

Investment Policy Matters!!

Constructing a Retiree Portfolio With the Highest Probability of Success

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Retiree accounts do not vaporize in a vacuum. Absent a nuclear exchange or catastrophic failure of the world's financial markets, retirees following well-defined prudent investment practices should expect that their portfolio will last as long as they do.

Prudent investment practices are embedded in ERISA, the Uniform Prudent Investment Act, Management of Public Employees Retirement System (MPERS), Common Law, Restatement of Trusts, and implied under NASD suitability standards.

Any person in a position of trust that invests funds for another is a fiduciary and owes the beneficiary both prudence and loyalty. While investment advisors are clearly fiduciaries, stock brokers providing advice other than "purely incidental" to the sale of a security may also be deemed fiduciaries and held to the same standards of care.

Standards of care are no mystery. They are widely known and are virtually uniform across the various acts. For instance, a concise outline of the standards of care is contained in *Prudent Investment Practices* published by the Center for Fiduciary Studies of the University of Pittsburg and edited by the AICPA.

Because no one can predict the future, and no one can guarantee a particular result, we judge the prudence of the investment strategy recommended, not the outcome. A prudent investment

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Frank has over 30 years experience in the securities and financial services industry. He holds a B.A. in Economics from the University of Virginia and is a CERTIFIED FINANCIAL PLANNER® practitioner and Accredited Investment Fiduciary (AIF). His best selling book *The Informed Investor* was cited by Business Week as one of the best investment books of 2002. His first publication, *Investment Strategies for the 21st Century*, is one of the first books ever published and serialized on the internet in multiple languages.

Frank Armstrong was also a featured columnist on Morningstar.com for a number of years and is a frequent contributor to CNNfn.com, AccountsWorld.com, and Fundsinteractive.com. He has also appeared on "CNN Headline News", "Your Money with Stewart Varney", "PBS Morning Business Report", and Net Financial News. He has also been featured on numerous radio shows around the country including CNBC, Money Life with Chuck Jaffee, and Public Radio stations around the country. Frank is widely quoted in the media and lectures nationwide on principles of investment management.

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strategy is no guarantee of excess returns, or even positive returns. But, implied in the various fiduciary statutes is the concept that prudent practice will lead to positive returns over time.

Imprudent investment strategies may occasionally produce exceptional returns. Certainly bad strategies are less apparent in bull markets. After all, a rising tide carries almost all ships. Positive returns, however, do not equate to a prudent investment strategy. If I take your family fortune to Las Vegas, place it all on the red and win, am I a genius? Would a prudent man endorse the process? Have I met my fiduciary obligations? Was my investment policy suitable? Whenever failures in an investment portfolio occur, they can invariably be traced to lapses of prudence or loyalty. Failures tend to cluster around bear markets where the lack of prudence is more readily apparent.

A prudent investment process starts with a well-defined investment policy. This policy should be agreed to by both the client and investment advisor and reduced to writing. The Investment Policy Statement (IPS) becomes the business plan for the account and should contain sufficient detail for a third-party to administer if necessary. An IPS is required of all fiduciaries, but is an essential first step for even do-in-yourself investors.

Modern investment practice is about managing risk at the portfolio level. No single investment should be judged in isolation; rather we must evaluate its impact on the portfolio. Even risky investments have a place in a properly designed conservative portfolio. This is not an argument, however, for simply throwing any investment into the mix. Each investment in the portfolio must be selected after a comprehensive due diligence effort, and must be reasonably expected to improve the efficiency of the account at the portfolio level. Minimum documentation for each investment should include expected rate of return, risk, correlation to other assets in the portfolio and impact on the portfolio's modeled risk-reward characteristics. Both capital market assumptions and portfolio modeling should be included in the IPS.

Sustainable Withdrawal Rates

For an investor who relies on an investment portfolio to generate immediate income, withdrawal rate is probably the most important variable of their investment policy.

