GREENWOOD REPORT

INVESTMENT, RISK, AND
THE MYTHS OF ASSET ALLOCATION

One of the most thought-provoking topics we discuss with clients is that of **asset allocation**. These discussions are prompted as much by *our* views on the topic (which contrast with conventional wisdom) as they are by the challenges of the current investment environment. While addressing this topic with clients, especially those in the later stages of life, we inevitably find ourselves discussing **risk** and what Greenwood Gearhart believes is its true mitigator**: the research process and the quest for knowledge to find good, investable businesses at undervalued prices.**

Asset allocation is most commonly defined as the apportionment between and within stocks, bonds, and cash to optimize risk and return in a portfolio. "Conventional wisdom" posits that *stocks are risky, bonds are safe, and cash is risk-free*. Thus, proponents of conventional wisdom – "rigid-asset-allocators" – believe that investors with a balance of bonds, stocks, and cash should, over time, be the beneficiaries of less volatile returns than those fully invested in a single asset class. Additionally, by regularly *rebalancing* the portfolio to the original asset allocation, an advisor can better tune the portfolio to the client's *willingness* to assume risk, regardless of the investment environment. An advisor can do this, or a computer can do this, which has led to an entire new industry of "robo" advisors.

Greenwood Gearhart's approach to asset allocation differs from conventional wisdom – and rigid asset allocation – for the following reasons:

I. A client's **willingness** to assume risk is only part of the equation. Significant weight should also be placed on the client's **ability** to assume risk.

II. Assuming an above-average ability to assume risk, the **prevailing investment environment** and relative valuation (attractiveness) of bonds versus stocks should be a primary determinant of a client's asset allocation.

III. Although **volatility** can be an indicator of risk, it **is not the definition of risk** and, as such, should carry less weight in the asset allocation decision.

IV. Conventional wisdom (*that stocks are risky, bonds are safe, and cash is risk-free*) relies on gross generalizations that can lead to serious investment pitfalls.

For many years, we've heard a common "rule-of-thumb": *an individual's basic allocation to bonds should equal their age, with the balance in equities*. While catchy, this oversimplified guidepost ignores a number of key factors in gauging the appropriate level of portfolio risk and thus, asset allocation.

I. WILLINGNESS AND ABILITY

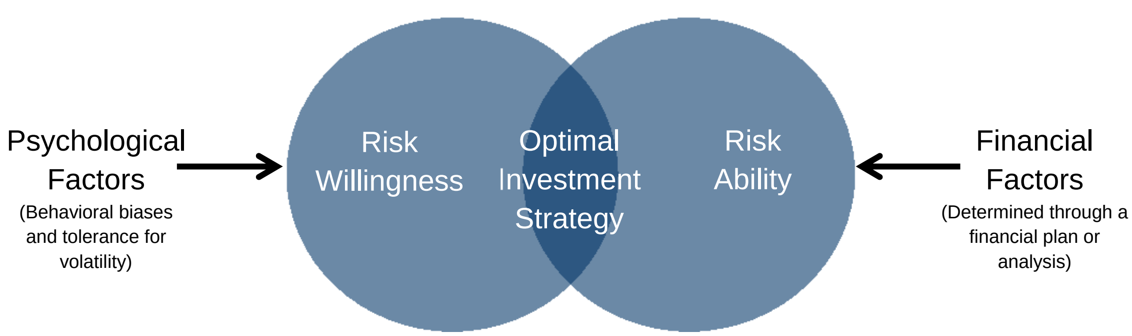
A key differentiator of Greenwood Gearhart's investment process is the effort we put into understanding a client's *ability* to assume risk, to getting to know the client personally. While an individual's *willingness* to assume risk tends to be based primarily on psychological factors (i.e. aversion to loss, correlating emotions with the market, investing only in 'familiar' investments, aversion to volatility), an individual's *ability* to assume risk tends to be based on financial factors such as their:

- Specific liquidity needs
- Investment income requirements
- Level of wealth and assets held elsewhere
- Source of wealth
- Future earnings potential / stability
- Concentrated stock issues
- Stage of life (time horizon)
- Tax situation
- Strategy for transferring wealth to the next generation
- Other family dynamics

Rigid allocators often place greater prominence on the individual's *willingness* as opposed to their *ability* to assume risk. This bias can lead to suboptimal portfolio construction that may 1) provide for too much risk (in the case of an overly aggressive investor) or 2) provide for too little risk (in the case of an overly passive investor). Further, rather than focusing on the individual's financial factors – and the corresponding risk level they support – the advisor may let their own reluctance to disappoint their client creep into the asset allocation decision. The crutch of "this is what the client wanted" is easy to lean on when adverse market conditions prevail or during periods of underperformance.

