

Dynamic Asset Allocation: An Active Path to Superior Portfolio Diversification

February 2017



Thomas Zimmerer, Ph.D.
Managing Director,
Senior Product Specialist
Multi Asset Team, U.S.



Michael Stamos, Ph.D., CFA
Director,
Senior Portfolio Manager
Multi Asset Team, U.S.

Nearly a decade after the 2008 global financial crisis, the primary strategies used to manage risk at the time—mainly asset class and geographic diversification—are still in place and largely unchanged. Although many institutional investors were disappointed by the performance of those strategies during that tumultuous period, better replacement alternatives have been hard to come by. The search for new solutions is taking on even greater urgency today amid deepening concerns about the prospects of increased market volatility at a time of political and macro-economic uncertainty, and the ongoing challenge of generating yield in an environment of low and even negative interest rates.

We believe that the introduction of dynamic asset allocation strategies to a portfolio can help institutions manage these risks while also providing a new source of returns beyond security selection and traditional asset allocation. By employing a sophisticated investment process that identifies and responds to trends within and across asset classes, a range of dynamic asset allocation approaches can be used as building blocks to enhance portfolios' diversification as well as improve risk mitigation and potential returns.

In this paper, we explain the fundamental principles behind dynamic asset allocation, why we believe that these strategies can add value to institutional portfolios, and present three approaches through which institutions can deploy these strategies to meet differing needs in their investment portfolios (e.g., risk mitigation, potential alpha generation and diversification benefits).

Key Takeaways

- Risk management through traditional portfolio diversification has limitations that can cost institutional investors dearly when they need it most: In times of financial-market distress.
- Dynamic asset allocation can enhance diversification and help investors manage “fat-tail” risks by identifying positive and negative trends across asset classes, and “up- or down-risking” portfolios accordingly.
- Dynamic asset allocation offers different approaches that can be deployed to play different roles in an institutional portfolio, depending on investors' objectives and constraints.

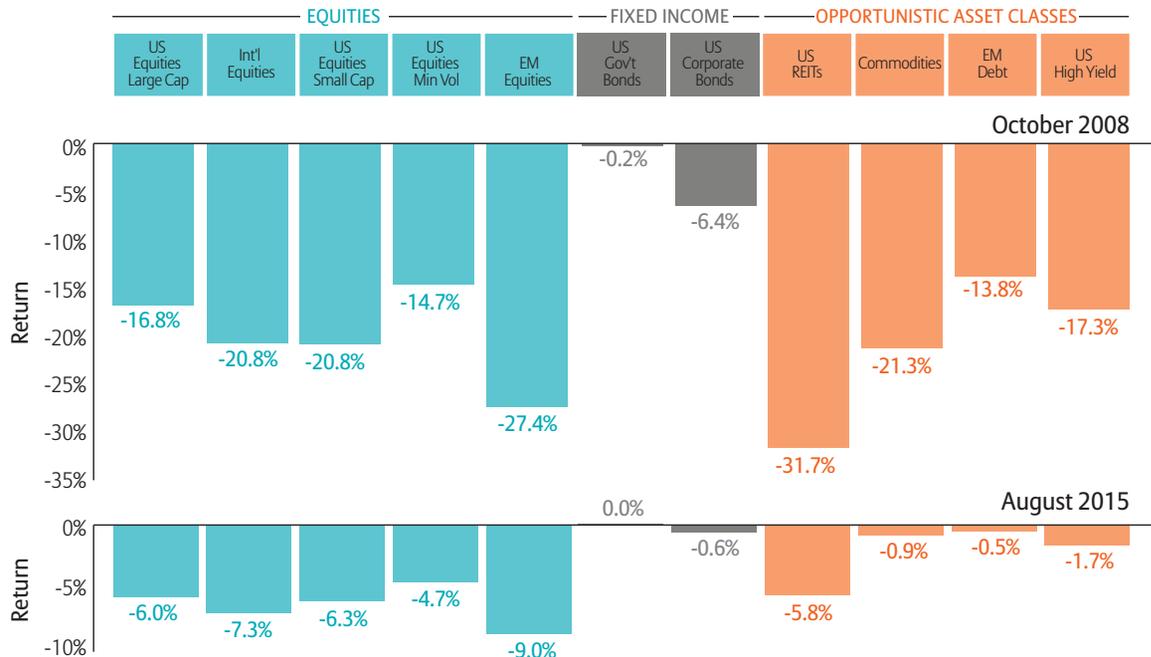
The Limits of Diversification

When it comes to risk management, traditional portfolio diversification has one main shortcoming: It appears to fail when you need it most.

