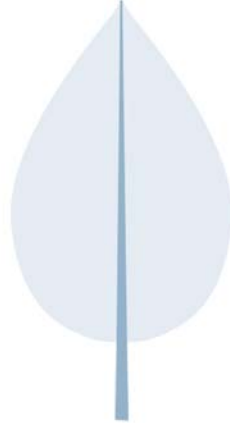


A Granite Hill Investment Field Guide

Begin Your Journey With Stock-Bond Decisions

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Flip open a popular financial magazine. Browse its Web presence. Visit your local brokers. What do they tell you? The most urgent messaging tends to fixate on which stocks or sectors you should be trading on (this time), with all sorts of theories on why.

The problem is, pursuing successful security selection is like chasing a mirage in the desert instead of properly equipping your expedition for the ever-shifting sands.

That's why your focus should be on choosing and maintaining an appropriate stock-bond mix. It's the first, most durable and perhaps most critical component to sound portfolio construction.

The Rationale

The value of making a deliberate, strategic decision about the proportion of stocks versus bonds in a portfolio is rooted in what is known as the "separation theorem" proposed by Nobel laureate James Tobin in the late 1950s.¹ Your stock-bond decision is the real-life implementation of this essential finding.

The separation theorem proposes that all investors face two important decisions:

- (1) How much risk to take
- (2) What portfolio of "risky" assets (equities) and "less risky" assets (bonds) achieves your risk goals

It further proposes that, if you are willing to take stock risk, you should begin with a diversified market portfolio. You can then dial down your overall portfolio risk by adding bonds to the mix. The greater the bond allocation relative to stocks, the less risky the portfolio and the lower the total expected

return; the greater the stock allocation relative to bonds, the higher the portfolio's expected return and risk.

The Right Allocation for You

So, how do you confidently allocate between stocks and bonds to achieve your unique investment objectives? A common method is to evaluate model portfolios along the risk-return spectrum. The riskiest portfolio holds all stocks, and the least volatile portfolio holds all bonds. Between these extremes lie standard stock-bond allocations, such as those ranging from 80 percent stock/20 percent bonds to 20 percent stocks/80 percent bonds.ⁱ [See the first graph in the appendix for examples.]

Understanding the vital role of stock-bond mix in portfolio construction can help you assess your individual goals and align them with an appropriate stock-bond mix through techniques such as comparing the average annualized return and volatility of each model portfolio, as well as best- and worst-case returns for various historical periods.

While these techniques rely on historical performance and no strategy (or human) can see into the future, it helps you focus on the realities and ignore the mirages in the investment world: It helps you think in a disciplined manner about the market's realistic risk-return tradeoffs.

Essentially this approach can help shed light on your willingness to take risk. Your ability or need to take risk is best assessed in view of your overall financial resources and goals.

To visualize your strategy's range of potential outcomes over five, ten, twenty or more years, simulated wealth provides better perspective. Simulations highlight the fact that risk increases with time and expose the fallacy of

¹ James Tobin, "Liquidity Preference as Behavior Towards Risk," *The Review of Economic Studies* 25, no. 2 (February 1958): 65-66



time diversification² – the notion that somehow things will even out over time. Alternatively stated, investment results can vary widely over a couple of decades, which is true of real life.

Refining Your Equity Allocation

After establishing the basic stock-bond mix, you can turn your attention to the role that risk plays within your equity allocation by considering:

- (1) Global diversification
- (2) Diversification among riskier, more volatile equity asset classes

By holding equities across domestic and international markets, you can reduce the impact of underperformance in a single market or region of the world. Although markets may move together to varying degrees, diversification can further reduce volatility in a portfolio, which translates into higher expected compounded returns over time.

Investors can also overweight or “tilt” their allocation toward riskier asset classes that have a history of offering average returns above the market. Research has found that:

- (1) Small-company stocks (small-caps) have had higher average returns than large-company stocks (large-caps)
- (2) Distressed company stocks or those with poor prospects (value) have had higher average returns than growth stocks.