Greenwood Gearhart, in contrast, believes it is the intersection of an individual's *willingness and ability* to assume risk that determines the optimal investment strategy. It is, after all, the duty of a competent investment advisor to help the individual overcome behavioral biases (the factors that impact their risk willingness) and invest with their own best interests in mind (the factors that impact their risk ability). Certainly, the advisor should avoid a strategy that makes the client uncomfortable risk-wise, but should also educate the client – perhaps through the financial planning process – on how their financial factors can better inform their asset allocation.

Figure 1: The Risk Intersection



II. INVESTMENT ENVIRONMENT

The second aspect to gauging the appropriate level of portfolio risk and asset allocation is the prevailing **investment environment** and relative valuation (attractiveness) of bonds versus stocks.

In today's low-to-no inflation environment and correspondingly low interest rates, bonds are a challenged asset class. A high allocation to bonds may *mitigate volatility*, but may *add risk* to an investor's portfolio for the following reasons:

- **Current Bond Issues Carry Low Yields**: New issue, high grade, long-term corporate bonds yield around 3-4%. Not only does this return barely keep pace with cost-of-living increases, but at the end of the bond's term the investor only receives a return-of-principal where the original investment is depreciated (even by low inflation). **Today's bonds fall short of most individual's inflation-adjusted minimum income requirements in retirement**. Even a continued 0.25% upward move in the short-term Federal Funds rate affirms highly accommodative policy and historically low rates (which Greenwood Gearhart believes will remain so for an extended period of time).

- **Bond Prices <u>Can</u> Fall**: Interest rates and market prices for fixed-income securities have an inverse relationship: that is, when interest rates *do* rise, bond prices *will* fall. This is referred to as interest rate risk: investors buy bonds at lower coupon rates or long maturities and, when rates increase are "locked-in" at lower rates, rendering their bonds less desirable. **The notion that bonds can be money losing investments is new to many investors**; perhaps because most investor's history of investing only spans the last thirty years, when interest rates fell and bond prices rose.

These risks help explain why, in September of 2012, Greenwood Gearhart's investment strategy adapted to market conditions. At the advent of the 2008-2009 credit crisis, the Federal Reserve, in an effort to jumpstart the economy, employed extraordinary stimulus measures through its various quantitative easing programs and low interest rate policies. Correspondingly, the bond markets offered declining rates and meager short and long-term yields for investment grade issues, mostly due to the large amount of capital liquidity in the marketplace. As a result, Greenwood Gearhart requested of clients a suspension of their asset allocation policy. Effectively, we believed risk could be better managed in the equity markets versus the fixed income markets and sought the ability to allow a client's equity allocation to "float" above the maximum policy level. **This decision has led to superior returns for our investors when compared to a rigid-rebalancing strategy.** Of course, this move prompted a number of client questions:

"Is my portfolio over-allocated to stocks given my age?"

"Does this move make my portfolio more volatile?"

"Does this move make my portfolio too risky?"