Modern Portfolio Theory showed that investors could increase their return potential and simultaneously lower their risk profile by investing in a diversified range of assets. This concept—which holds merit to this day—has revolutionized investing, especially for pension plans, many of which have constructed their entire portfolios on the tenets of diversification.

Exhibit 1: When it comes to risk management, traditional portfolio diversification has one main shortcoming: It appears to fail when you need it most

Individual asset class return



Source: Bloomberg. Past performance is not a reliable indicator of future results. US Equities Large Cap are represented by the S&P 500 Total Return Index, International Equities are represented by MSCI Daily TR Gross World Ex US Index, US Equities Small Cap are represented by the Russell 2000 Index, US Equities Min Vol are represented by the MSCI USA Minimum Volatility Index, EM Equities are represented by the MSCI Daily TR Gross EM USD Index, US Government Bonds are represented by J.P. Morgan GBI US Unhedged LOC Index, US Corporate Bonds are represented by BofA Merrill Lynch Corporate US Bond Index, US REITs are represented by the FTSE E/N All Equity REITs Total Return Index, Commodities are represented by the Bloomberg Commodity Total Return Index, EM Debt is represented by the JP Morgan GBI US Unhedged Local Total Return Index and US High Yield is represented by the iBoxx USD Liquid High Yield Index.

However, the global financial crisis provided a painful demonstration of the limitations of that strategy (*Exhibit 1*). During the crisis, asset classes once thought to be complementary showed remarkable positive correlation as equities, fixed income and opportunistic asset classes became bunched closer together on the efficient frontier. Even years after that historic event, asset classes continue to show much closer correlations than in the past. In August 2015, for example, amid fears of a China economic slowdown and worsening Greek debt woes, most asset classes again fell in unison, providing another nerve-wracking reminder of the limitations of traditional diversification.

Why is that the case? Explanations abound, and much financial and academic research has been devoted to it. That said, a thread appears common along the spectrum of theories: In an extremely interconnected financial world, potential exogenous shocks may spark systemic risk factors more quickly—and more often—than traditionally predicted by statistical distribution modeling. In other words, events that were

expected to happen less often end up happening more often. So how does one manage these “fat-tail” risks properly? We believe that a dynamic approach to asset allocation can help.

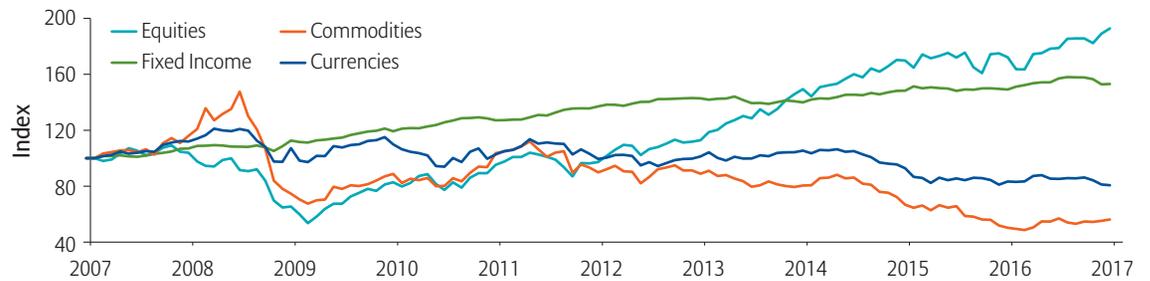
The Dynamic Alternative

One step that many institutions have taken in an attempt to enhance risk management and improve risk-adjusted returns is the addition of multi-asset strategies to their portfolios. However, these investors run the risk of falling short in their pursuit of both goals. The reason: In many cases, rather than providing true diversification, the addition of multi-asset strategies simply doubles up on beta exposures already existing in the portfolio.

Dynamic asset allocation can help avoid this problem and provides more effective diversification. How? The central insight behind dynamic asset allocation is that asset classes move in trends. There is a strong body of academic research supporting trend-following and momentum-based investment strategies. This research explains the existence, persistence and

Exhibit 2: Most of the time, asset classes tend to move in trends, which can be explored to enhance diversification and generate potential returns

Equities, Fixed Income, Commodities and Currencies from January 2007 to December 2016



Source: Allianz Global Investors

Equities are represented by the S&P 500 Index, Fixed Income by the Barclays US Aggregate TR Index, Commodities by the Bloomberg Commodities Index and Currencies by the USD/EUR exchange rate. Past performance is not indicative of future results.

