

## The Hierarchy of Risks



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This September marks the fifth anniversary of the Lehman Brothers bankruptcy; what many call the epicenter of the 2008 financial crisis. When discussing this infamous moment in time with clients and other colleagues, the conversation often centers on the risks inherent in the financial markets. It is curious to us that the primary definition of risk by many focuses chiefly on volatility, or short-term uncertainty in the markets, particularly the stock market.

Without question, investor perspective on risk is in part shaped by current market conditions and historical sentiments about asset classes. Investors tend to extrapolate what recent experience tells them and project it indefinitely into the future. This should not come as a surprise given that we are constantly bombarded with alarming headlines from the media.

Consider that during the period from September 2011 through December 2012, the *Wall Street Journal* sported headlines like, “Economic Signals Heighten Worries of a Double Dip” (9/23/11) and “Markets Flash Global Warnings” (9/26/11). These types of headlines coupled with volatile markets and the human tendency toward self-

preservation may cause an investor to focus more on short-term investment results and be easily distracted from what truly impacts their long-term financial well being. From these headlines, for example, one could reasonably surmise that moving out of the equity markets to the sidelines would be the prudent course of action.

Yet if the hypothetical investor had reacted to the sensational headlines and avoided or eliminated equity investments in their portfolios, he or she would have missed participating in a +30.94% return (S&P 500) during that 15 month period. This short-term focus heightens the investor’s perception of market volatility as the overriding

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‘danger’ to their investment portfolio, which is not necessarily true.

Therefore, it is important to put financial risks in perspective. Despite what media hype might lead us to believe, the greatest risks facing investors are actually the ones within their control, such as portfolio spending, behavioral investing, and asset allocation. Short-term market fluctuations, while real and ever present, often fall far down the list. We recognize that there are countless types of portfolio risks including liquidity risk, concentration risk, interest rate risk, reinvestment risk, geopolitical risk, etc. The following discussion presumes that a portfolio is prudently diversified so as to manage and balance these other portfolio risks.

## 1. Spending Risk

Investors have little control over the markets. They do, however, have control over how much they spend from a portfolio, their approach to investing, and asset allocation. In our experience, the spending rate from a portfolio has the single greatest impact on the portfolio over time; more so than short-term market changes, asset allocation, investment selection, or market timing. Consider an investor with a 25-year life expectancy that has a one million dollar portfolio<sup>1</sup> at the time he or she retires. If he initially distributes \$60,000, or 6%, and then follows a typical spending pattern for someone in retirement<sup>2</sup>, the

<sup>1</sup> This illustration is based on a portfolio with a 75% allocation to US and international equities and 25% to bonds.

<sup>2</sup> Spending in retirement typically increases by inflation in the first 10 years, flattens for the next 10

income earned by the investments is not enough to offset the stress on the principal portfolio. The likelihood of the portfolio surviving the entire 25-year period is less than 50%.<sup>3</sup> In this scenario, the only hope for the investor is that the stock market achieves an above-average investment return over the entire time frame. As a result, the investor’s financial well-being is now out of his or her control. A higher equity exposure cannot, by itself, offset a sustained high spending pattern. Only when combined with above average stock market returns will it be able to do so. Remember, equities can be extremely volatile in the short term. On any given day, there is a 46% probability of losing money in the market (see [“Short-Term Focus” graph](#) on page 6). Therefore, overly high equity allocations combined with recurring principal distributions will add to both the short-term and long-term risk profile of a portfolio.

While the 6% scenario may seem dire, an individual can dramatically improve the outcome if the distribution is reduced to 4%, or \$40,000, of the initial portfolio value. At a 4% distribution rate, the likelihood that the portfolio will be depleted within 25 years declines to around 5%. In addition, there is a 50% probability that the portfolio will retain its initial purchasing power. By setting the distribution rate at a sustainable level, an individual can directly enhance and control the long-term sustainability of their portfolio.

years, and decreases by approximately 5% for the next 5 years.

<sup>3</sup> Using a [Monte Carlo](#) simulation analysis.

## 2. Behavioral Risk

In the face of market factors that cannot be controlled, investors must manage how they react to avoid falling into common investment traps that negatively impact their financial wealth. To do this successfully, an investor must set aside emotions, such as fear and

whether it is a car, dress, suit or almost any consumer good. This should be the rational approach to investing as well. The graph below, however, shows actual behavior is quite the opposite. Investors too often use recent experience to predict future results. This particular study of a mutual fund during 2003

**Hot-Hand Fallacy: Chasing Fund Performance**  
Wealth versus cash flows 2003–2012



greed, and embrace a forward-looking, independent approach to investing.

