RESEARCH

Dimensional's Approach to Asset Allocation

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With so many building blocks available to construct asset allocations, how can investors sort through the noise to find solutions that meet their financial goals?

Whatever the financial goal, Dimensional applies robust investment principles to asset allocation. Our approach starts with defining an investment goal and identifying the key risks relevant to this goal. Then we build solutions that aim to help investors achieve their goals by systematically pursuing reliable sources of higher expected returns while managing risks and costs efficiently.

For many investors, the key considerations to asset allocation include the split between equity and fixed income, considerations for regional allocations, emphasis on known drivers of higher expected returns, tax impact, and considerations for unique investor values.

ASSET ALLOCATION BETWEEN EQUITY AND FIXED INCOME

Fixed income can serve many roles in a portfolio to help investors achieve their goals, including managing overall portfolio volatility or managing liabilities. For example, adding fixed income to an equity portfolio is one of the most effective tools an investor can use to balance the expected volatility and returns of the total portfolio. Determining the appropriate amount of fixed income to include in a portfolio should be based on an investor's goals, preferences, and constraints.

For investors focused on the growth of assets, all-equity or equity-heavy allocations may be most suitable. For investors seeking to dampen some of the volatility in their portfolios, a greater allocation to fixed income may be beneficial. A portfolio made up of 60% equity and 40% fixed income, for example, that seeks total return consisting of capital appreciation and current income may better meet the needs of such investors.

For investors who first and foremost seek the preservation of capital, more conservative allocations invested predominantly in fixed income securities may limit potential losses in the event of poor equity market performance.

ASSET ALLOCATION ACROSS REGIONS

At Dimensional, our investment approach is based on our belief that competition among many market participants all around the globe makes prices in public capital markets quickly reflect new information and expectations. The global market portfolio's allocations to various regions are a sensible starting point for an equity investor. The global market portfolio is a theoretical basket of investments that holds all securities in the investment universe and, therefore, all industries and countries according to their market capitalization weights. It incorporates the aggregate expectations of all market participants and provides a continuously updated, instantaneous snapshot of global diversification.

We believe global diversification is an effective way to manage country-specific risks and provides a good rationale for investors to hold the equity and fixed income securities of US and non-US firms. While both regions offer the potential to earn positive expected returns in the long run, they may perform quite differently over short periods, though there is no reliable evidence that the performance of one country or region relative to another can be predicted in advance. Therefore we believe that, for many investors, holding regions at approximately market cap weights is a suitable approach.

There may, however, be sensible reasons to deviate from that global market portfolio and allocate more than the market cap weight to the US to incorporate a home bias. Those reasons could be related to differences in implementation costs. For example, foreign dividend tax withholding can create a performance drag on international investments held in non-taxable or tax-deferred portfolios.

Another important consideration when investing globally is currency hedging. Research shows that currency hedging is an effective way to reduce the portfolio volatility of fixed-income-heavy allocations.[1] In contrast, for equity-heavy allocations, hedging currencies does not meaningfully reduce return volatility,[2] although certain investors may still prefer to use currency hedges to protect against large currency swings over the short term. Investors should base currency hedging decisions on their asset allocations and investment goals and preferences.

ASSET ALLOCATION ACROSS SECURITIES

Dimensional's investment solutions seek to add value by using up-to-date information embedded in the latest market prices to identify reliable differences in expected returns across securities in equity and fixed income markets. By doing so, we can avoid the rigidities of indexing as well as the unreliability of forecasting.

We believe such an approach is critical to building a robust asset allocation and better positions investors for success.

Equities

Valuation theory provides a framework about the drivers of expected stock returns, linking expectations about a firm's future cash flows to its current value through a discount rate (or, equivalently, the expected return on the stock). Using the valuation framework, we can expect small cap stocks to outperform large cap stocks, low relative price stocks to outperform high relative price stocks, and stocks with higher profitability[3] to outperform low profitability stocks.

