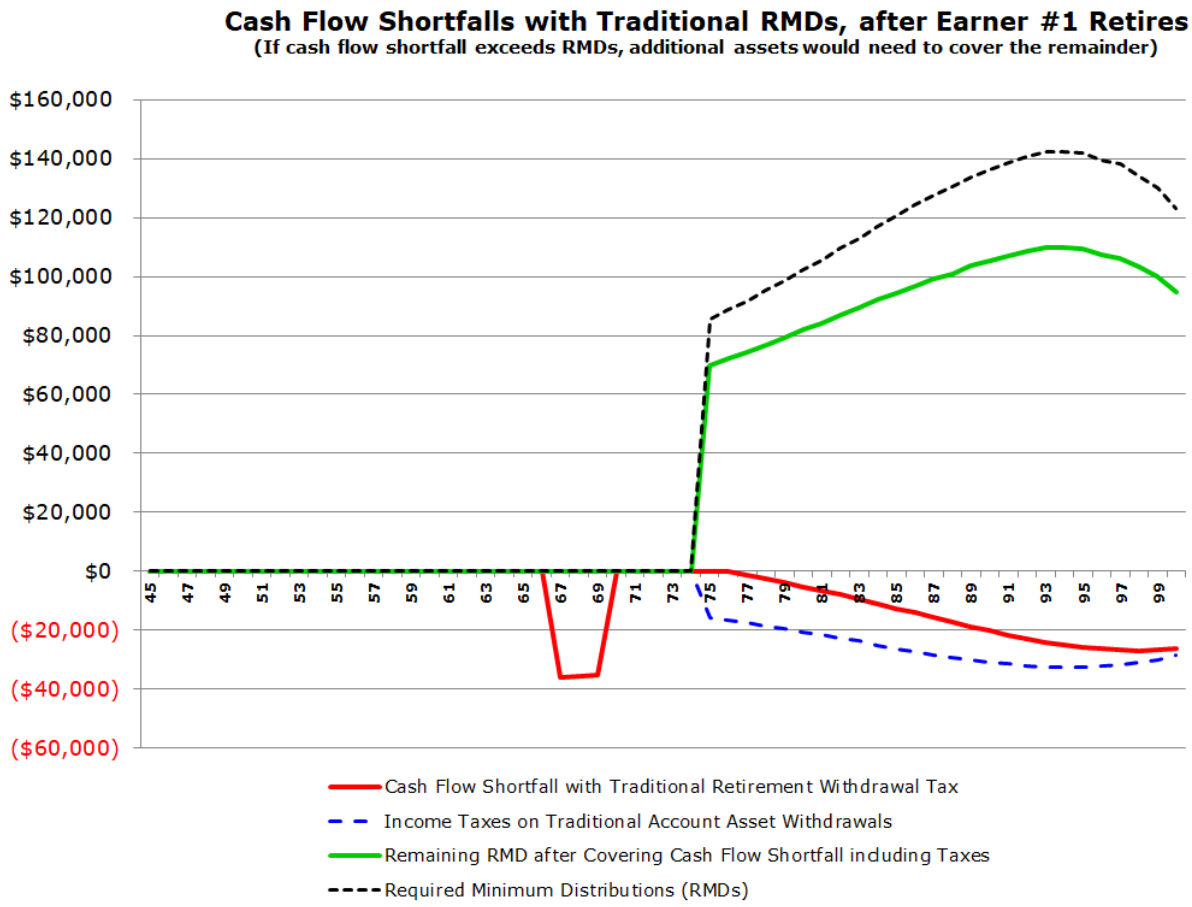
RETIREMENT SHORTFALLS graphic example

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.