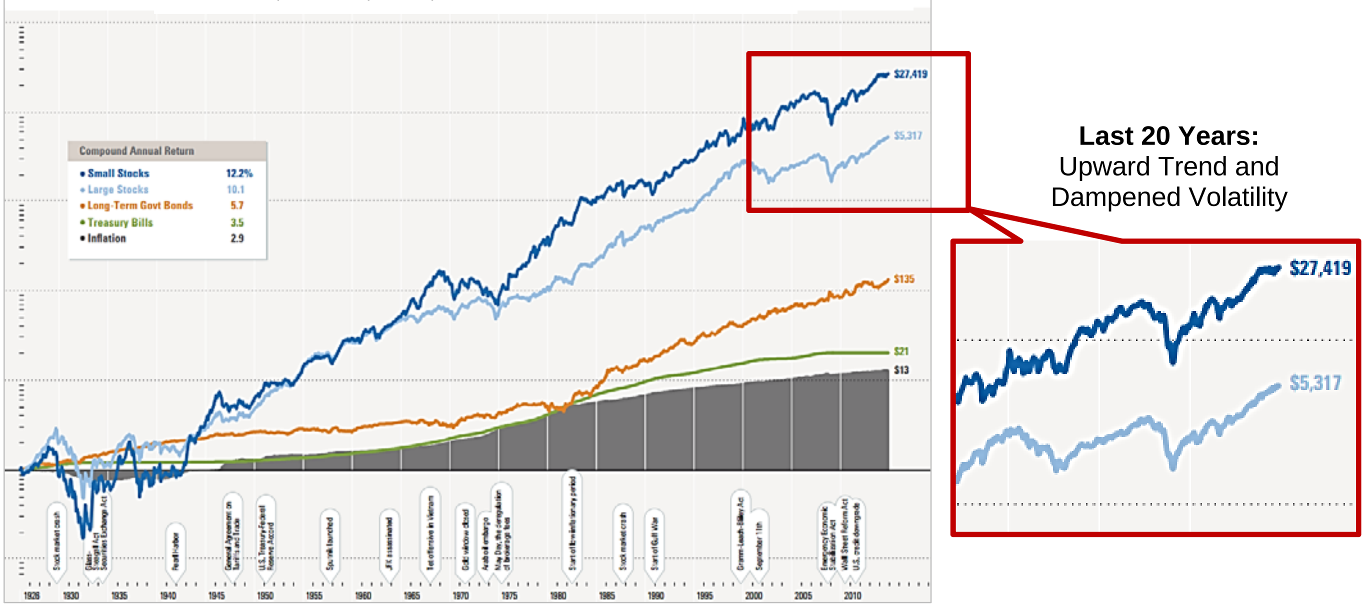
"How is my portfolio protected if we experience another financial crisis?"

III. VOLATILITY AND RISK

Each of these questions emanates from the tendency of lay investors to equate risk with volatility. **Although volatility can be an indicator of risk, it is not the definition of risk and, in our opinion, should be a secondary factor in the asset allocation decision**. As shown in the Appendix, there are two varying schools of thought on the definition of risk: Harry Markowitz's Modern Portfolio Theory (of which Rigid Allocators subscribe) and Ben Graham / Warren Buffett's Value Investing framework (of which Greenwood Gearhart subscribes). The biggest variation of the two approaches lies in the definition of volatility. Where Markowitz posits that the more volatile an investment, the riskier it is; Graham posits that the **more volatile the investment, the more opportunity for an intelligent investor to profit from asset mispricing**. If a client is positioned to take advantage of opportunity – and never forced into a particular action – they are, by definition, managing risk.

It is clear, as the chart below shows, that stocks typically experience more volatility than bonds. However, for an individual with a long-term time horizon, this volatility dampens. Despite all of the challenges over the history of our country, stocks have performed remarkably well. Even the last 20 years (shown by the call out) have trended positive despite the tech bubble, 9-11, three wars, and the Great Recession.

Figure 2: Ibbotson® SBBI®
Stocks, Bonds, Bills, and Inflation 1926-Present



When Greenwood Gearhart conducts research on a potential investment, we consider a time horizon of at least five years. As Warren Buffett says: *"I never attempt to make money on the stock market. I buy on the assumption that they could close the market the next day and not reopen it for five years."* This quote exemplifies the difference between investment and speculation. Long-term investors who can see beyond annual returns stand to benefit from the fact that financial markets, over the long-term, tend to rise. In fact, in the post-war history of the financial markets there has never been a 20 year period where the markets experienced negative returns (including the one highlighted above). There have only been two 10 year negative periods: 1974 and 2008 and their preceding ten years.