The traditional financial planning assumption about retirement income generation goes something like this: The investor will make 10% on average, withdraw 6% per year, each year the account balance and income will grow by an average of 4%, the investor will die rich, and his children will receive a windfall. This sounds wonderful in theory, but experience and academic analysis has established that it's a bust in the real world.

The fatal problem with the traditional assumption is that it conveniently ignores the variability of returns in the real world facing the retiree. Past experience has shown that projecting average returns forward in a straight line is totally inappropriate. Average returns count for nothing if a

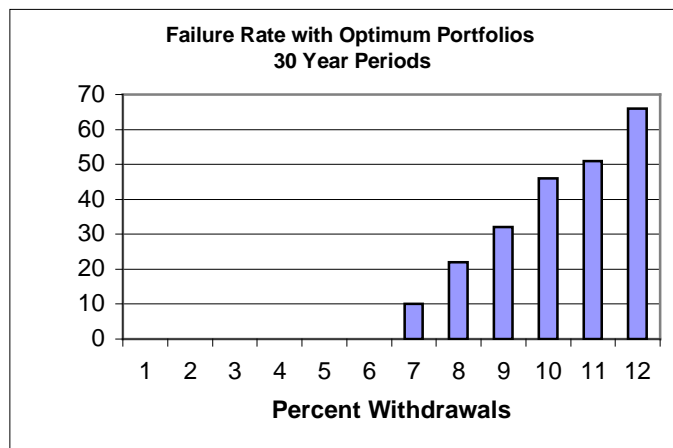
client's retirement precedes a period like the Depression, 1973-1974² or 2000-2002 in which a retiree's nest egg stood a high chance of self-liquidating.

The real world is much more complicated and risky than an "average" return might indicate. Brokers who pretend otherwise are, at the least, of doubtful competence.

A Pioneering Study

In 1998, three business professors from Trinity University of Texas, Philip L. Cooley, Carl M. Hubbard and Daniel T. Walz, published an influential paper: "Retirement Savings: Choosing a Withdrawal Rate That Is Sustainable".³ The professors employed historical back testing to demonstrate the relationship between withdrawal rates, time horizon, and asset allocation. The results reveal that portfolio "failure rates" (by which the authors mean running out of money before the end of the 30 year period) are directly related to time horizon and withdrawal rates, and influenced by asset allocation.

Using the S&P 500 and bonds in various combinations over varying time periods commencing in 1926, the study tracked failure rates against withdrawal amounts. Even in the best possible case where there were no taxes, no expenses or transaction fees, and the optimum portfolio was known in advance, significant failure rates occurred above 6%.



The Cooley, Hubbard, Walz study highlights the need for conservative withdrawal rates, and by implication the need to accumulate liberal amounts of capital to fund a comfortable retirement. Historical back testing is a useful tool and provides a powerful "sanity check". Like any modeling tool, it has limitations. Unless past results will re-occur in exactly the same sequence the expected return will not be as robust as anticipated. For instance, running the sequence backwards or any other re-shuffling will result in entirely different results. Furthermore, historical back testing leaves us with no simple method to vary either rates of return or volatility in the sample set.

New and more powerful modeling tools confirm these principles and add additional insight, but do not replace the need for very conservative assumptions if the retiree wishes to have a high probability of success.

² If a worker had retired in 1972 with \$500,000, invested in stocks and withdrawn 8% per year, owing to the 50% decline in the market in 1973-1974 and the aggressive withdrawal rate, by the end of 1974, he would have lost over 60% of his principal.

³ "Retirement Savings: Choosing a Withdrawal Rate That is Sustainable", by Philip L. Cooley, Carl M. Hubbard, and Daniel T. Walz, February 1998.

The fact remains that the highest risk factor a retiree faces (and the only decision directly under his control) is the withdrawal rate.