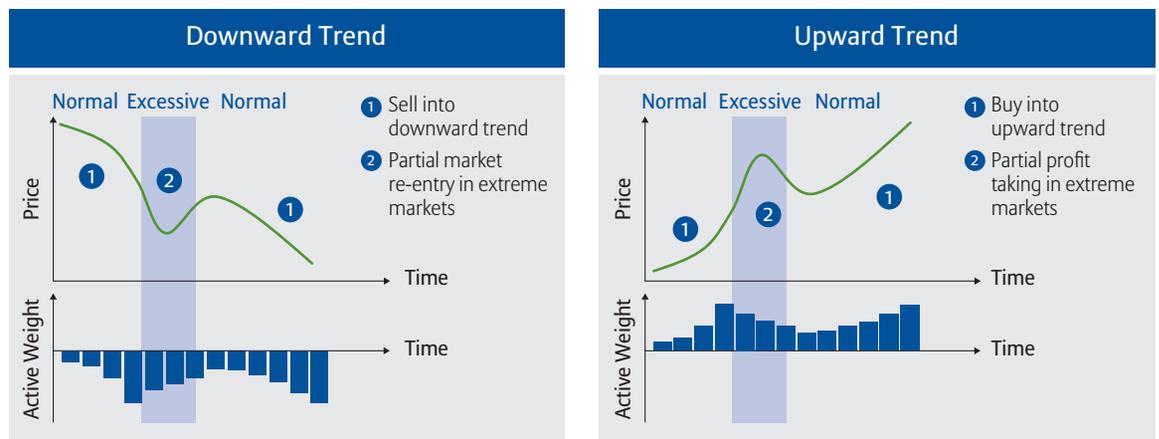
mean-reversion of trends across and within asset classes. As illustrated in *Exhibit 2*, equity markets over the past decade have been characterized by persistent up- and down-trends, with occasional sideways markets like in 2007 and 2015. Over the same period, fixed income markets have demonstrated steady up-trends followed by periodic down-trends, while commodities and currencies display shorter and faster-reversing trends. One key observation illustrated in the exhibit is the fact that trends exist not only within asset classes, but across different asset classes as well. And they can be measured and exploited to enhance diversification and potentially generate enhanced risk-adjusted returns.

Dynamic asset allocation operates on a rules-based, repeatable process that identifies “trending” and “mean-reverting” return patterns. Based on this pattern recognition, the process can “up-risk” or

“down-risk” the portfolio according to changing market conditions, and drive decisions about when to take profits and when to re-enter markets (*Exhibit 3*). By identifying trends and responding with pro-cyclical (going with the trend) and anti-cyclical (going against the trend) allocation measures, the resulting allocation seeks to balance as many return-seeking assets as possible with as many defensive assets as necessary. There is no need to “forecast” trends; dynamic asset allocation achieves its results by observing and responding with active adjustments to the allocation.

For institutional investors, this process has the potential to provide two main benefits: Drawdown protection in down markets and crises, and return enhancement in positive market environments. For pension plans faced with a low-growth, low-rate environment, the ability to participate in rising markets and better preserve capital in declining markets can result in a better alignment of

Exhibit 3: Dynamic asset allocation aims to identify positive and negative trends across asset classes and “up-risk” or “down-risk” the portfolio accordingly



Source: Allianz Global Investors

The information and charts above are provided for illustrative purposes only, illustrating how the pro-cyclical and anti-cyclical process is implemented, and are not accurate representations of the characteristics of an actual portfolio. The charts do not reflect actual data or show actual performance and are not indicative of future performance.

assets with liabilities. Finally, in its most unconstrained form, dynamic asset allocation can target alpha creation in both up and down market cycles.

Three Approaches to Dynamic Asset Allocation

Dynamic asset allocation can be applied to a portfolio through several approaches, each with characteristics and investment objectives that will appeal to different institutions based on portfolio needs, objectives and constraints. It can be delivered through three main approaches: 1) Dynamic Beta Enhancement, 2) Dynamic Risk Parity and 3) Dynamic Alpha (*Exhibit 4*).