By holding a larger portion of small-cap and value equity asset classes in your portfolio, you can increase the potential to earn higher expected returns for the additional risk taken — if additional equity risk is warranted for your investment goals. [See Appendix chart on Size

² Bodie, Kane, and Marcus, *Investments* (Second Edition, 1993, Chapter 7, Appendix C): 237.

and Value Effects Are Strong around the World.]

Bond Strategies

Research³ shows that two risk factors — maturity and credit quality — account for most of the average return differences in diversified bond portfolios. Long-term bonds and lower-quality corporate bonds (“junk” bonds, at their lowest quality) typically offer higher average yields to compensate you for taking more risk.

But keep in mind that these expected returns are lower than those expected from accepting additional stock risk, as described above.

Investors generally hold bonds for two either/or reasons:

- (1) To reduce overall portfolio volatility
- (2) To generate a reliable income stream

These objectives typically lead to different investment decisions. The first approach, volatility reduction, is an application of the theory that you determine how much risk to take by choosing a combination of stocks and bonds.

Rather than increasing risk to maximize yield, you can hold lower-risk bonds. Certain bond asset groups (e.g., U.S. Treasury bonds, high quality corporate bonds, and highly rated foreign government bonds hedged to remove currency risk and all with average maturities of 5 or less years) are better suited for this strategy.

The second purpose for holding bonds is to generate reliable cash flow. If you are an income-oriented investor, such as a retiree, or a pension plan or endowment trustee, you may

³ Fama, Eugene F.; French, Kenneth R., “The Cross-Section of Expected Stock Returns,” *Journal of Finance* 47, no. 2 (June 1992): 427–465



not worry as much about short-term volatility in your bond portfolio. Your priority is to meet a specific funding obligation in the future. Consequently, you may design a portfolio around bonds and accept more volatility in hope of earning higher yields by holding bonds with longer maturities and/or lower credit quality.

Whether investing for total long-term return or for income, short-term corporate bonds should be diversified to avoid the risk from specific issuers.

Disciplined Maintenance and Rebalancing

Once you've made your strategic stock-bond decisions, the aim is to stick with them. Following such a plan equips you to make adjustments based on changes in your individual ability or need to take risk, rather than in rash reaction to market fluctuations.

However, as the market fluctuates, your relative proportions of stocks and bonds will drift over time. You also want to monitor the mix and rebalance as needed to stay on your risk target.

Discipline is key to this strategy of maintaining a risk target, as it can take many years to reach

your desired destination. And make no mistake, the markets can be a harsh environment for those who wander off-course.

Summary

The stock-bond decision drives a large part of your portfolio's long-term performance.

- (1) During portfolio design, evaluating different stock-bond combinations can help you visualize the risk-return tradeoff as you consider the range of potential outcomes over time.
- (2) Once you determine a mix, it can guide your more detailed choices of which asset classes to hold in the portfolio, based on your ability and need to accept market risk.
- (3) Your target allocations help you efficiently rebalance back to your appropriate mix when market fluctuations alter it.
- (4) As your appetite for risk shifts over time and actual returns evolve, you can rationally revisit your decisions, to estimate how shifting your portfolio mix may impact your wealth accumulation and preservation goals into the future.

Appendix

To make some of these points more clear, graphs and charts are attached.

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The information presented above draws upon a paper prepared by Dimensional Fund Advisors, a non-affiliated third party, but incorporates the research and perspective of Granite Hill Capital Management, LLC (GHC). The appendix which follows was developed solely by GHC.

Disclosures

Although investors may form their expectations from the past, there is no assurance that future investment results will model historical performance.



Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Diversification neither assures a profit nor guarantees against loss in a declining market.

A bond portfolio designed for income also carries significant risks, including default and term risk, call risk, and purchasing power (inflation) risk.

Foreign securities are exposed to currency movements.

Stock is the capital raised by a corporation through the issue of shares entitling holders to an ownership interest of the corporation. A bond is a loan that an investor makes to a corporation, government, federal agency, or other organization. Also known as debt or fixed income securities, most types of bonds pay interest based on a regular, predetermined coupon rate that is set when the bond is issued.