Recognizing the Effect of Volatility

Monte Carlo simulation and today's powerful spreadsheet applications give us far more insight into the problem, and point out some additional solutions that would not have been possible with historical back testing.

Simply put, a Monte Carlo simulation utilizes random draws of numbers from pools constructed with specified rates of return and volatility (risk). Much like a lottery, it builds a pool of numbers and pull them out at random to construct a single test. The process is then repeated 1000 or 10,000 times and the results are summarized. The summary provides a quantitative estimate of the range and distribution of the possible returns. By varying the construction of the pools of numbers we can examine different strategies to see which ones give a higher probability of success.

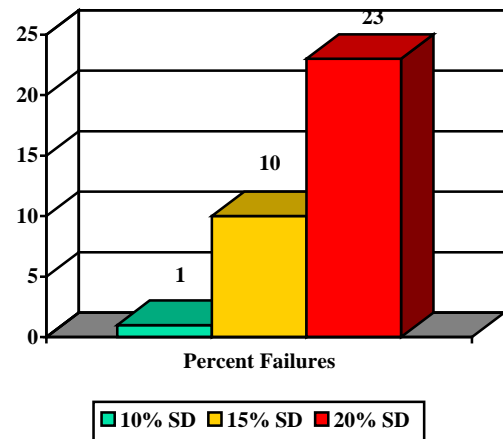
To demonstrate the effects of volatility, three tests could be conducted using a pool of numbers with a 10% rate of return but a standard deviation of 10%, 15%, and 20%, and a withdrawal rate of 6% per year. At 30 years only 1% of trials fail at 10%, but 23% fail at a standard deviation of 20%. Failure rates soar with the higher volatility!

The simulation reveals a clear link between volatility and survival of the portfolio at any given time horizon. Therefore, any action taken to reduce portfolio volatility (given the same rate of return and withdrawal rates) will significantly enhance the chance that a retiree's nest egg will survive.

Totally Skewed

In the traditional analysis referred to above, it would appear that half of all trials would result in greater than expected returns, and half less. But, it's worse than that. The only case where each trial yields the average result occurs where there is no portfolio volatility. In that special case, every trial survives and gets the identical result.

With volatility, outcomes become skewed. Even though we obtain the expected rate of return across the sample was obtained, the median return was less than the average. The higher the volatility, the greater the sample becomes skewed at any time horizon. As the number of failures goes up, the number of extraordinary results also goes up. A small number of players obtain much higher than expected results, while a large number of players' portfolios either fail or obtain lower than expected results.



For example, suppose we expect a terminal value of \$100,000 for a particular withdrawal rate, rate of return and time horizon. If one result yields \$1,000,000, and nine results yield \$0 at some particular risk level, we have achieved our average return. But, nine of ten retirees are broke!

Monte Carlo analysis generally confirms the historical back testing of Cooley, Hubbard and Waltz. Even with moderate volatility, high withdrawal rates lead to high portfolio failure rates.

Constructing the Asset Allocation

Every step of the investment policy must support the retiree's objectives. The ideal policy will support the required withdrawal rate while maximizing the probability of success.

The first problem that faces the retiree is that "guaranteed" investment products are unlikely to provide sufficient total return to meet his reasonable needs. Meanwhile, equities are far too volatile to provide a reliable income stream. A compromise must be reached. A combination of stocks and bonds will probably best meet the needs.

Because at least part of the portfolio will be volatile, the question of risk management moves to the forefront. Our first step is to construct a "two bucket" portfolio, or a portfolio that balances the need for long-term growth with adequate liquidity to withstand market downturns.

Bucket One - Adequate Liquid Reserves

Investment policy that does not provide adequate liquidity to account for down market periods ideally positions the retiree to witness the self-liquidation of his portfolio at the first market dip. Many of the dramatic portfolio failures of 1973-1974, 1987-1991 and 2000-2002 can be traced to a simple lack of liquidity.