Still, humans are wired to focus on the short term; to seek instant gratification; to monitor the daily fluctuations of the market without putting it in perspective of their lifetime. We are bombarded by the press to focus on short-term market fluctuations (see Jim Cramer). Ironically, we don't apply the same logic to our single largest asset, our home, maybe because it is not marked-to-market daily. For instance[1]:

If, after checking the value of your stock portfolio at 1:24 P.M. you felt compelled to check again 10 minutes later at 1:34 P.M., ask yourself these questions:

- *Did I call a real-estate agent to check the market price of my house at 1:24 P.M.? Did I call back at 1:34 P.M.?*
- *If I had, would the price have changed?*
- *If it did, would I have rushed to sell my house?*
- *By not checking, or even knowing, the market price of my house from minute to minute, do I prevent its value from rising (or falling) over time?*
- *Did my house become more or less risky as the value fluctuated?*

In our opinion, just because a portfolio experiences greater volatility doesn't mean it carries greater risk. The primary risk associated with volatility is that an investor has to liquidate their portfolio at an inopportune time (when the market is down) to meet liquidity needs. This risk is manageable: as part of the portfolio management process, it is good practice to reserve excess liquidity to meet needed monthly outflows and/or have a "sleep at night" fund in cash. The appropriate liquidity level varies by client, but 12-18 months of spending is a good starting point based on the duration of the major financial crises of the last 100 years. A "normalized" period may be shorter.

Figure 3: Duration of Major Financial Crises
Last 100 Years

Crisis	Dates	Drop in S&P 500	Peak to Trough Duration (in months)
Credit	'08-'09	-56.8%	17
9-11	01-'02	-27.7%	13
Tech Bubble	'01	-27.8%	13
Russia	'98	-12.7%	2
Black Monday	'87	-28.5%	0
Oil Shock	'73-'74	-48.2%	21
Great Depression	'29-'39	-86.2%	33

Manage with 12-18 months of liquidity

Moreover, most individual's time horizons have lengthened considerably as human lifespan has increased. The chance that a baby born today will live to 100 is much higher than just twenty years ago. Today's 65 year old retiree could have 20 or 30 more years to live and invest. This longer term time horizon allows for a greater volatility

[1] Source: Adapted from – The Intelligent Investor By Benjamin Graham. Chapter 8 Commentary by Jason Zweig

tolerance. For wealthy families with low portfolio spending requirements, investing for generation two or even three lengthens their time horizons even further.

Furthermore, an individual's portfolio spending policy influences their ability to tolerate volatility. For an individual with modest spending requirements in relation to their portfolio (ie. 4-5%) a 50% decline in the stock market results in *temporary* increase in the spending rate to 8-10% that, with history as a barometer, lasts months not years. This assumes a worst case scenario: that adequate liquidity was not held in advance of the decline.

IV. CONVENTIONAL "FOLLY"

Conventional wisdom (that stocks are risky, bonds are safe, and cash is risk-free) relies on gross generalizations that can lead to an unsuitable asset allocation.

"Stocks are Risky"

Although certain stocks carry greater risk than others, not all stocks are inherently *risky*. Take a stock that fluctuates, but ultimately doubles in three years (26% compound growth, 33% average growth per year). Was this 100% return "risky" or not? Proponents of conventional wisdom may contend that the only way to achieve a 100% return is by taking high levels of risk, that the volatile nature of the stock makes it risky. To measure this "risk", they use a standard deviation from the mean returns (average volatility, if you will); a measure that has nothing to do with the underlying prospects of the business. For instance, this stock's stellar returns may have been a result of the market mispricing the asset, an above-market-price acquisition, a breakthrough product, or a variety (or combination) of other factors.

As an alternative to mathematical measures of volatility, Greenwood Gearhart assesses risk and expected returns using fundamental analysis. Among many questions, we ask:

- Are we paying a fair to undervalued price for this company based on normalized earnings, cash flow, and comparable corporations (Ben Graham's "Margin of Safety")?
- Does this company have a strong balance sheet, manageable debt load, and ready access to the capital markets?
- Does this company have a long-term track record of acting in the best interests of – and returning capital to – shareholders?
- Does this company possess competitive advantages that are difficult to replicate? Do they have pricing power?
- Does this company operate in an industry with favorable cyclical or structural characteristics, barriers to entry, and/or exposure to demographic tailwinds?
- Is management focused on optimizing capital allocation, or promoting their own interests?

Through the research process, we are able to honestly answer these questions before committing our client's capital to an investment. By answering these questions on the front-end, we go a long way to mitigating the investment's risk.

