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

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Overview: 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. Industry rules-of-thumb often state that 15 to 30 stocks are enough for a well-diversified portfolio. This can be very misleading.Recent studies point out that industry rules-of-thumb on the number of stocks needed for a well-diversified portfolio are simply not adequate. These rules-of-thumb most often state that 15 to 30 stocks are enough. “The Truth About Diversification by the Numbers” by Ronald J. Surz and Mitchell Price of Roxbury Capital Management is an insightful study on the “how many stocks” question.1 (See: Can a limited number of equities provide complete portfolio diversification?) To determine the number of stocks required to achieve a desired level of portfolio diversification, Surz and Price computed all possible combinations of NYSE and NASD traded stock portfolios of various sizes for the 1986 to 1999 period. They argued that a diversification rule-of-thumb commonly used in investment management – that 30 randomly chosen stocks will achieve 95% of diversification – is inadequate. Using tests of statistical significance and market tracking error, Surz and Price found that the number of stocks required to achieve diversification is much higher than commonly thought. Surz and Price found that the average randomly chosen 30-stock portfolio achieved only about 85% of possible diversification. A 60-stock portfolio achieved about 88% of possible diversification. Using computer optimization techniques and favoring large capitalization stocks both helped to improve portfolio diversification, when compared with randomly selected portfolios. Price volatility at the individual common stock level has increased substantially in recent years. This factor and the fact that the correlation of price volatility between individual stocks has also declined, means that significantly increased numbers of stocks are required to achieve diversification. The number of stocks required is very large, and this makes index mutual fund and exchange-traded fund investment alternatives increasingly appealing. (See: Why is diversification valuable to individual investors?) Properly selecting and managing a personal stock portfolio is not a casual affair. The individual investor who intends to self-assemble a well-diversified portfolio with a relatively large number of equities has a huge challenge. Personal time commitments, financial analysis skill/experience, relative costs versus mutual funds, and the availability, quality, and cost of financial information remain significant issues for the do-it-yourselfer. For those who rely on full-service brokers for advice, very important additional considerations are additional broker fees and whether the broker even believes that maintaining a well-diversified portfolio is important just as long as you keep trading and generating commissions. The advisability of portfolio self-management should always be considered in the light of the index mutual fund and index ETF alternatives. To keep purchasing individual securities, when the alternative of investing in passively managed (or even actively managed) mutual funds is available, requires some rational personal economic advantage to portfolio self-assembly. Frankly, *The Skilled Investor* has not yet found any good reason for individual investors to own individual stock or bond securities versus holding mutual funds or exchange-traded funds. Certain reasons are sometimes advocated as a rationale for individuals to hold individual securities versus funds. None seems to be valid in the light of the scientific investment literature. Some investors believe that they can pick winners and beat-the-market, but the evidence is overwhelming that this is a flawed strategy for individuals. (See: What is the cost to individual investors of sub-optimal portfolio diversification?) It is sometimes suggested that individual investors can better control capital gains tax realization through individual securities.However, financial studies show that most individual investors do not manage taxes well. Self-managed individual investors recognize capital gains without recognizing capital losses. They tend to sell winning stock too soon and hold their losers far too long. On the contrary, a passive index mutual fund or exchange traded fund strategy tends to be far more tax efficient. Not only does investment portfolio self-management require skill, it takes significant time. The vast majority of individual investors will not beat a passive index return despite all the time they spend. Self-directed investor can spend large amounts of personal time very ineffectively. When the opportunity cost of the time they spend is taken into consideration, then their personal economic losses widen. Just as the average actively-managed professional mutual fund manager does not return even half of his added fees and costs through sufficiently improved investment performance, neither does the average individual investor. (See: The value and opportunity cost of your time) By focusing on the number of stocks or bonds in a self-managed investment portfolio, an individual investor really is paying attention to the wrong thing. The bottom line is that individuals should fire themselves as portfolio managers to achieve better risk-adjusted returns. In addition, instead of hiring expensive professionals to attempt active strategies that tend not to work, they should instead hire only very low-cost index fund managers and very low cost ETF managers who focus on tracking market benchmarks and keeping costs and taxes to the bare minimum.1) Ronald J. Surz and Mitchell Price. “The Truth About Diversification by the Numbers.” Journal of Investing, Winter 2000: 1-3

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