Market downturns are an unpleasant fact of life, which can be excruciatingly long and stressful for retirees. Three years can seem like forever as portfolios shrink due to a combination of market decline and withdrawals. This problem is especially acute where downturns occur shortly after retirement. Because market downturns are random, and because the retiree only has one draw in the game of life, the portfolio must be designed to anticipate down market experience beginning on day one.

Recognizing that equity investments are too volatile to support even moderate withdrawal rates safely, investors must temper their portfolios with a near riskless asset that will lower the volatility at the portfolio level and be available to fund withdrawals during down market conditions. As a minimum liquidity requirement, high quality, short-term bonds are typically sufficient to cover seven to ten years of cash flow needs from the portfolio at the beginning of retirement.

While it is tempting to chase higher yields with longer duration or lower quality issues, past experience indicates that the enormous increase in risk swamps the small additional yield benefit. In a portfolio with longer duration low quality bonds, rising interest rates will devastate capital. This additional risk is not rewarded by higher total returns over the market cycle.

As an example of portfolio construction that provides adequate liquidity, if you expected to draw down 5% of your capital each year for income needs you might want to have 35-50% in fixed investments. That way if the market takes a dive, (as it probably will sometime during retirement), the retiree will have plenty of time for it to recover. Meanwhile the retiree can draw down the bonds without market loss. This investment strategy protects the growth assets during market declines.

Bucket Two – World Equity Market Basket

Long experience backed by modern financial theory suggests that a good starting point for the equity portfolio is the world market index. Under Capital Asset Pricing Model (CAP-M) this is the point that should produce the highest return per unit of risk. In fact, this portfolio is dramatically lower in risk than a domestic only portfolio without sacrificing return.

An investment policy of global diversification recognizes the impact of volatility and employs standard portfolio construction concepts to reduce it. Modern Portfolio Theory techniques include utilization of multiple asset classes with low correlations to one another. Low risk (low volatility) portfolios have a much higher chance of survival than higher risk portfolios.

Investors are systematically compensated for bearing market, size and value risk, nothing else. Diversification is the primary investor defense, and the best way to lower risk. Said another way, the investor's chief goal should be to ruthlessly eliminate any uncompensated risk. Given that the investor gives up nothing in the way of expected return by diversifying away all individual security, industry, or country risk it is amazing that everyone doesn't carry this policy to its logical conclusion.

Further refinement is possible. For example, an effective portfolio might contain nine distinct global equity asset classes, over weighted in small and value stocks to increase expected returns while diversifying into dissimilar asset classes. Each of these asset classes has high-expected returns at tolerable risk levels and relatively low correlation to each other.

The portfolio can further diversify an equity position by including defined weights in real estate and commodities futures. These last two asset classes have very low correlation to traditional stocks. Every time an appropriate dissimilar asset class is added to an existing portfolio an expected reduction in risk at the portfolio level occurs. As diversification increases, risk goes down, and the chance of having a happy ending improves. High risk in a retiree portfolio is never prudent.

Implementation

Once an appropriate asset allocation plan has been selected, the need to effectively and economically execute it is just as important.

Market Efficiency

Index funds and Exchange Traded Funds (ETFs) are the investment of choice for fiduciaries in that they provide pure market exposure to attractive global markets at minimum risk.

Markets are remarkably efficient, and attempts to beat them through either individual stock selection or market timing have a very low probability of success. Active management has a predictably negative impact on performance. On average, actively managed funds and separately managed accounts fall short of indexes by approximately 2% per year, an amount equal to their trading costs and management fees. Worse yet, the few active managers who have “beaten” the indexes in past markets fail to reliably repeat in subsequent periods. Nevertheless, in any period 20-25 percent of managers outperform their indexes giving hope in spite of the overwhelming evidence against active management. Given the low probability of success and the high cost in turns reduced average total return, the trade off is distinctly unfavorable.