"Bonds are Safe"

Just as not all stocks are risky, not all bonds are "safe". In the thirty year bond bull market that began in 1982 (characterized by declining interest rates) bond prices steadily rose due to the inverse price/rate relationship of a bond. Long tenured individuals of Greenwood Gearhart can remember a near 50% allocation to bonds during the 1980's, when Treasury yields were 10-15%. As rates rise (even modestly) this trend reverses.

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Bonds can also fall in response to market shocks. In 2008, the crisis originated in the credit markets, brought on by weak mortgage loans. After the failure of Lehman Brothers, bonds – as measured by the Barclays Aggregate Bond Index – fell 5% in a period of a month and a half. High yield (junk) bonds fell 23% during the same period. In times of peril, all correlations go to one (move together) and every asset experiences trouble. In addition to volatility, bonds can also experience default risk, reinvestment risk, call risk, and political risk. The recovery rate for bonds also varies and may not correlate with credit rating.

"Cash is Risk Free"

Death, taxes, and the notion that all investments carry risk are the three certainties in life. Some investors are unable to tolerate *any* risk. As a result, they encounter a common pitfall of converting their assets to supposedly "risk-free" cash or short-term treasury bills. What these investors miss is the impact of inflation and opportunity cost on their investment.

For instance, take two $100,000 investments in 1) a stock and 2) a Certificate of Deposit (cash). Both investments yield 2%: the stock's yield coming from a dividend and the CD's from interest. The CD promises return of capital ($100,000) at the end of ten years. The stock, however, has the potential (and is likely) to increase in value. For illustration purposes, let's assume the stock price grows 6% *in addition* to the 2% dividend yield, for a total return of 8%. Assuming both investors consume the dividends and interest payments (the 2%), the stock is worth $180,000 at the end of the ten year horizon while the CD matures at the original $100,000 investment. This "cash under the mattress" (or "guaranteed") approach means that, on an inflation adjusted basis, the CD's $100,000 initial investment is only worth $82,000 in equivalent purchasing power due to the rising prices of goods and services over time – the stock: $147,000. Plus, the cash investor had their 2% coupon taxed at ordinary income rates, while the stock investor received preferential tax treatment on dividends and long-term capital gains. Inflation is insidious and perhaps the biggest risk to an all-cash portfolio.

Figure 4: Cash versus Equity Investment
Adjusted for Inflation

	Stock (6% CAGR)	**Cash** (0% CAGR)	**Difference**
Beginning Value	$100,000	$100,000	$0
Income at 2%	$2,000	$2,000	$0
~ Each investment held for 10 years~			
Ending Value	$180,000	$100,000	$80,000
Income at 2%	$3,600	$2,000	$1,600
Inflation adjusted (2%)	$147,000	$82,000	$65,000

Sound asset allocation for individual investors goes well beyond general rules of thumb. It extends beyond on a person's age to incorporate the client's financial factors, the prevailing investment environment, and the risk, return, and volatility characteristics of underlying investments. The key tenants of Graham and Buffett value investing argue for a greater focus on the fundamentals of investments as opposed to the volatility they may incur. For long-term investors with adequate liquidity reserves, and above average risk ability, a flexible asset allocation policy is appropriate and critical to long-term wealth creation and preservation.

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Appendix: Modern Portfolio Theory Contrasted with Graham and Buffett's Value Investing Framework

	Modern Portfolio Theory (Rigid Asset Allocators)	**Graham / Buffett (Greenwood Gearhart)**
Volatility and Risk Relationship	The more volatile an investment, the riskier it is	The more volatile the investment, the more opportunity for an investor to profit from asset mispricing
Risk Mitigation	Risk can be mitigated by shifts in asset allocation, which should bias towards bonds as the investor ages	Risk can be mitigated through research to increase the knowledge of specific investments and through diversification to spread risk among investment opportunities.
Risk Measurement	Risk is measurable and definable in terms of volatility using mathematical statistics like standard deviation and beta	Risk is not measurable using mathematical statistics but rather represents the uncertainty of an investment outcome and the probability that the outcome is a loss, rather than a gain
Market Efficiency	Markets are efficient and security prices reflect all available information	Markets are mostly efficient, but their inefficiency is where prudent investing can add value

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