Stocks offer a higher potential return as compensation for bearing higher risk. However, this premium is not a certainty and investors should not expect to consistently receive higher returns from stocks. In fact, market history shows extended periods when stocks did not outperform bonds.

Overweighting or “tilting” stock allocations toward riskier small cap and value styles asset classes appear to provide incremental compensation above the total stock market premium. These premiums are not predictable and may not appear for extended periods. It is also possible that the premiums result from measurement errors, the chosen historical time period, or have been eliminated after discovery by investors. Past performance is not a guarantee of future results.

The returns and other characteristics of the allocation mixes contained in this presentation are based on model/back-tested simulations to demonstrate broad economic principles. They were achieved with the benefit of hindsight and do not represent actual investment performance. There are limitations inherent in model performance; it does not reflect trading in actual accounts and may not reflect the impact that economic and market factors may have had on Granite Hill’s decision making if Granite Hill were managing actual client money.

Model performance is hypothetical and is for illustrative purposes only. Model performance shown includes reinvestment of dividends and other earnings but does not reflect the deduction of investment advisory fees or other expenses. Clients’ investment returns would be reduced by the advisory fees and other expenses they would incur in the management of their accounts.

Simulations require simplifying assumptions which may cause misleading conclusions.

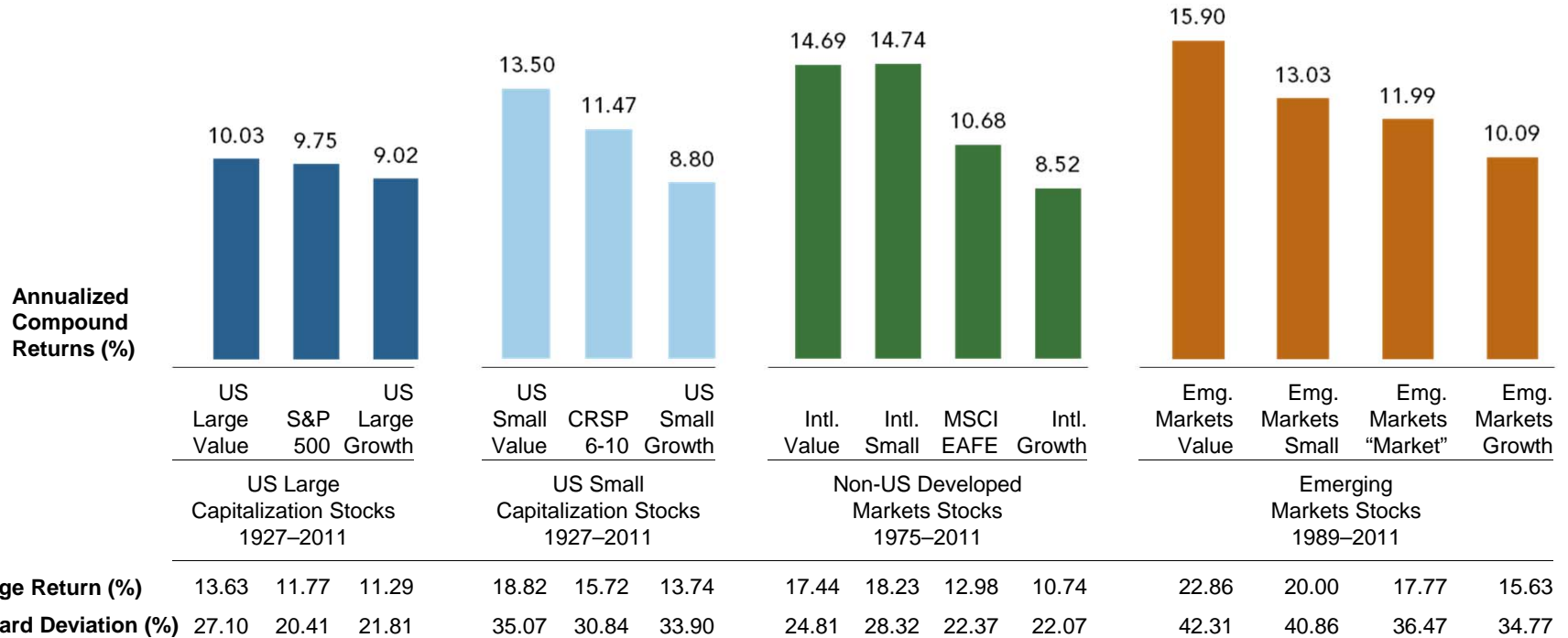
Maintaining a target risk exposure may not provide higher returns over long time periods.