The 2% number understates the magnitude of potential risk associated with active management. On occasion a high-flying fund or manager craters so spectacularly that little is left of the portfolio. Recall the astoundingly poor performance of many concentrated stock funds in the aftermath of the large cap growth and tech meltdown of 2000 to 2002. These uncompensated risks are completely avoidable at no cost to expected return.

The systematic underperformance of active managers along with their wide variation in returns (risk) is totally avoidable by simply utilizing no-load institutional class index funds and exchange traded funds (ETFs). Indeed, they should be the default investment medium. This policy spreads risk as widely as possible in some of the world’s most attractive markets while controlling costs, preventing “style drift”, minimizing taxes, and eliminating “management” risk.

It’s hard to argue with the low cost, low risk approach to obtaining the rewards generated by the world’s markets. It would take a very strong belief set to overcome the argument for passive investments in any asset class.

Hedge funds are active management on steroids, but without accountability, transparency, and liquidity. At least 17 distinct strategies might be labeled as hedge funds. All are a huge bet against the efficient market, boast astronomical fees, lack any meaningful track record, and are almost impossible to model in terms of risk, reward, and correlation to other investments in the portfolio. It is difficult to imagine that any level of due diligence might correct these deficiencies to the point where they would pass muster in any well designed investment policy.

Concentrated Holdings

Concentrated stock positions occupy one extreme edge of the irresponsible investment policy universe. The number of large highly visible firms beginning with Enron that simply vaporized staggers the mind. The human costs of such failures can be enormous.

Concentrated stock positions can be either single firm, single industry, or single country. They all generate huge amounts of uncompensated risk. Investors are NEVER compensated for risk

that they could have diversified away. No one should be surprised whenever a concentrated stock portfolio fails. There can be no argument that a concentrated position in a retiree account is responsible, prudent, or suitable. Diversification is an absolute non-negotiable requirement of any prudent investment policy.

Cost Containment

Market returns are finite, and costs reduce them. Professional advice, transaction costs, and other expenses are not free. Commissions, expense ratios, management fees all add up. But, the market is competitive, and total costs can easily be closely controlled by appropriate policy guidelines that insure that expenses are directly related to value received.

Unfortunately, abuses are common. Without specific control measures, costs can escalate far beyond the range of reasonableness or suitability. Churning, proprietary products, high annual expenses, back end surrender charges (B Shares Variable Life and Annuity products), trail commissions (12b-1 Fees), annuity and life insurance charges can reduce real returns so drastically that performance is irrevocably impaired. In some cases forensic accounting may be necessary to figure out where all the money went.

Controlling Conflicts of Interest

Conflicts of interest and lack of disclosure are a primary concern, which can only be cured by full disclosure and total transparency.

The transaction oriented, commission based compensation system is so corrupt that managing the imbedded conflicts of interest is functionally impossible. Certainly not every investment advisor fiduciary is a sage saint, and not every commissioned salesman is a greedy fool. But, whenever a system rewards an advisor more for one recommendation than another, the possibilities for mischief are boundless, inappropriate advice flourishes, and the concept of objective advice loses meaning.

Guarding Against Inadequate Supervision

Any organization large or small can have a rogue agent. It is the responsibility of management at all levels to develop auditing systems to monitor and if necessary weed out the incompetent, greedy or delusional.

Fraud and Theft

Occasionally an investment advisor or broker makes headlines by simply stealing tons of money from trusting clients. An appropriate investment policy secures assets in strong third party custodians, demands adequate accounting and transparency, requires appropriate bonding and insurance, and maintains accounts under the jurisdiction of US courts.

Summary

Investment policy matters! Following simple prudent practices vastly reduces the chance of a bad outcome for retirees. Because of the risk associated with systematic withdrawals, every effort must be made to control portfolio volatility, and provide adequate liquidity. Implementation should be effective, low cost, low risk and tax efficient.

Prudence can be systematically engineered while loyalty can be monitored within a framework of full disclosure, total transparency, and continuous supervision.