It is well-documented that individuals feel twice as strongly about losing a dollar than they do about gaining a dollar.<sup>4</sup> This lends itself to problematic investing decisions. The idea is to ‘buy low and sell high.’ We even brag to our friends when we get a good deal on sale

through 2012 shows that higher prices were used as an indication of when to buy into the mutual fund. As a result cash inflows accelerated as prices peaked (i.e. greed).

What is also evident on this graph is that when the fund experienced a rapid decline in price, investors were unable to see past the short term and fled from the fund (i.e. fear). The consequence of this irrational, but instinctive, behavior demonstrated by the graph is that the

<sup>4</sup>[http://www.princeton.edu/~kahneman/docs/Publications/prospect\\_theory.pdf](http://www.princeton.edu/~kahneman/docs/Publications/prospect_theory.pdf)

## The Importance of Staying Invested Ending wealth values after a market decline



investors in this mutual fund suffered a -16.3% return per year while the mutual fund itself experienced a +10.6% return per year over same the time period! While this may be an extreme example, countless studies prove the same point—that when on sale, stocks are the one thing that many investors will not buy.

The mutual fund outflows in the above example also bring to light an additional way investors can sabotage their financial health. The urge to flee the market is a natural one when faced with heightened market volatility and near-term uncertainty. The unnatural response is having the discipline to stay invested in chaotic markets. Those investors that are able to keep an eye on the long-term horizon and stay the course benefit greatly. The graph above illustrates three hypothetical scenarios during the 2008-2009 bear market. Each investor started with \$100,000 in

January 2007 and, in response to the market trough in 2009, either left the market permanently; left at the market bottom but returned a year later or; stayed invested for the entire period.

The investor that sold out at the bottom and stayed in cash lost 45% of their initial investment. The investor that left the market temporarily was able to recover about half of what they lost by reinvesting in the market. They still, however, experienced a 25% net loss by the end of 2012. This is in stark contrast to the investor that stayed invested through the market turmoil, which was not easy to do by any means. By staying invested in the market, the portfolio realized a 15% return on their initial investment by the end of 2012.

**Many individual investors mitigate these behavioral risks illustrated above by working with trusted**

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**advisors that have independent research capabilities and the discipline to stick to the plan over the long term. Counseling our clients to stay with their investment plan is one of the most critical ways in which we truly add value to the client experience and their financial success.**

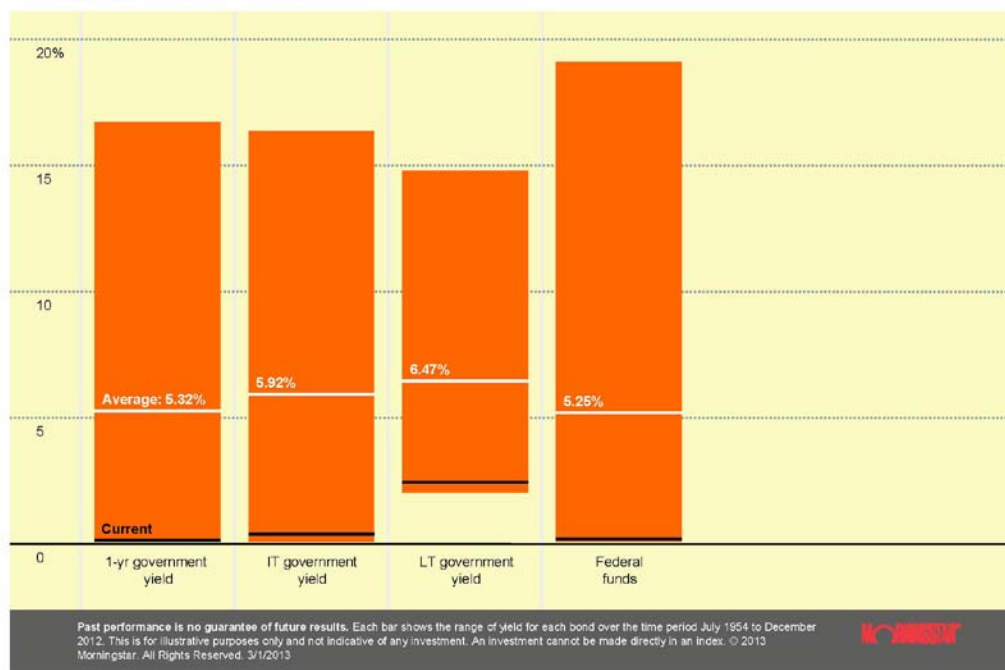
**3. Asset Allocation Risk**

Historical sentiments about asset classes and current experiences cause individual investors to have a distorted view of the risks associated with each asset class. The risks associated with stocks are in our face every day. The risks associated with long-dated bonds will occur over time and therefore aren't newsworthy so we don't hear about them regularly. As a result, individual investors still view stocks as 'risky' and