Endnote

ⁱ The basic stock component may be reflected by the S&P 500 Index, or preferably, by a broader market proxy, such as the CRSP 1-10 Index. The CRSP 1-10 Index is a market capitalization weighted index of all stocks listed on the NYSE, Amex, NASDAQ, and NYSE Arca exchanges. The S&P 500 Index offers a proxy of the large cap US equities market. The fixed income component may be represented by an index of short-term US government securities or government and corporate bonds.

Size and Value Effects Are Strong around the World

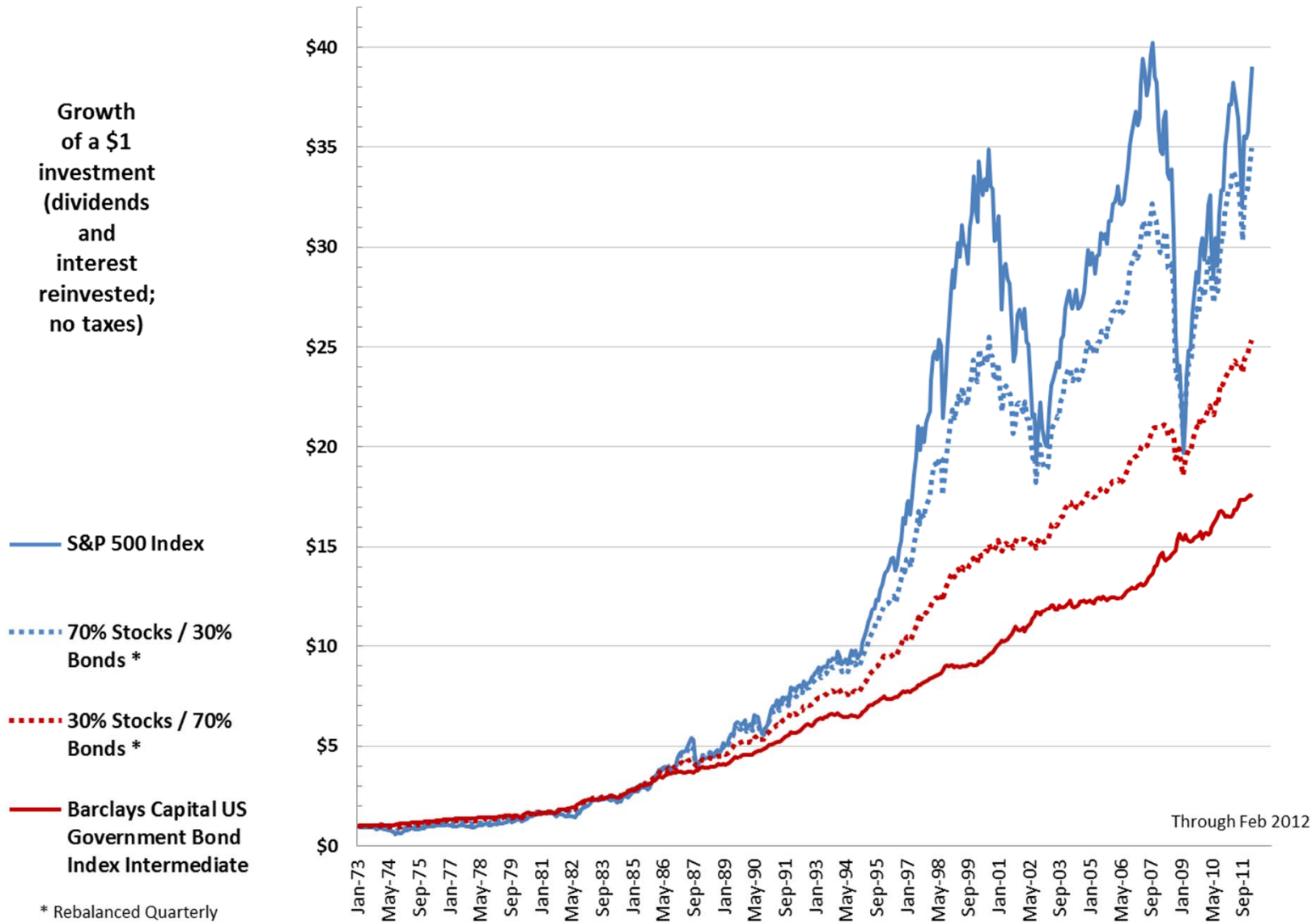
Annual Index Data



In US dollars. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. US value and growth index data (ex utilities) provided by Fama/French. The S&P data are provided by Standard & Poor's Index Services Group. CRSP data provided by the Center for Research in Security Prices, University of Chicago. International Value data provided by Fama/French from Bloomberg and MSCI securities data. International Small data compiled by Dimensional from Bloomberg, StyleResearch, London Business School, and Nomura Securities data. MSCI EAFE Index is net of foreign withholding taxes on dividends; copyright MSCI 2012, all rights reserved. Emerging markets index data simulated by Fama/French from countries in the IFC Investable Universe; simulations are free-float weighted both within each country and across all countries.

Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. *Small company risk:* Securities of small firms are often less liquid than those of large companies. As a result, small company stocks may fluctuate relatively more in price. *Emerging markets risk:* Numerous emerging countries have experienced serious, and potentially continuing, economic and political problems. Stock markets in many emerging countries are relatively small, expensive, and risky. Foreigners are often limited in their ability