Each of these approaches brings some level of return enhancement and risk mitigation. The remainder of this section delves into the details of each approach.

Dynamic Beta Enhancement

This approach acts as an enhanced, dynamic version of an investor's existing, static portfolio. When implemented, it reflects a portfolio's original risk/return profile—while injecting the element of dynamic allocation as an enhancer and reducing correlations of the overall portfolio to individual asset classes.

In a Dynamic Beta Enhancement approach, the investor maintains the portfolio's existing allocation benchmark, which is used to define the investment universe around which the allocation ranges can be applied. This universe can be further expanded by opportunistic, off-benchmark assets according to investors' desired return profile.

Dynamic Beta Enhancement approaches seek to deliver both risk mitigation and return enhancement. Investors can choose which of these goals to emphasize by selecting a relative or asymmetric return focus.

A relative return profile targets a certain degree of return enhancement by applying symmetric allocation bands around the static benchmark weights, leading to an outperformance target independent of negative and positive markets. The sizing of allocation ranges is determined by the tracking error the investor is willing to take.

The asymmetric approach is appropriate for investors with a focus on risk mitigation. The strategy applies asymmetric allocation leeway around the benchmark, resulting in allocation bands that allow more down-

risking than up-risking. As such, the outperformance potential is more pronounced in negative than in positive trend-markets, leading to an asymmetric return distribution.

In selecting the most suitable approach, investors should keep in mind that Dynamic Beta Enhancement strategies provide greater amounts of diversification benefits to the existing portfolio with greater levels of active allocation leeway, or wider bands.

Dynamic Risk Parity

Like Dynamic Beta Enhancement, the Dynamic Risk Parity approach applies the dynamic asset allocation process to an existing portfolio, according to existing allocation benchmarks. In this case, however, those allocation parameters are expressed in risk-weights as opposed to dollar-weights.

A risk parity portfolio divides overall targeted volatility equally among chosen asset classes, generally including equities, fixed income and real assets like commodities. An even distribution of risk is achieved by scaling asset-class weights up or down according to the different volatility levels of the asset classes in the portfolio.

Since volatility of fixed-income assets is typically much lower than that of equities and commodities, risk parity portfolios are generally fixed-income heavy. To achieve a volatility profile similar to that of traditional multi-asset portfolios, managers using risk parity approaches must employ leverage in the fixed income bucket. Since volatilities and correlations among asset classes change over time, the composition of the risk parity portfolio will change in step to adapt. Due to this construction, a multi-asset risk parity portfolio can offer significant diversification benefits, and can be viewed as complementary to an existing portfolio with similar volatility.

However, the active adjustment of portfolio composition to maintain a position of risk parity does nothing to alter the risk allocations assigned to individual asset classes or the overall risk level of the portfolio as market conditions change. Adding a dynamic element to the process can address this shortcoming and create new benefits for investors.

Rather than targeting a constant volatility at all times, a Dynamic Risk Parity approach gives the manager discretion to alter risk allocation within predefined constraints, down-risking and up-risking portfolio and asset class volatility levels according

to changing market trends. This process of dynamic asset allocation can deliver greater levels of diversification, return enhancement and risk mitigation.

Dynamic Alpha

Dynamic Alpha uses managed futures to deliver dynamic asset allocation in its highest-octane form. Of all the three dynamic asset allocation approaches, Dynamic Alpha gives the manager by far the most discretion. Managers invest in equities, fixed income, commodities and currencies without being constrained by any specific benchmark, as opposed to applying their dynamic allocation process to a neutral cash position with symmetric allocation bands.

While benchmark-oriented concepts like Dynamic Beta Enhancement and Dynamic Risk Parity seek to deliver beta plus alpha, Dynamic Alpha approaches look to generate pure alpha from asset-class trends. While the first two approaches can mitigate risk by underweighting or avoiding unattractive asset classes, Dynamic Alpha can use short exposures, allowing the portfolio to benefit not only from rising but also from falling asset-class trends.

The absolute return-approach of managed futures is reflected in the fact that return targets are expressed in a money-market-plus format. However, excess return targets are typically in line with returns associated with equity investments, with enhanced diversification benefits. This framework results in a portfolio that is strategically uncorrelated to equity and bond markets.