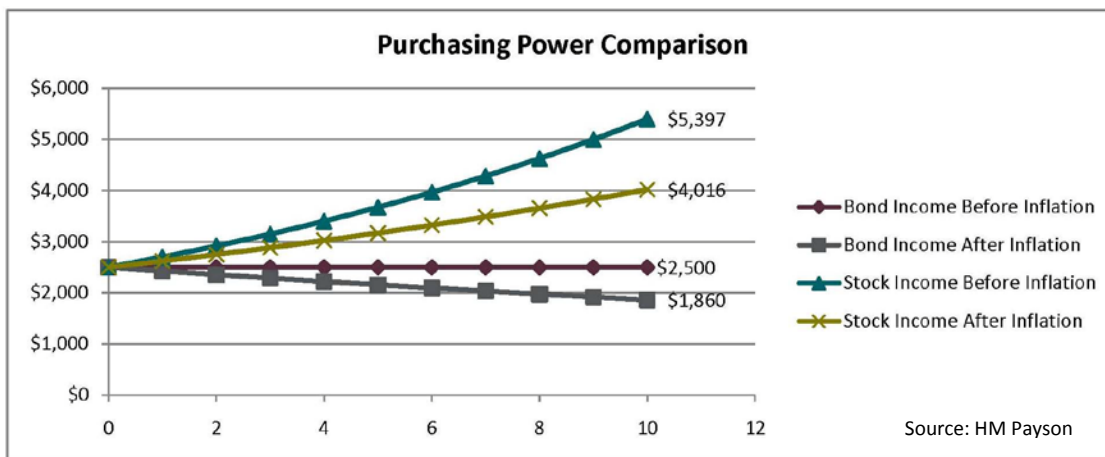
fixed-income instruments as a 'safe' investments.

Asset selection must evaluate the different risks associated with each type of asset class and balance them against the investor's particular time horizon. The return of principal at maturity and regular interest payments give bonds the appearance of being safe investments. The relative safety of bonds, however, is entirely dependent on the interest rate environment. In the 1980s bonds were, in hindsight, safe investments because interest rates were high enough to compensate investors for declining rates of inflation. As the graph below indicates, times have since changed, and current interest rates are near historic lows and certainly well below their long-term average.

History of Interest Rates  
July 1954–December 2012



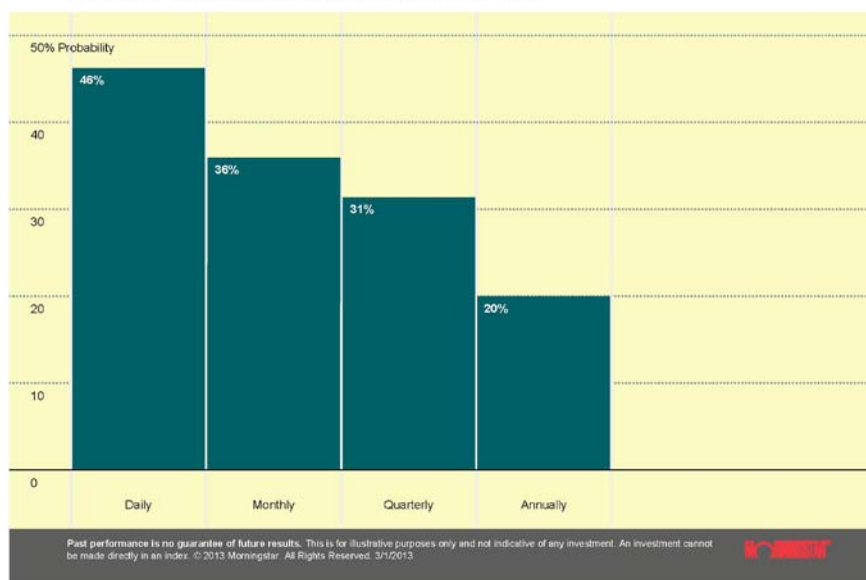
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Over time, inflation erodes the purchasing power of a bond's principal and fixed interest payments. In today's interest rate environment the potential opportunity cost associated with investing in bonds long-term is evident when compared to equities over a 10 year period. For example, a \$100,000 intermediate-term bond with a 2.5% yield will pay an investor a fixed \$2,500 of interest per year over 10 years. Assuming an inflation rate of 3%, the

fixed interest payment's purchasing power will **drop** by 26% by year 10. During the same 10 year period, the stock of a high quality company, which currently yields 2.5% and increases its dividend by 8% annually, will **increase** its purchasing power by 61%. Because this takes a long time to develop, there is little financial incentive for the media to bring it to our attention.