Consistent with valuation theory, the existence of these premiums has been documented in studies covering over 40 countries and nine decades of stock data.[4]

Dimensional's core equity strategies seek to efficiently target the size, value, and profitability premiums through a total market solution. These solutions systematically overweight stocks with higher expected returns (those with lower market capitalizations, lower relative prices, and higher profitability) relative to their market weights and underweight stocks with lower expected returns (those with higher market capitalizations, higher relative prices, and lower profitability) across the entire market in each eligible country.[5]

Realized returns vary across the premiums as well as across regions, countries, and sectors. Research, however, has not found evidence that these differences are reliable over the long term.[6] As a result, we believe that an integrated and balanced focus on all three reliable long-term drivers of expected returns along with broad diversification across geographies and regions provide investors with the best chance of outperforming the market.

Additionally, research has found little evidence that short-term performance differences across premiums, regions, countries, or sectors can be consistently predicted.[7] Based on these findings, we do not make short-term allocation shifts across premiums, regions, countries, or sectors. A strategy that attempts to time these differences may increase return volatility and incur higher turnover and trading costs relative to a consistent approach, increasing the performance hurdle required to make such a strategy worth pursuing.[8] A disciplined asset allocation that maintains broad diversification and a consistent focus on the long-term drivers of expected returns is, in our view, a more reliable way to pursue higher expected returns.

We also believe that designing asset allocations using a thoughtful framework based on financial science is advantageous vs. employing optimization techniques. An approach to asset allocation that uses ex post investment outcomes as ex ante return assumptions in a complex, opaque model may result in poorly understood or misleading conclusions for investors. For more on this, see Lee (2013) and Davis (2008).[9]

Fixed Income

As with equities, we use current market prices to identify systematic differences in expected returns among fixed income securities. Across bonds, expected returns vary by duration, credit quality, and currency of issuance. We also use information in current market prices to monitor and manage risks and eliminate unnecessary trading costs. Portfolio implementation—which includes research, portfolio design, and portfolio management and trading—integrates those functions with the goal of increasing overall returns or meeting investors' goals efficiently.[10]

Emphasis on Known Drivers of Higher Expected Returns

The degree to which an investor emphasizes equity and fixed income premiums in their asset allocation should depend, in part, on their goals as well as their overall portfolio.

In portfolios with higher equity allocations, taking on more term and credit exposure (by focusing on bonds with longer durations or lower credit quality, respectively) can supplement the higher expected return goal of such asset allocations without materially impacting the overall volatility of the portfolio since this volatility is dominated by the equity component. In portfolios with higher fixed income allocations, the goal is to preserve capital and minimize losses in consumption power, so such allocations would benefit from fixed income investments that emphasize short duration, high credit quality, and inflation protection.

ASSET ALLOCATION AND TAXES

Tax-sensitive investors may prefer an asset allocation with a stronger focus on reducing federal income tax impact and improving after-tax returns. In addition to incorporating a home bias, investing in solutions that consider tax impact in portfolio management and trading decisions in an effort to improve after-tax returns while avoiding less tax efficient strategies can enhance an asset allocation's overall tax efficiency.

Due to the nature of REITs—in particular the requirement that they pay out the majority of profit as dividends to shareholders and the fact that most of those dividends are non-qualified (i.e., taxed at a higher rate than qualified dividends)—investors may prefer to exclude REITs from tax-sensitive portfolios and instead hold them in tax-deferred accounts.

Tax-sensitive investors may prefer to hold municipal bonds in their fixed income allocation. For example, Dimensional's suite of municipal bond portfolios, which incorporate the firm's process-driven and cost-effective approach to pursuing higher expected bond returns, are designed to provide federally tax-exempt income.

ASSET ALLOCATION AND INVESTOR VALUES

Investors may wish to incorporate additional considerations into their asset allocation. For example, those who want to reduce their portfolio's exposure to firms with less sustainable business practices or firms involved in controversial activities could achieve this goal with Dimensional's sustainability or social-focused strategies.