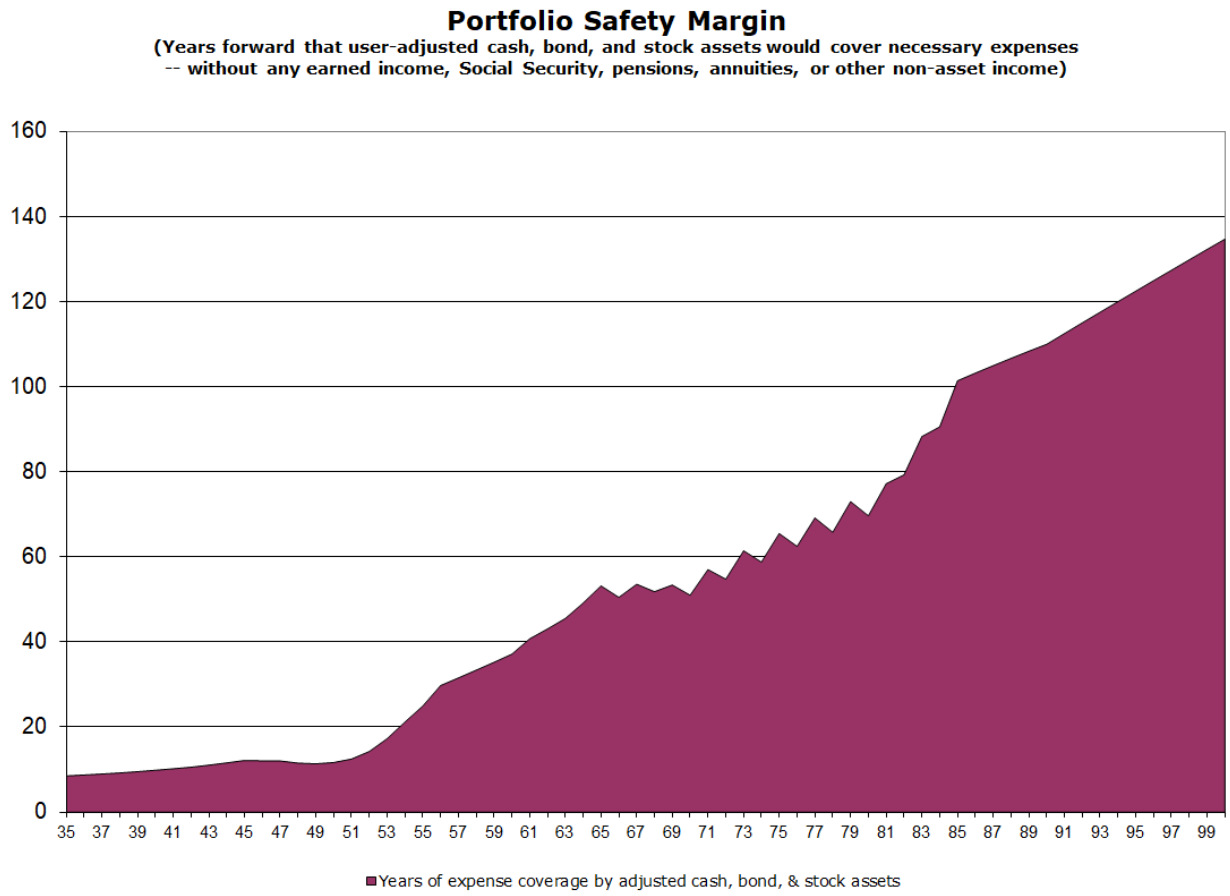
18) ASSET SAFETY MARGIN Graphic

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) VALUE OF TIME Graphic: Hourly wage equivalent value of income, expenses, and financial assets

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 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.

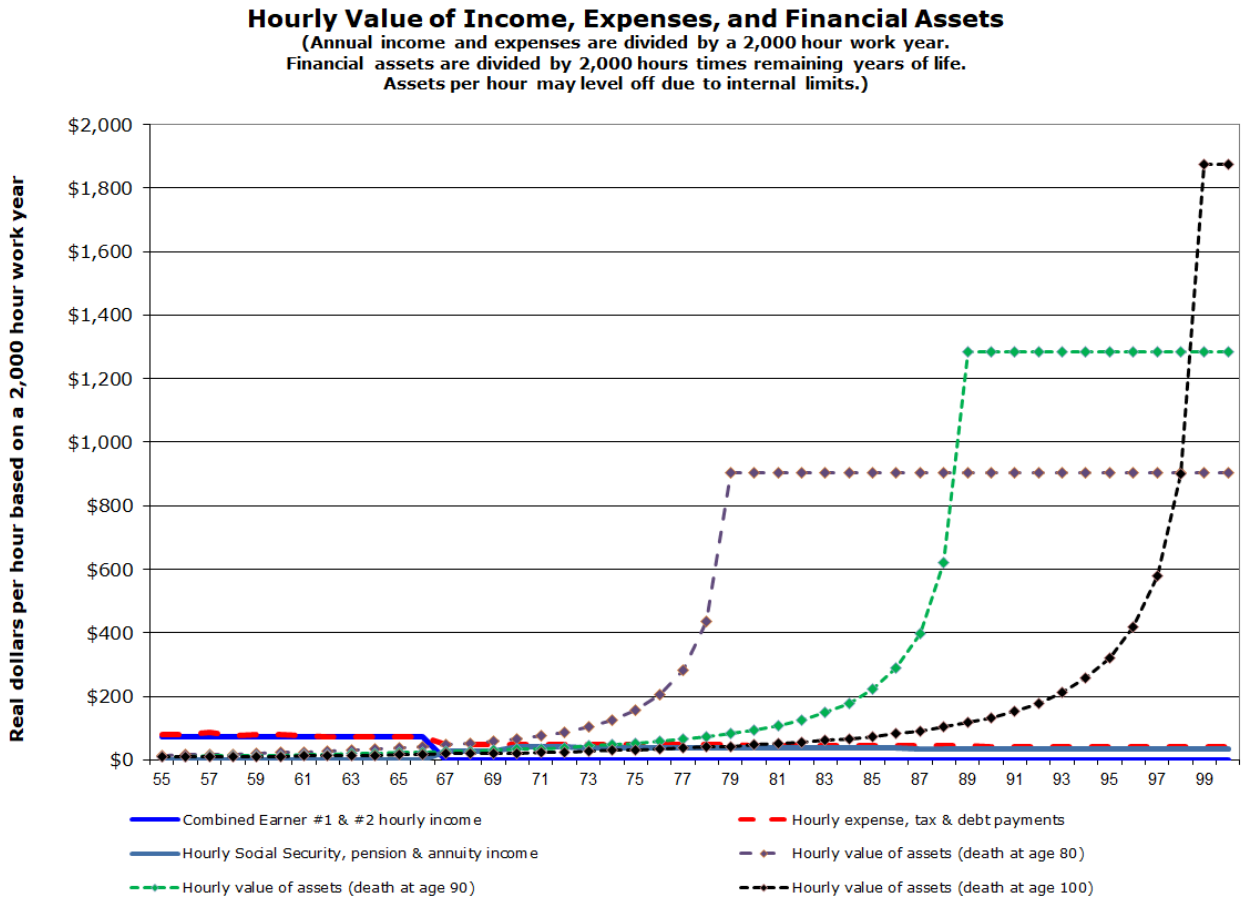
Because the earned income, retirement income, and expenses lines measure a single year, this is how they are calculated:

- 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



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

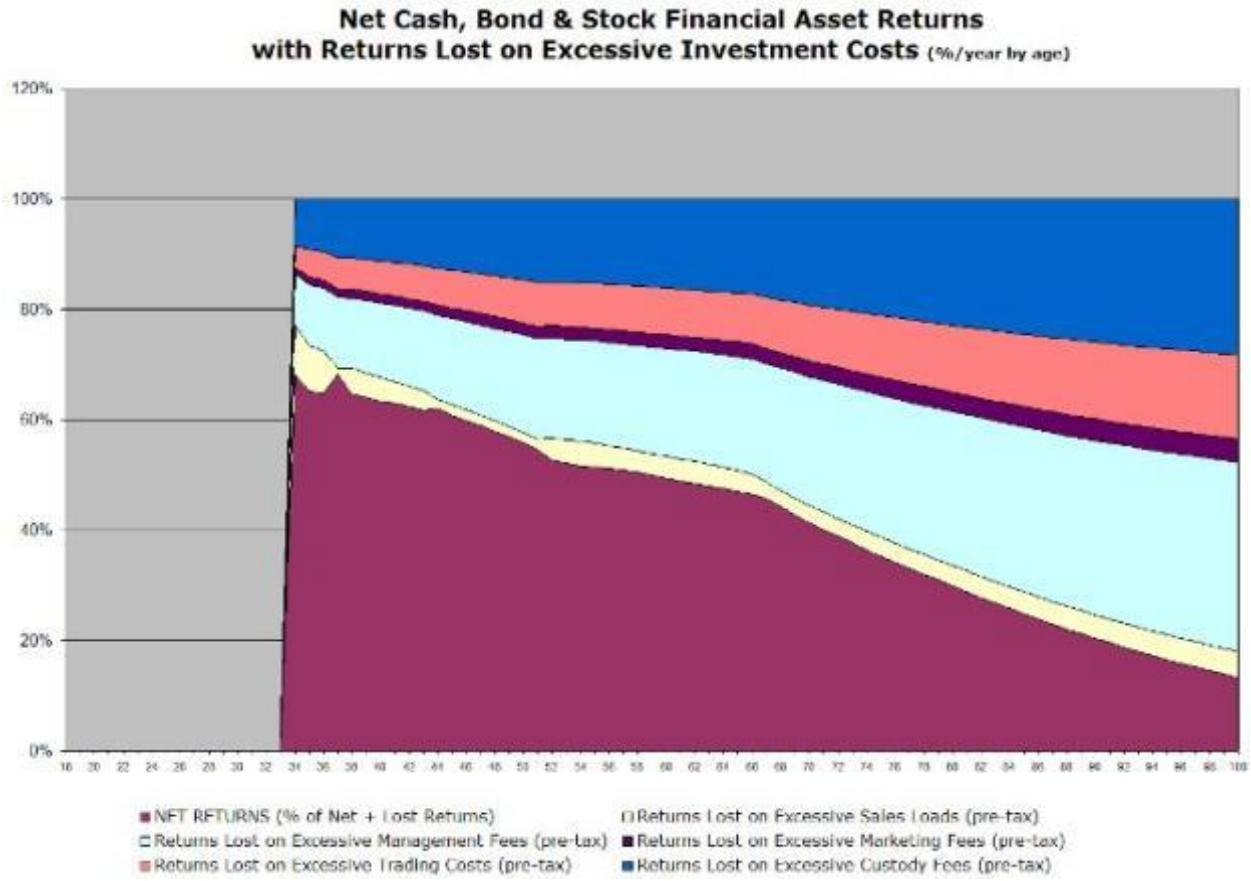
more cost-efficient strategy versus your projected asset returns and portfolio values with your current costs.

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.

21) COST-EFFICIENCY $ Graphic

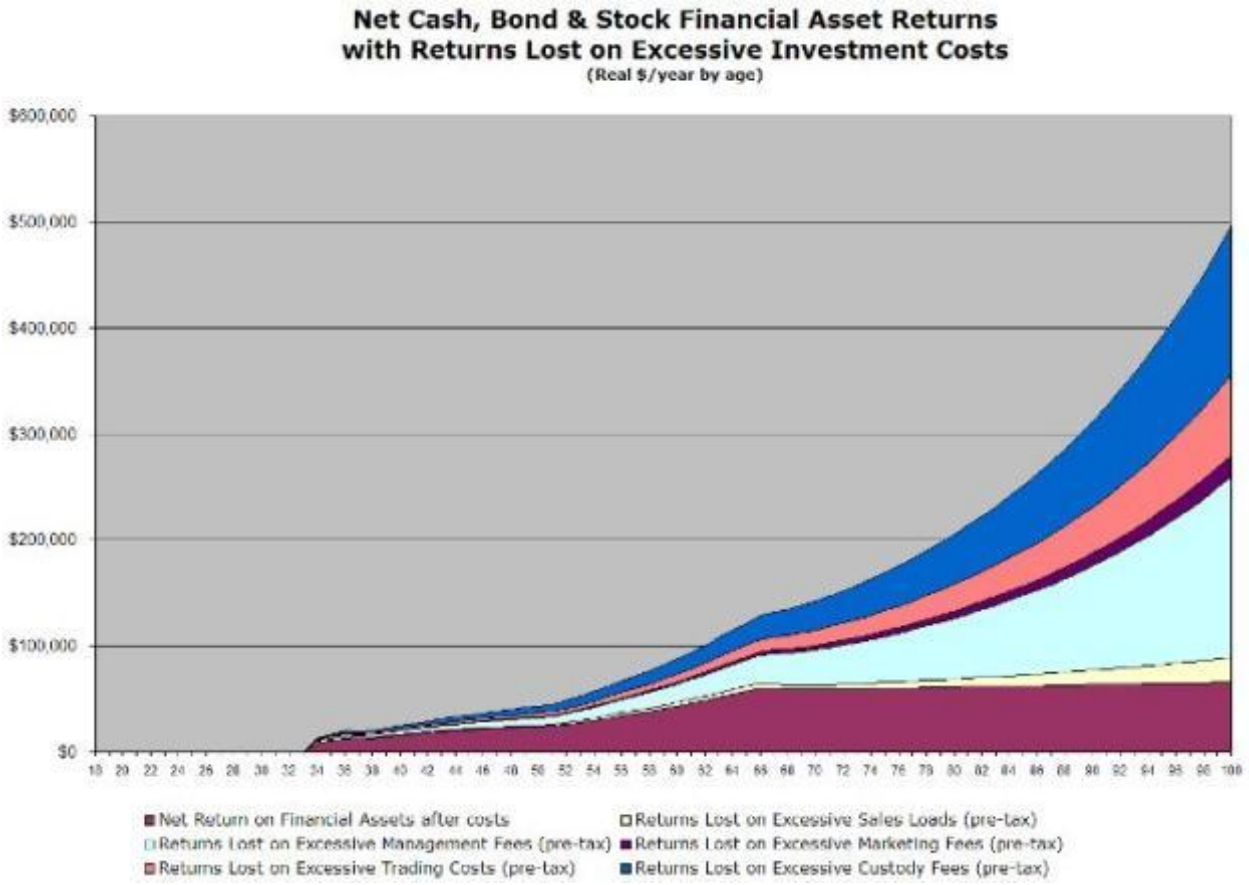
Net Cash, Bond & Stock Financial Asset Returns with Returns Lost on Excessive Investment Costs

(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.)



