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A case for dynamic asset allocation for long term investors

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Abstract

The strategic asset allocation (SAA) decision represents the key driver of results for long term institutional investors. In practice this decision translates into a static portfolio with fixed allocations to narrowly defined asset classes which is not responsive to time varying expected return and risk driven by changes in the economic environment for example. In this context we define dynamic asset allocation (DAA) as the process of implementing time varying expected excess returns (returns over the risk free rate) and/or expected risk with a medium term time horizon. In this paper we assess its applicability for long term institutional investors, review different forms of implementation seen in practice, and discuss key requirements and governance challenges in an institutional context.

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Keywords: strategic asset allocation; dynamic asset allocation; expected excess return; investment horizon; liabilities; funded status; funded ratio; mean reversion.

1. Introduction

The strategic asset allocation (SAA) decision represents the key driver of results for long term institutional investors like sovereign wealth funds and pension funds. The mainstream theoretical approach used to set the SAA relies on the modern portfolio theory and the mean-variance optimization framework. For these longer term investors, the asset allocation review process is typically done infrequently (e.g. every 3-5 years) and it involves a comprehensive analysis of the long term risk tolerance and preferences of the asset owners, cash flow profile of the fund, and, liquidity needs and liability profile. In the case of pension funds and sovereign wealth funds this is usually done through an asset-liability management (ALM) study. Asset properties are modelled on a forward-looking basis using long term expected return and risk assumptions which reflect unconditional expectations, in other words, some sort of equilibrium view of financial markets and resulting risk premiums. The output of the process is a static asset allocation expected to maximize the investment objective (for example either as a real return target for sovereign wealth funds and/or as a surplus return target in the case of pension funds) over the long investment horizon (e.g. 10-15 years) given risk constraints. In addition, active risk versus the static SAA is allocated to portfolio managers focused on generating excess returns over short investment horizons (typically up to 1 year). Embedded in this approach, and what is reflected in the SAA, is the view that markets are efficient and thus have close to constant properties with respect to expected risk and return, and that these properties are best captured by a strategic long term allocation to asset classes. In this view of the world, changes in the investment opportunity set are unpredictable and best captured by skilled active management.

From an empirical point of view increased evidence over time of asset bubbles and market crashes, return distributions that exhibit

fatter tails and asset return volatilities and correlations which are not constant over time supports the concepts of ‘fair value’ and mean reversion around fair value in asset prices. This, in turn, implies that expected excess returns (returns in excess of the risk free rate) may vary over time. Theoretical and empirical evidence of time varying expected excess returns and relative risk aversion challenged the optimality of the static approach to asset allocation - see for example Merton (1971), Fama and French (1988), Campbell and Shiller (1988) and more recently Campbell and Cochrane (1999, 2002). Their work and the work of others suggested that even in an informational efficient market with rational investors, expected returns can change over time due to changes in preferences to volatility in consumption and wealth. Furthermore, this body of literature suggests that these changes in expected excess returns and risk are at least somewhat predictable over the medium term by using observable state variables linked to the economic or business cycle. Vliet and Blitz (2009) find that the risk of a static SAA allocation tends to increase during recession periods, which may be undesirable for a risk-averse investor. Also they show that the average return of various asset classes is dependent on the economic environment. Campbell and Viceira (2005) show that risk, defined as the conditional co-variances and variances per period of asset returns may be significantly different across investment horizons creating a term structure of risk-return trade-offs.

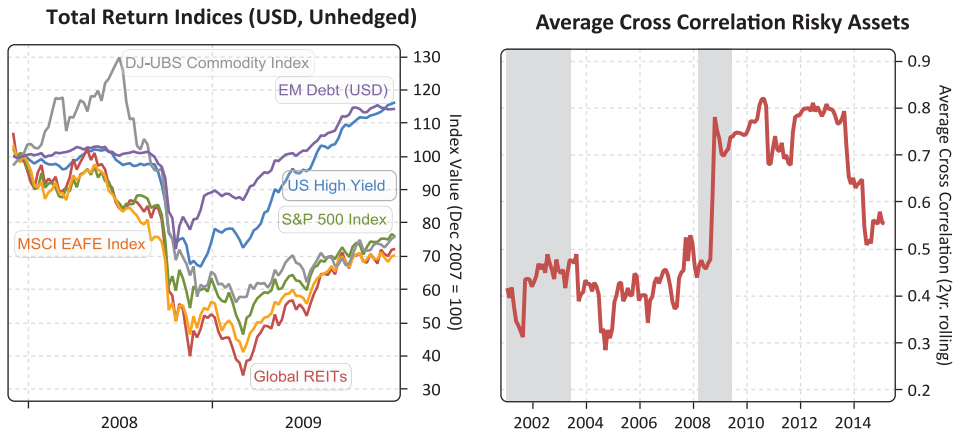


Fig.1 (a) Risky assets returns; (b) Average cross correlation
 Source: Macrobond, Bloomberg, Bank of America Merrill Lynch;

Over the last decade, and especially following the financial crisis, institutional investors started to show increased interest in exploring and exposing the shortcomings of the mainstream approach to asset allocation. The lack of ‘responsiveness’ of the strategic asset allocation to the extreme market conditions of 2008 resulted in severe negative nominal returns for long term portfolios with large allocations to risky assets, and was even more concerning for pension funds who saw their funded ratio plummet in a ‘perfect storm’ scenario where low interest rates further exacerbated the impact of the drop in asset values on the funded status (see Fig.2,3 below).

The market recovery that followed further re-enforced the appeal of the idea of fair value and mean reversion in financial markets and increased the appetite of institutional investors to look for ways of making the asset allocation more responsive to changes in the macroeconomic and market environment over the medium term, hence in making the asset allocation more ‘dynamic’. Various forms of ‘dynamism’ have been observed across the portfolios of institutional investors ranging from alternative weighting schemes for benchmark indices and ‘smarter’ rebalancing strategies, to more fundamental approaches that seek to break the link between risk allocation and narrowly defined asset classes. Examples of the latter include risk-based, factor-based asset allocations and risk-parity type of strategies; however implementation challenges remain and results so far seem to be mixed.

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