Dimensional has managed value-added sustainability and social investment solutions for more than two decades.[11] These well-diversified equity and fixed income strategies are designed to address the issues most important to environmentally focused or socially mindful investors without compromising on sound investment principles. Dimensional separately managed accounts (SMAs) further allow investors to incorporate specific environmental, social, and governance considerations into the design of their personalized portfolios. All of these offerings provide investors the ability to build robust global asset allocations that have a consistent social or sustainability approach across the total portfolio.

THE DIMENSIONAL DIFFERENCE

When it comes to asset allocation, Dimensional applies a robust framework and thoughtful implementation.

We believe that building a broadly diversified portfolio that consistently focuses on the reliable drivers of expected returns and continuously balances the tradeoffs among competing premiums, diversification, and costs is a more reliable way to pursue higher expected returns than relying on capital market assumptions or opaque optimization techniques.

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1. Wei Dai and Warwick Schneller, "To Hedge or Not to Hedge: A Framework for Currency Hedging Decisions in Global Equity & Fixed Income Portfolios" (October 1, 2020). Available at SSRN: https://ssrn.com/abstract=3703333.

2. Dai and Schneller (2020).

3. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book equity.

4. For example, see Eugene F. Fama, Kenneth R. French, "The Cross-Section of Expected Stock Returns," *Journal of Finance* 47, no. 2, (June 1992); Eugene F. Fama, Kenneth R. French, "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33, no. 1, (February 1993); Eugene F. Fama, Kenneth R. French, "Profitability, Investment and Average Returns," *Journal of Financial Economics* 82, no. 3 (December 2006); Eugene F. Fama, Kenneth R. French, "A Five-Factor Asset Pricing Model," *Journal of Financial Economics* 116, no. 1 (April 2015); Eugene F. Fama, Kenneth R. French, "International Tests of a Five-Factor Asset Pricing Model," *Journal of Financial Economics* 123, no. 3 (March 2017); Robert Novy-Marx, "The Other Side of Value: The Gross Profitability Premium," *Journal of Financial Economics* 108, no. 1 (April 2013); and Gerard O'Reilly and Savina Rizova, "Expected Profitability: A New Dimension of Expected Returns" (white paper, Dimensional Fund Advisors, June 2013).

5. For further discussion, see Kaitlin Hendrix, "Developing Dimensional Wealth Models" (white paper, Dimensional Fund Advisors, 2020).

6. For example, see Eugene F. Fama, Kenneth R. French, "Industry Costs of Equity," *Journal of Financial Economics* 43, no. 2 (February 1997); and Stanley Black and Wei Dai, "Assessing the Relative Magnitude of Premiums" (white paper, Dimensional Fund Advisors, 2021).

7. Wei Dai, "Premium Timing with Valuation Ratios" (white paper, Dimensional Fund Advisors, 2016); James L. Davis, "Mean Reversion in the Dimensions of Expected Stock Returns" (white paper, Dimensional Fund Advisors, 2014).

8. Warwick Schneller, "Market Timing: The Built-in Hurdle" (Dimensional Fund Advisors, 2017).

9. Marlena Lee, "Stress Testing Monte Carlo Assumptions" (Pension Research Council Working Paper October 2013); James L. Davis, "Efficient Frontiers Constructed with Historical Data Can Be Misleading" (October 2008).

10. For further discussion, see the following Dimensional white papers: David Plecha and L. Jacobo Rodríguez, "A Market-Driven Approach to Fixed Income" (June 2016); and Wei Dai, Joseph Kolerich, and Douglas Longo, "Pursuing Higher Expected Returns with Duration Constraints" (October 2017).

11. For additional information on Dimensional's sustainability and social strategies, see Isabelle Williams and Marilyn Giselle Hazlett, "The Sustainability Opportunity" (Dimensional Fund Advisors, March 2021); "Sustainability Core Equity Funds" (Dimensional Fund Advisors, March 2019); "Global Sustainability Fixed Income Strategy"

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RISKS

Investments involve risks. The investment return and principal value of an investment may fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original value. Past performance is not a guarantee of future results. There is no guarantee strategies will be successful.