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.

22) SALES LOADS Graphic

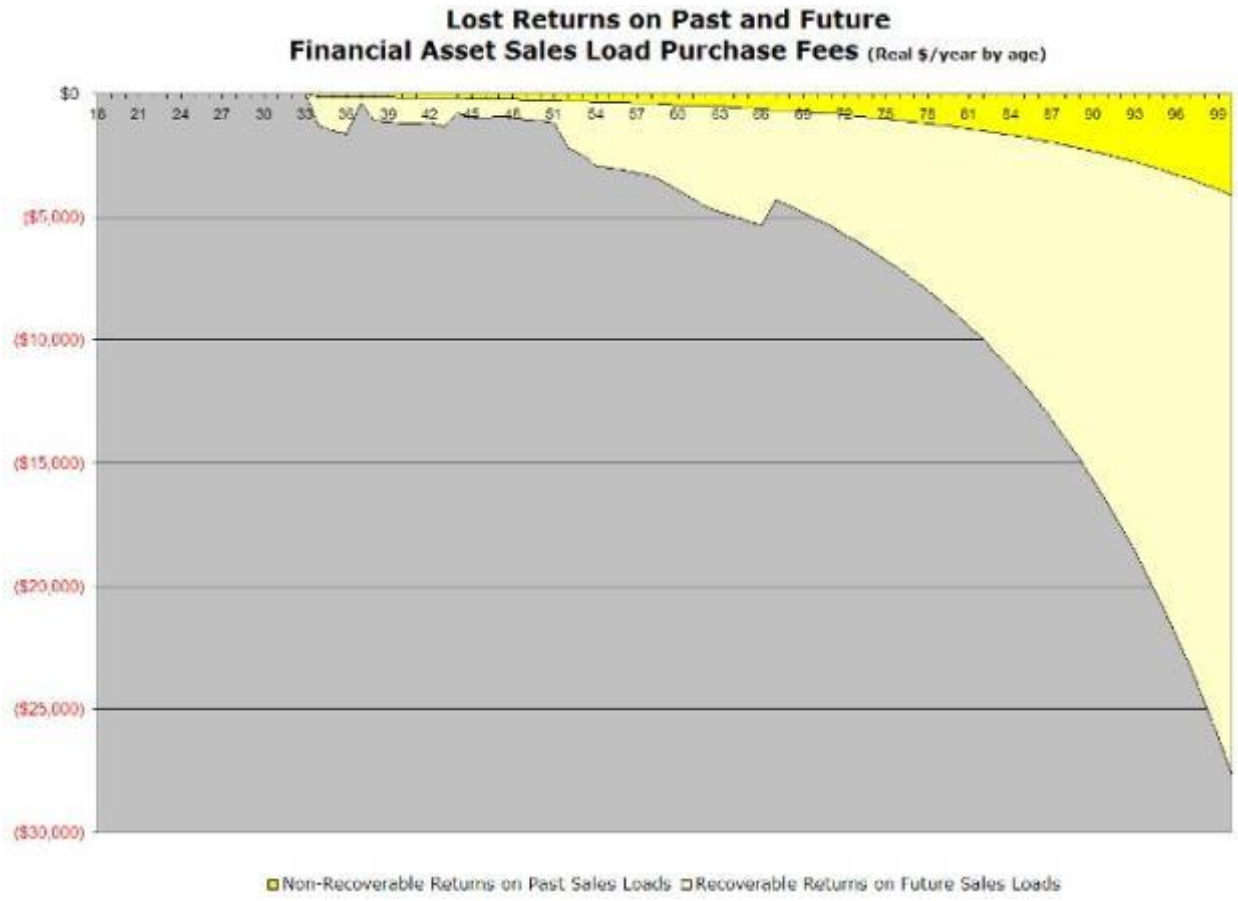
Lost Returns on Past and Future Financial Asset Sales Load Purchase Fees

