Basics of Academic Investing

Premise

Synergy Financial Planning's investment philosophy is based on Modern Portfolio Theory and other teachings of Nobel Prize winning economists. Our belief is that outperforming the market through stock selection or market timing certainly is possible; however, the odds of success are so low that it is not rational to try. We further believe that while we cannot control or predict market returns, we can control the costs we pay and the risk we accept.

- **Design your portfolio by choosing asset classes –** This determines almost all your return.
- **Use Index funds**– Most active funds lose to index funds and those few winning active funds do not continue to win.
- **Diversify** – Diversification reduces risk and helps protect your money in a down market.
- **Control your Behavior** – Attempts to market time or chase returns reduce average returns by significant amounts.

Market timing, stock selection and asset classes

1. The asset classes chosen determines the vast majority of your performance.
2. If fact, over 90% of the long term performance of a mutual fund is due to the asset classes chosen. This leaves less than 10% of the performance due to market timing and security selection. Note that this deviation can be positive or negative.[1]

Index or Active

1. Performance-- Index funds consistently outperform a majority of actively managed funds [2]
   a. Investing is a zero sum game before costs, meaning that on average, the returns of all funds will match that of the market they are invested in. After costs, the average active fund must underperform the market.
   b. History strongly predicts that index funds will outperform actively managed funds across all types of asset class, including those assets classes considered by some to be inefficient (for example, small caps or emerging markets).
2. Cost – Index funds are typically lower in cost than actively managed funds.
   a. Unlike returns, the costs you pay are largely controllable by you.
   b. Just a 0.7% difference in annual fees over a 30 year span can mean that 20% of your returns are lost to fees, if all else is equal.
   c. In 2011, Daniel Wallick determined that expense ratio was a statistically significant factor in determining future returns and that on average, every 1 percentage point increase in expenses *reduced* returns by 0.78 percentage points[3].
3. Consistency- Choosing an active fund based on its prior five year record is not a proven winning strategy.
   a. Most actively managed funds that do manage to outperform their index over a five year period **do not** repeat that outperformance in the following five year period.
   b. For example, a study over two consecutive five year periods (2003-2007 and 2008-2012) using Morningstar data reported than an investor had under an 8% chance of choosing a fund that beat its benchmark over both periods[4].

Diversify to reduce risk

1. Combining different asset classes of broadly diversified funds within a portfolio will increase the odds of a more stable return over an investing cycle.
2. Diversify within the asset class – investing in hundreds or even thousands of stocks and bonds in an asset class virtually eliminates non-market risk (the risk specific to a company, a narrow industry or a narrow sector)
3. Diversify within the portfolio - Asset classes will often behave differently from each other. When one asset class is losing value, another may be gaining. The random nature of asset class leadership makes predicting ahead of time which asset class will outperform an extremely unlikely event. Portfolios diversified across asset classes over the investing cycle will participate in the strongest performing asset classes each year. They will also have reduced vulnerability to significant swings in the market caused by any one segment.
4. While diversification does not insure against losses, portfolios that are undiversified have greater potential to suffer life changing catastrophic losses.

Investor Behavior

Investor returns have typically lagged actual fund returns by attempting to time the market or chasing the hot fund or asset class of the prior year. Studies such as one by Vanguard show that decisions by average investors have negated their long term returns significantly, as much as 3 percentage points per year over a 15 year period[5]. Simply leaving the portfolio alone can be the difference between retirement and needing to continue working.

Putting it All Together -- Modern Portfolio Theory

Modern Portfolio Theory, made famous by Nobel Laureate Harry Markowitz, can be used to design a portfolio to increase the chances of maximum return for the risk level desired using diversification, different asset classes and low cost fund choices.

This investing principle is used to

1. Virtually eliminate non market risk through investing in a large number of securities within asset classes
2. Reduce portfolio risk through allocating funds among different asset classes
3. Provide the opportunity for cost minimization by selecting index funds.
4. Resist return-damaging investor behavior by setting up a long term "buy and rebalance portfolio"

Conclusion

If we believe:

1. That almost all our return will be determined by our asset allocation decisions.
2. That investing is a zero sum game before costs and a negative sum game after costs.
3. That most active portfolios will lose to similarly set up index portfolios.

Then:

> ***We must conclude that the best odds of long term success is to design a low cost diversified portfolio and rebalance regularly to the target risk level.***

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[1] Brinson, Singer and Beebower, Determinants of Portfolio Performace II: An Update, 1991, and Vanguard's Principles for Investing Success, figure 4.
[2] William F. Sharpe, The Arithmetic of Active Management, 1991 and Vanguard's Principles for Investing Success, figures 9, 13.
[3] Daniel Wallick, *Shopping for alpha: You get what you don't pay for,* 2011
[4] Vanguard's Principles for Investing Success, figure 18.
[5] Vanguard's Principles for Investing Success, figure 19.