**Short-Term Focus: Coping with Near-Term Fluctuations**  
Probability of losing money in the market 1993–2012



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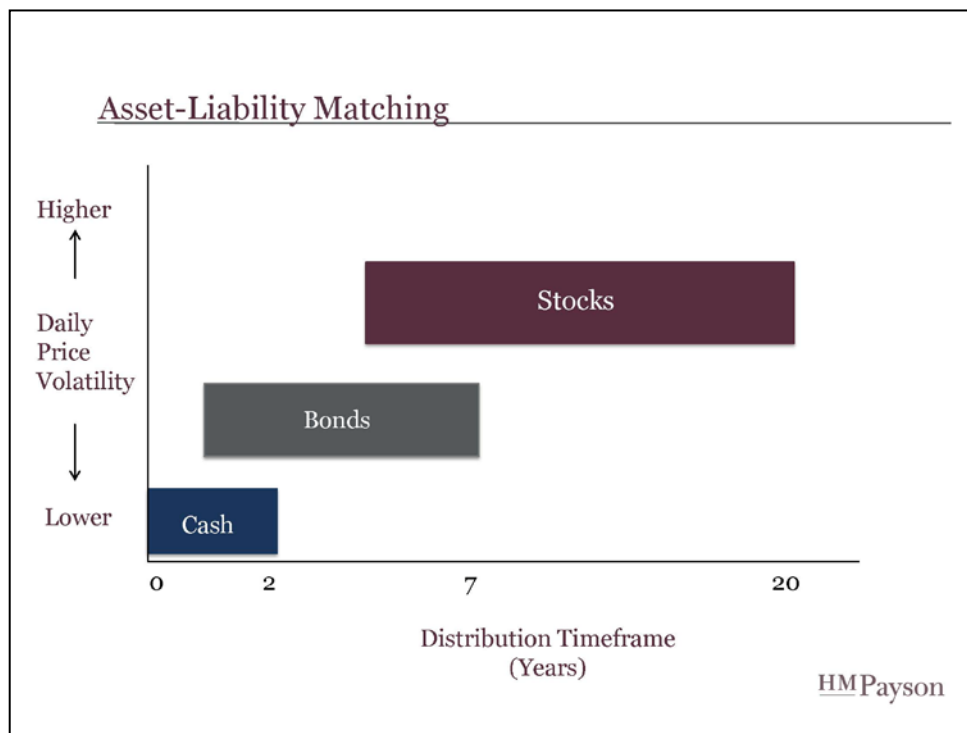
## 4. Volatility Risk Management

As mentioned earlier, on any given day, there is a 46% probability of losing money in the stock market. However the risk of loss decreases meaningfully over time as good days, months, or years in the market offset bad ones (see [“Short-Term Focus” graph](#) above).

Therefore, stocks are not ideal to meet short-term goals. But over the long term, stocks offer better returns than bonds. In the short term, when markets are volatile, bonds can provide stability

‘asset-liability matching.’ The ideal time frame to start thinking about this is 3-5 years in advance of the first distribution. The graph below illustrates how the three primary asset classes -cash, stocks and bonds- can be coordinated in a portfolio to match the timing of cash needs, both near-term and long-term needs.

Short-term needs, or liabilities, should be matched with short-term assets that have little or no price volatility, such as



to the portfolio. Over the long term, inflation becomes the greater risk to a portfolio.

The goal for a portfolio, when near-term distributions are required, is to temper short-term volatility by using fixed-income instruments and preserve the long-term purchasing power of the portfolio using stocks. This is called

cash equivalents or high credit quality short-term bonds. Intermediate-term liabilities should be met with intermediate-term assets, such as intermediate-term bonds (those maturing in 3 to 7 years). For spending needs in years 7 and beyond, equities will better serve an investor when inflation becomes the primary risk to manage over short-term volatility. An

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asset-liability matching strategy is most successful when portfolio distributions are held to a manageable rate (i.e. low spending risk) and investors do not react emotionally in volatile markets.

## Conclusion

A portfolio is sustainable over the long term by managing the risks associated with investor behavior and the different asset classes. So while market risk and volatility consume much of our attention, when put into the appropriate context, they are only small components of the total risk associated with an investment portfolio. The largest risk to an investment portfolio is actually investor behavior; the most fundamental, but controllable, component of this being the rate of distributions from a portfolio.

In sum, behavioral, spending and other risks to a portfolio that result from investor behavior can be successfully mitigated by adopting (and following) a disciplined, forward looking investment strategy.

## Market Log- September 23, 2013

S&P 500: 1,701.84

10 year T-Note: 2.714%

Crude Oil: \$103.48

Gold: \$1,326.90

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