(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

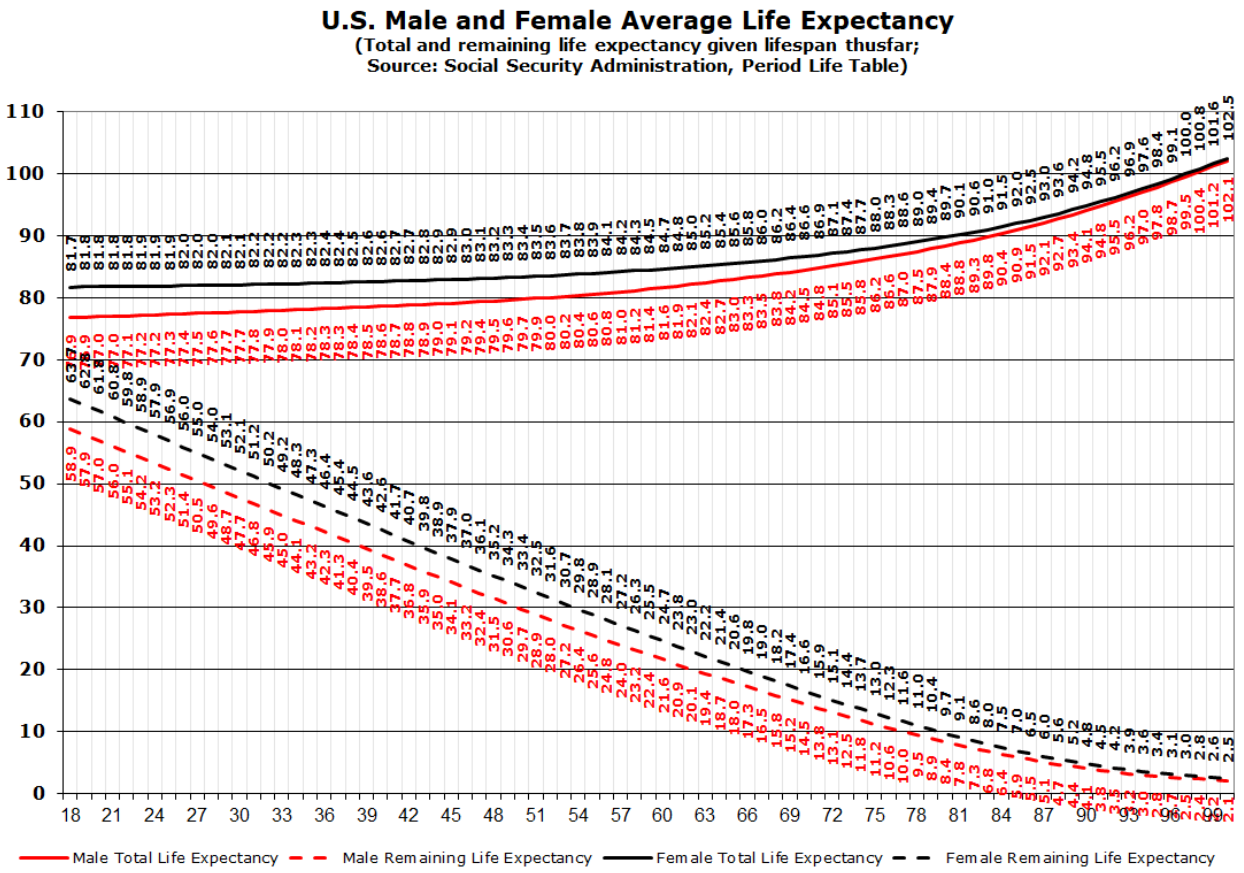
(This is the older style of this VeriPlan graphic. Because it represents the projection scenario described in the accompanying text, this older graphic has been retained.)



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.

23) LIFE EXPECTANCY: Average U.S. male and female total life expectancy and remaining life expectancy by current age

LIFE EXPECTANCY graphic example: (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)



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
- Total life expectancy of a male given one's current age on the X-axis
- Remaining life expectancy of a female given one's current age on the X-axis
- Remaining life expectancy of a male given one's current age on the X-axis

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 must be 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 Social Security Administration Trustee's Report.

24) HISTORICAL RETURNS Graphic

U.S. Financial Asset Class Returns and Inflation for 1928 to the most recent calendar 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.

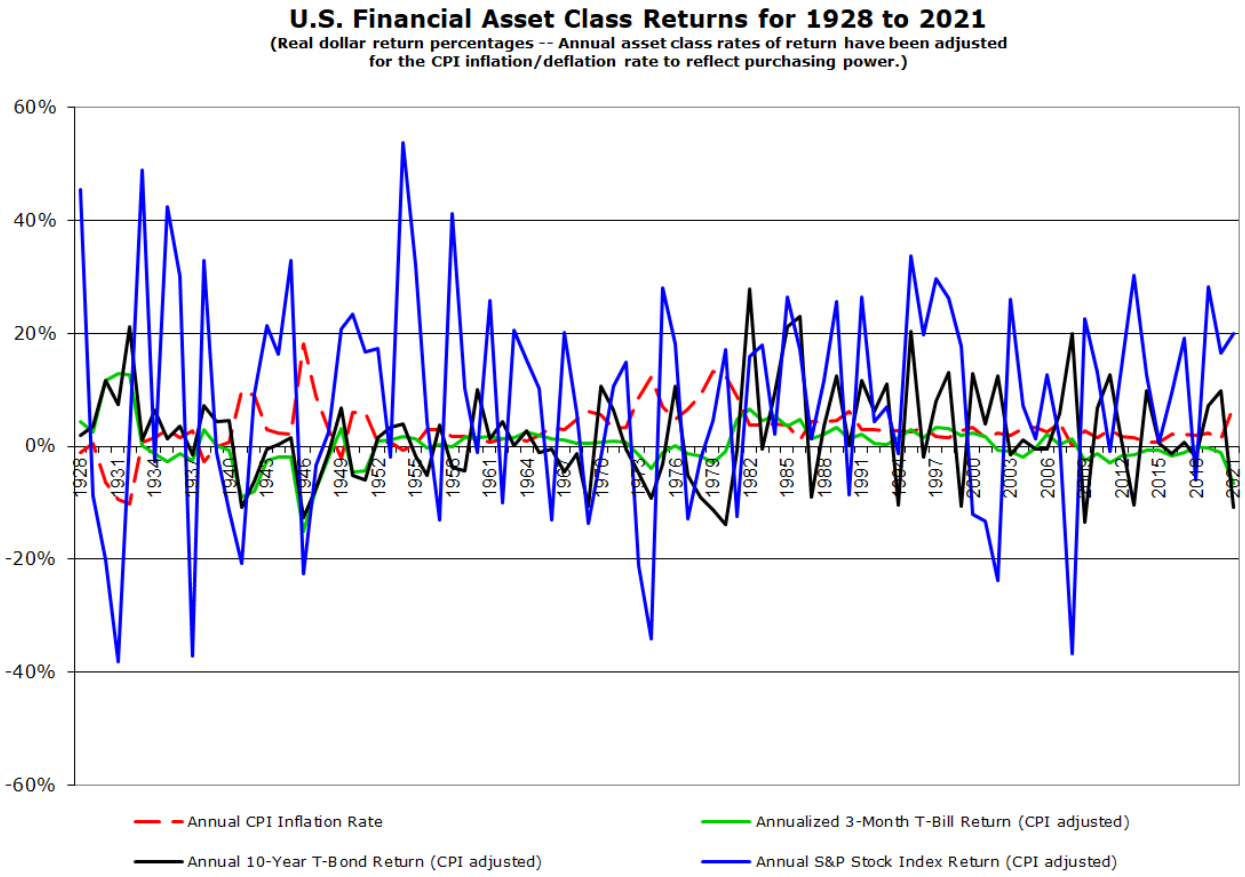
The HISTORICAL RETURNS graphic

This 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. Two versions of this graphic are provided:

A) annual real dollar returns by asset class from 1928 to the most recent year, and

B) the same data presented as a series of overlapping five year rolling returns.