Conclusion

Dynamic asset allocation represents a sophisticated option for institutional investors seeking alternatives to traditional diversification-based asset allocation strategies. By utilizing an investment process that identifies and responds to trends within and among asset classes, we can create a range of dynamic asset allocation solutions that deliver different benefits and meet the unique needs of individual institutions. By selecting the dynamic asset allocation approach that best aligns with their own portfolios, institutional investors can access varying degrees of diversification, risk mitigation and return enhancement.

Exhibit 4: Dynamic asset allocation approaches can play different roles in an institutional portfolio, depending on investors' investment objectives and constraints

	Dynamic Beta Enhancement	Dynamic Risk Parity	Dynamic Alpha
Main function in portfolio	Dynamic enhancement of static portfolio	Beta-diversification through risk-balanced approach	Equity-like return potential with more diversification
Offers solutions to investors who...	...are constrained by predefined Strategic Asset Allocation and allocation bands	...can use leverage to enhance existing dynamic or passive exposures	...are looking to enhance their Alternatives allocation through a liquid multi-asset strategy
Seeks to improve portfolio efficiency by...	...potentially enhancing returns in up-trending markets while providing risk mitigation in down-trending markets	...adopting a risk-parity approach to potentially enhancing returns in up-trending markets and mitigate risk in down-trending markets	...potentially enhancing returns in up-trending markets and providing positive returns in down-trending markets
Correlation to equities	High	Medium	Low
Correlation to fixed income	Medium	Medium	Low

Source: Allianz Global Investors

About the Authors

Thomas Zimmerer, Ph.D.

Managing Director, Senior Product Specialist

Dr. Thomas Zimmerer is a senior product specialist, managing director and global head of product specialists Multi Asset with Allianz Global Investors, which he joined in 2014. As a member of the Multi Asset U.S. portfolio-management team, he focusses on the Firm's dynamic multi-asset strategies. Mr. Zimmerer has investment-industry experience since 1997. Before joining Allianz Global Investors, he was a professor of Finance and Investments at the University of Applied Science in Ansbach, Germany, and served as senior consultant for Alpha Portfolio Advisors, a German-based consulting firm, advising institutional investors. Prior, Mr. Zimmerer was a portfolio manager with Allianz Asset Management on active bond strategies and active protection strategies. He has a master's degree in Economics and Finance and a Ph.D. in Econometrics from the University of Regensburg, Germany.

Michael Stamos, Ph.D., CFA

Director, Senior Portfolio Manager

Dr. Michael Stamos is a senior portfolio manager and a director with Allianz Global Investors, which he joined in 2007. As a member of the Multi Asset US team, Dr. Stamos is responsible for the research and development of systematic asset allocation strategies and is lead portfolio manager for dynamically managed global allocation funds. Prior to joining Allianz Global Investors, Dr. Stamos served from 2003 to 2007 as a researcher at the Institute of Investment, Portfolio Management and Pension Finance at the University of Frankfurt. Dr. Stamos has published research papers in highly ranked academic and practitioner journals and has presented his work at international conferences. Dr. Stamos holds a Ph.D. in finance (summa cum laude) and a master's degree in quantitative finance (with distinction) from J.W. Goethe University, Frankfurt, Germany.

Investing involves risk. The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security.

The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted.

This material has not been reviewed by any regulatory authorities. In mainland China, it is used only as supporting

material to the offshore investment products offered by commercial banks under the Qualified Domestic Institutional Investors scheme pursuant to applicable rules and regulations.

This material is being distributed by the following Allianz Global Investors companies: Allianz Global Investors U.S. LLC, an investment adviser registered with the U.S. Securities and Exchange Commission; Allianz Global Investors GmbH, an investment company in Germany, authorized by the German Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin); Allianz Global Investors Asia Pacific Ltd., licensed by the Hong Kong Securities and Futures Commission; Allianz Global Investors Singapore Ltd., regulated by the Monetary Authority of Singapore [Company Registration No. 199907169Z]; Allianz Global Investors Japan Co., Ltd., registered in Japan as a Financial Instruments Business Operator [Registered No. The Director of Kanto Local Finance Bureau (Financial Instruments Business Operator), No. 424, Member of Japan Investment Advisers Association]; Allianz Global Investors Korea Ltd., licensed

by the Korea Financial Services Commission; and Allianz Global Investors Taiwan Ltd., licensed by Financial Supervisory Commission in Taiwan.

© 2017 Allianz Global Investors U.S. LLC

1633 Broadway, New York, NY 10019, us.allianzgi.com
105297 | 02244

Allianz 
Global Investors