to invest in, and withdraw assets from, these markets. Additional restrictions may be imposed under other conditions. *Foreign securities and currencies risk:* Foreign securities prices may decline or fluctuate because of: (a) economic or political actions of foreign governments, and/or (b) less regulated or liquid securities markets. Investors holding these securities are also exposed to foreign currency risk (the possibility that foreign currency will fluctuate in value against the US dollar).

Stock and Bond Proportions Contribute to Returns and Risk.



Data Sources

Monthly: 01/1973 - 02/2012

<u>Data Series</u>	<u>DataRange</u>	<u>Description</u>
S&P 500 Index	01, 1926 - 02, 2012	Total returns in US\$ January 1990-Present: S&P 500 Index The S&P Data are provided by Standard & Poor's Index Services Group January 1926-December 1989: S&P 500 Index Ibbotson data courtesy of © Stocks, Bonds, Bills and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated works by Roger C. Ibbotson and Rex A. Sinquefeld). The S&P data are provided by Standard & Poor's Index Services Group.
Barclays Capital US Government Bond Index Intermediate	01, 1973 - 02, 2012	November 2008 - present: Barclays Capital US Government Bond Index Intermediate Total returns in US\$ January 1973 - October 2008: Lehman Intermediate Government Bond Index Intermediate Maturity range 1-10 Years Source: Barclays Capital data provided by Barclays Bank PLC.
Stocks70% Bonds30%	01, 1973 - 02, 2012	From 01/1973 To 02/2012. Constructed under USD Period 1: From 01/1973 (Earliest) To 02/2012 Rebalance: Per 3 Months S&P 500 Index: 70%; Barclays Capital US Government Bond Index Intermediate: 30%
Stocks30% Bonds70%	01, 1973 - 02, 2012	From 01/1973 To 02/2012. Constructed under USD Period 1: From 01/1973 (Earliest) To 02/2012 Rebalance: Per 3 Months S&P 500 Index: 30%; Barclays Capital US Government Bond Index Intermediate: 70%