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.



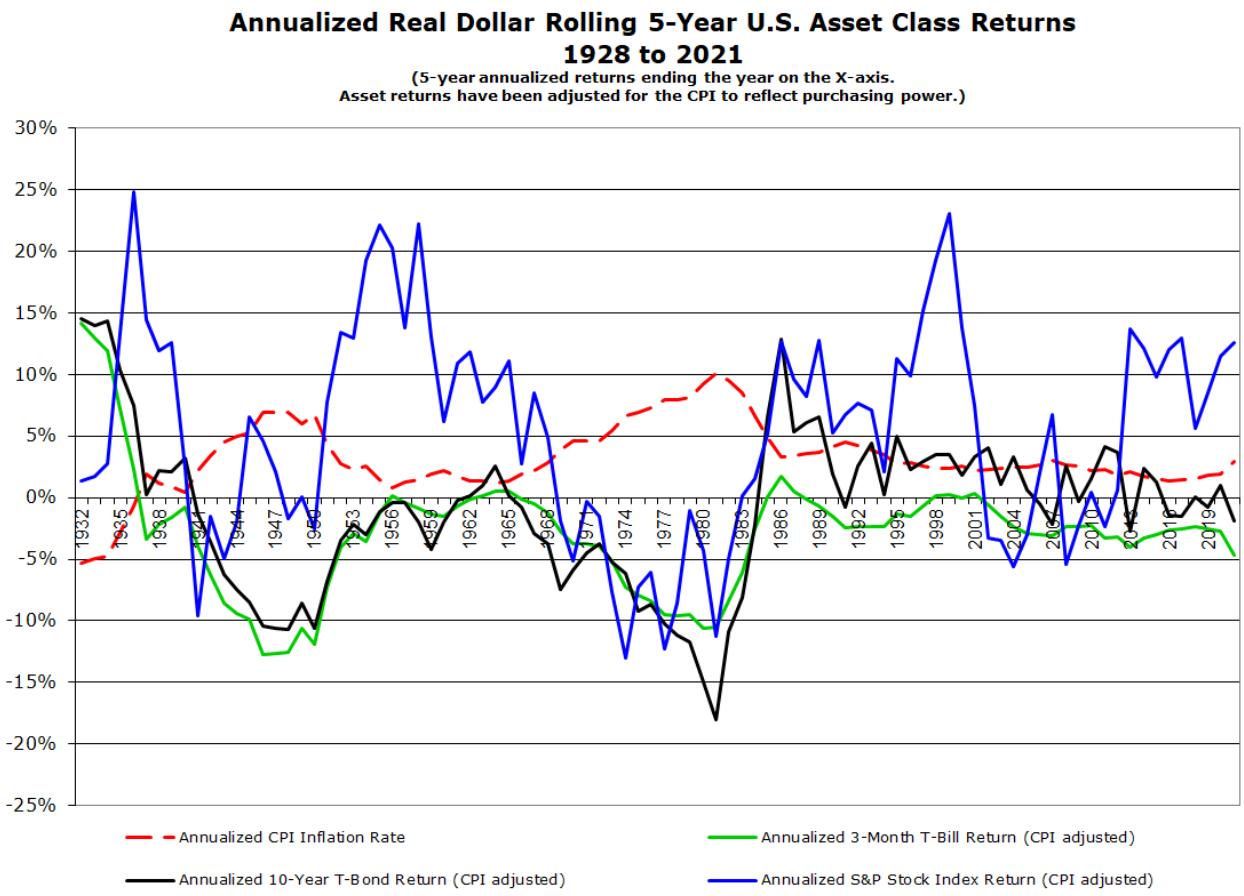
These historical US asset class total investment returns are provided for reference. Note that they are calendar year returns, including both interest or dividends and capital appreciation.

25) ROLLING RETURNS Graphic: Annualized rolling 5-year real dollar asset class returns and CPI inflation from 1928 to the most recent year

The ROLLING RETURNS graphic

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.



The best home and family financial planning software available

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

Appendix: Author's background

Lawrence (Larry) Russell is the author of this book. Since 2001, I have been President and Managing Director of Lawrence Russell and Company, a personal financial planning services provider and registered investment adviser in Pasadena, California. I am also a former technology industry business executive with a background in corporate business management, technology start-ups, financial modeling, investment management, economics, statistics, taxation, and accounting.

For my resume, see my LinkedIn profile page:

https://www.linkedin.com/in/larryrussell

To find my books and publications see:

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

Overview of my financial planning and investment management background

My knowledge of financial planning and investments has been developed through:

* education at M.I.T. (BS-1975), Brandeis University (MA-1979), and Stanford University (MBA-1982) [That's right. I'm getting older every day.]

* twenty-five years of corporate and start-up management experience in the business development, financial planning, corporate development, and investment functions
* studying the scientific finance research literature in depth to find evidence about which investment and financial planning strategies do and do not work
* design and development of VeriPlan, a lifetime financial planning software product

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 later 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, including external investments in private firms.

In 1999, I co-founded Codexa Corporation in Altadena, California with my friend and 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.

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 tech industry positions along with the haystack of other unemployed professionals in the wake of the dot com crash. Given the economy in 2001, I soon reached the conclusion that, however unwillingly, I must be retired – at least from the high tech industry – at the ripe old age of 50. In 2001, I established Lawrence Russell and Company, initially as a management consulting firm, and it later evolved into a financial planning services firm.

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, Thus, retiring at 50 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.

As I searched the web, university libraries, and on-line scholarly paper repositories, I was impressed by how much useful personal financial planning information was scattered around the academic world. It seemed to me that many individuals and families were starved for just this kind of objective financial and investment information. At the same time, people were drowning in a sea of self-interested securities and financial services industry sales pitches that pushed overly expensive and unnecessarily risky investment products.

After a year of 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.

Through this research, I reached these primary conclusions:

1) The financial research literature clearly demonstrates that the optimal investment strategy for individual investor is a completely passive and most broadly diversified strategy that cuts all investment fees, costs, taxes, and time commitments to the very bone.
2) Lifetime family financial planning should never be one-size fits all or even several sizes fit all. While there are commonalities, every family's current and intended future financial situation is unique and must be modeled to develop a customized and implementable long-term financial plan.

To make some of this academic finance information more accessible to the general public, in 2002, I began to write summary articles and publish them on the web. In the past decade+, I have published well over a thousand 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 also became convinced that I understood more efficient and scientifically verifiable pathways for individuals to optimize their financial planning and investment strategies. Furthermore, I 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-envelope calculations were generally useless when hundreds of personal income, expense, debt, tax, investment, and other factors unique to each family were in play.

In 2002, I had begun to design and develop a financial and investment planning spreadsheet for my own family. I got a bit carried away with this project. In 2003, designed the architecture for a fully automated, completely integrated, and highly customizable lifetime planning software tool build upon the Microsoft Excel spreadsheet engine. This software 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. Furthermore, 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 functionality of VeriPlan was complete and robust. Since 2007, I estimate that I have spent between 300 and 500 more hours annually working on VeriPlan. Over these twenty years of software development and enhancement, total cumulative hours are roughly 10,000. These hours of effort are an indication of how complex it is to develop a fully integrated, automated, and robust lifetime financial and investment planning application.

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, and perhaps most dismayingly, many of these computerized professional planning tools are largely 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 selection criteria.

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 decided 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, 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.

I refused to adopt the percent of assets advisory compensation model that is standard in the industry. I did not set out to “gather assets” to increase my fee revenue and live off of other people's hard-earned investment assets. Instead, I chose only to bill clients directly for services on a fixed fee for project and hourly basis.

Direct compensation paid by my clients is less lucrative than the commission or asset fee models that absolutely dominate the financial services industry. Direct income from clients paying reasonable fees combined with additional income from writing personal finance software, ebooks, and websites has been enough for me.

Furthermore, this is a far superior approach to compensation, because all these activities allow me to develop and implement the best financial practices for my clients and readers. In contrast, the commission or asset fee models dominating the financial services industry force almost every professional to spend an inordinate amount of their time hustling to attract very well-off clientele who already have substantial investment assets. All this hustling for new, wealthy clients leaves these advisors with much less time either to understand or to deliver high quality financial services in their client's best interests. In fact, this leads to a never-ending cycle, wherein most advisors charge their current clients far too much, while they spend much of their time chasing new clients who will in turn be charged too much.

Direct compensation from my clients and income from my financial planning books and software has been very liberating. I can tell my clients and the readers of my books exactly what the financial research shows. I can say and write what I think has been proven by sound academic research to be in the best interests of real people without giving any thought to my own interests. This is the very definition of the fiduciary care standard that financial advisors are supposed to use with respect to the primacy of the interests of their clients.

This approach is also allows me to help my clients and my readers get the myriad of financial industry hands out of their family wallets. Some people feel that they pay too much for financial services, but they keep paying anyway, because they do not understand that they have do-it-yourself alternatives. Most others have no idea of just how ghastly costly their relationship with the financial services industry will be over their lifetimes. This book can help you to

understand the huge costs that the financial industry imposes upon their "retail" clientele to the significant lifelong detriment of these retail clients.

When some of these retail clients finally get fed up with the self-interested greed of the financial industry, they must have an alternative way to do-it-themselves or they just become more frustrated. Just pointing out the problem is not enough. In place of the frustration, people need practical solutions that enable them to self-manage their own financial affairs. In reality, financial self-management is not very difficult, but it takes a commitment on your part both to understand what is better to do and then the sustained will to do it.

Over the past several years, I have developed financial planning and investment management materials and processes for my clients and to allow them to cut out unnecessary and vastly overpriced financial industry "services." My focus with my direct clients is to work cooperatively with them:

a) to develop a durable lifetime plan that they can implement themselves,

b) to increase their knowledge and competence in self-management, and

c) to supply them with sophisticated, yet easy-to-use software planning tools.

My clients can use this knowledge and these materials to implement their own plans without having to repeatedly pay more and more advisory fees and many other excessive financial costs year after year. In addition, to helping directly some of the do-it-yourselfers out there, I have spend thousands of hours over the past decade plus, making these materials available to the general public in the form of web articles, ebooks, and lifetime financial planning decision support software.

I have researched and written various objective books that can help you cut your investment expenses and increase your wealth. To learn more, click the book covers or go to this web page:

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

Notice: This financial information is for educational purposes.

This book provides financial information, and all information in this book is solely for informational and educational purposes. This book does not provide financial advice or investment advice of any kind. Under law, specific investment advice can only be dispensed to you by someone who is authorized to do so and who has an understanding of your particular financial situation.

This book attempts to provide information that focuses on the best interests of individuals and families. Fiduciary care of people's financial interests requires knowledge, experience, and the absence of financial conflicts of interest that distort the quality of information and advice given to people.

Global securities markets have a dog-eat-dog ethos with winners and losers. Highly competitive and ruthless securities markets are necessary for efficient price setting and capital allocation. I applaud when full-time financial professionals engage in competition among themselves with knowledge, resources, and skill.

However, when similar strategies are applied to individuals who lack knowledge, education, and resources, then this is just an unfair fight. When the inadequacies, ignorance, biases, and misperceptions of individuals are exploited systematically, this is deplorable. Unfortunately, this approach is standard operating procedure for many parts of the financial services industry.

When financial industry marketing and promotions imply that there is a partnership or advisory role, but actions taken indicate that this is not the case, then this is moral bankruptcy. When the financial industry is so strong that it distorts fairness in governmental regulation, then many deplorable behaviors are not criminal, largely because laws, regulations, and enforcement are too weak.

I believe that enlightened individuals should never naively expect fairness, when they deal with much of the financial services industry. Despite the financial industry’s recent self-induced credit crisis, self-immolation, and taxpayer bailout, there is no reason to believe that this industry will ever change voluntarily. The game is just too profitable for the financial services industry and its excessively compensated employees to expect things ever to change fundamentally.

The mass of American financial consumers are trusting, docile sheep regarding their personal financial affairs. The amount they are willing to waste on overpriced financial services

is astonishing. Far too many US consumers pay far too much and get woefully little value in return from the financial services industry. The industry repeatedly scrapes the consumer excess off the table and stuffs it into its salaries, bonuses, and corporate earnings reports. The only salvation for most individuals is that eventually some of them will wake up and decide to stop paying tribute to this beast.

Do not be naive about financial advisors. Figuratively, (and literally) they come in all shapes and sizes. In general, financial "advice" laws, regulations, and enforcement related to financial "advisors / advisers / planners" are weak and are riddled with loop holes. Survey's have clearly demonstrated very widespread consumer confusion about different types advisors and their responsibilities related to their clients. Caveat emptor or "let the buyer beware" is the reality related to all financial advisors, but far too many people are naive and trusting in the face of the complexity of finance.

It is a very bad idea to go into any advisory relationship assuming that the advisor will automatically have your best interests in mind and act solely for your benefit. If this were the reality, then the financial services industry would not be so very large and so very profitable. If the global financial services industry were to put the interests of their customer ahead of their shareholders, then the financial industry simply would not be one of the largest industries on earth.

Anyone with a bit more than a vague interest in the financial world around them grows up to understand that the capitalist business model and its associated self-interested profit motive predominates. Shareholders demand maximum returns on their invested capital. Capitalist enterprise executives, who are the agents of these shareholders, are tasked with maximizing shareholder returns. Incentive systems attempt to align manager and shareholder interests. When these self-interests conflict, sometimes the manager agent tail can wag the shareholder dog. Nevertheless, such agent and shareholder conflicts almost always are focused on how the maximum profit pie gets split and not on the "best interests" of customers.

Regarding the profit motive and the financial services industry, see this five-part article series that I published in 2007 prior to the financial crisis. It is entitled:

The Biggest Personal Finance Story of the Past 30 Years

https://www.theskilledinvestor.com/ss.item.270/the-biggest-personal-finance-story-of-the-past-30-years.html

I urge you to read this five-part article series -- before your hire any financial advisor and their firm.

Here are some highlights from what I wrote in this series of articles:

> "The biggest personal finance story of the past 30 years has been the dramatic growth of the market capitalization of financial services firms within the U.S. equity markets. ... The reason that this is so important to your personal finances is pretty straightforward. Simply put, most individuals pay far too much for financial products and services. Their continuing overpayments show up in the increasing value of financial services company stocks. People have paid far too much for years, and the industry's excessive charges have been increasing for years."
>
> "In return, individuals receive far too little. Exorbitant and increasing investment costs, high banking fees, predatory credit card charges, excessive insurance costs, etc. simply represent a massive wealth transfer from the personal pocket books of average individuals into the coffers of the financial services industry and into the high paychecks of its employees."
>
> "There is no reason to believe that industry self-regulation or governmental regulation will ever fix these conflict-of-interest problems. Only those individuals who become wise enough to be proactive and seek out lower cost financial products will stop getting fleeced. The vast majority or individuals will just keep on paying excessive costs to the financial industry, while they receive inadequate value in return. ... The choice is yours as to whether you want to keep pouring in your money or whether you want to adopt a lower cost personal finance strategy."

So, if you really do need financial or investment advice, you should hire a financial advisor, but you should do so with your eyes wide open to avoid getting fleeced. Understand and remember that advisors are expensive, yet some of them could be worth paying for. If you do not feel you can manage your finances entirely by yourself or you have particular needs that require professional expertise and advice, I suggest that you interview several advisors carefully.

Be proactive in looking for the right advisor and do not simply follow the lead of a friend who happens to recommend an advisor that they trust. While that recommended advisor might be fine, "trust referrals" are potentially problematic. Problems can arise, because along that chain of trusted recommendations, it is possible/probable that nobody really did any actual due diligence

that might have unveiled potential advisory problems. Some of the most pernicious advisor frauds and scams have been perpetrated against religious and other affiliated groups that have been infiltrated by fraudsters who gained the trust of few members and then widely expanded their network of fraud through trusting referrals.

When a family member, friend, or co-worker makes a recommendation of a financial adviser, that could be a good start. However, that recommendation does not absolve you of your personal responsibility to do your own due diligence. Before you start to trust that this advisor and commit your hard-earned money, check out the advisor and decide for yourself whether he really will take care of you and your family and will always put your interests ahead of his and his firm's interests.

I have published a set of almost 40 articles about financial advisor selection, regulation, payment, frauds, and scams. These articles might be helpful in your search, and you can find here:

https://www.theskilledinvestor.com/financial/financial-advisors-investment-counselors.html

Read and understand these web articles and this book. An advisor acting in your best interests would tend to follow the investment principles that I discussed in my books and my web articles. I never change my fundamental financial planning and investment principles. That is the whole point about developing lifetime financial principles. Financial principals should valid, research based, and durable to navigate an uncertain and unpredictable future.

I strongly suggest that you choose an advisor whom you pay directly. Furthermore, choose an advisor who does not accept compensation from the industry in any form. Seemingly free financial advice can cost you very dearly over your lifetime. Never lose sight of the stark fact that throughout your life you are a walking, breathing financial industry profit center.

So to summarize: This book DOES NOT constitute or provide personalized financial planning advice, personalized investment advice, or any other kind of personalized financial advice under the laws and regulations of the United States of America and its various States or of any other country in the world. In no way does this book constitute a solicitation or offer to sell investment securities, investment advisory services, financial planning services, or any other kind of financial service as defined under any financial or securities law anywhere in the world.

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