Rocaton

INSIGHTS

Incorporating Alternatives in an LDI Growth Portfolio

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EXECUTIVE SUMMARY

* The primary objective of a liability driven investing growth portfolio is to provide defined benefit plans with expected returns which are greater than the expected growth of the plan's liability.
* Historically, public equity strategies have constituted the vast majority of growth portfolios. While long-term returns have been strong, equities are susceptible to significant drawdown risk that may adversely impact a defined benefit plan's funded status.
* We believe plan sponsors should consider certain alternative investment strategies in growth portfolios. These strategies seek to generate attractive returns with less drawdown risk than the broad equity market.
* Importantly, investing in alternatives carries unique implementation and other risks given their added complexity.

Introduction

Many pension plan sponsors following a liability driven investing ("LDI") approach have split their portfolios into hedging assets (e.g. long duration fixed income) and growth assets. The primary objective of the growth portfolio is to provide defined benefit plans with higher expected returns, which should help cover service cost (if the plan is still accruing benefits), pay for plan expenses, improve the plan's funded status, and address longevity and other actuarial risks. Current return expectations for growth portfolios are generally in the mid-single digit range (e.g. 5–8%).

Historically, public equity strategies have constituted the vast majority of growth portfolios. While long-only equity strategies have provided strong returns over long time horizons, equities can be susceptible to sharp and prolonged sell-offs that may adversely impact a plan's funded status. Over the past 20 years, equity markets, as measured by the MSCI All Country World Index, have fallen by more than 20% on three occasions in a twelve-month period, with subsequent recoveries from the troughs lasting between 15 and 53 months. Equity markets have also fallen by more than 45% twice in the last 15 years, taking between 3 and 4 years to recover.

By seeking to exploit a variety of market inefficiencies, alternative investment strategies attempt to generate attractive returns with less risk and/or lower correlation

Constructing an LDI Growth Portfolio

As with many hedging portfolios, growth portfolios will generally be customized to meet a plan sponsor's specific needs. However, there are many overarching principles which should be kept in mind when developing a growth portfolio. Importantly, the growth portfolio's allocation and investment structure will likely change as the Plan funded status changes.

Key points that should be addressed in the construction of a growth portfolio include:

* **Liquidity:** Plan sponsors with shorter time horizons will likely have a smaller opportunity set to choose from as less liquid strategies (e.g., private equity, private real estate) will likely be excluded from consideration.
* **Costs:** Manager fees should be explicitly considered, particularly as it relates to determining the appropriate level of active and passive management.
* **Return Expectations:** Plans that are closer to fully funded will likely have a lower return hurdle and, therefore, may prefer a lower risk growth portfolio.
* **Risk Expectations:** Appropriate levels of downside risk and active risk (e.g. tracking error) should be considered.
* **Complexity:** The number of asset classes and strategies included should generally vary with plan size and funded status.

to traditional asset classes. While alternative investment strategies are heterogeneous and not all strategies are appropriate for a growth portfolio, we believe plan sponsors should consider certain alternative investment strategies. Specifically, Rocaton believes strategies which are expected to approximate or exceed growth portfolio return hurdles with less risk than public equities are attractive candidates for inclusion. Importantly, investing in alternatives carries unique implementation and other risks given their added complexity.

Strategies for Consideration and Their Key Attributes

Below we define a sample of alternative investment strategies which may provide attractive return enhancement and/or risk reduction benefits for LDI growth portfolios. This is not a comprehensive list, and a variety of other alternative strategies may be appropriate, depending on an investor's objectives, risk tolerance, and implementation constraints. Examples of strategies that investors may consider beyond those noted below include: private equity, venture capital, opportunistic credit, long/short credit, managed futures, low volatility equity strategies, and various short duration or high income real estate strategies.

Stressed/Distressed Debt and Other Credit Strategies

Stressed and distressed debt typically refers to strategies which invest—primarily through bank debt, bonds, or trade claims—in companies or assets undergoing significant financial or market stress or which are in bankruptcy. The strategy seeks to cheaply create equity-like corporate exposure during disruptive market events such as restructurings, liquidations, downgrades, and technical selloffs. During such events, traditional and ratings-based holders often become forced sellers, creating an opportunity to potentially buy assets cheaply. While these strategies have historically transacted primarily in corporate entities and assets, distressed managers may also participate in trading distressed structured products, such as Residential Mortgage Backed Securities ("RMBS") and Collateralized Loan Obligations ("CLOs"), as well as other assets.

Long/Short Equity

Long/short equity managers can take both long and short positions in public equity markets and are typically not constrained to a benchmark. In general, long/short equity managers seek to generate comparable returns to equity markets over a full cycle, with lower net market exposure. These managers can also dynamically manage their exposures, adding or reducing beta at various points in the cycle. Within long/short equity, managers employ a variety of styles, typically defined by amount of leverage used, market exposure, geographic area of focus, use of single name alpha shorting versus portfolio level hedging, and the ability to trade in instruments other than equity securities.

Event Driven

Event driven strategies can include a broad range of styles such as activist, merger arbitrage and credit arbitrage. In general, these strategies attempt to take advantage of market inefficiencies that occur before or after a corporate event such as a merger, acquisition, bankruptcy or spinoff. Within this universe, we prefer managers who have the flexibility and expertise to invest across the capital structure as the investment environment changes, use low-to-modest leverage and focus on a range of catalysts to unlock value. These managers can be quite opportunistic and typically have broad investment mandates with portfolio exposures that can change considerably over time.

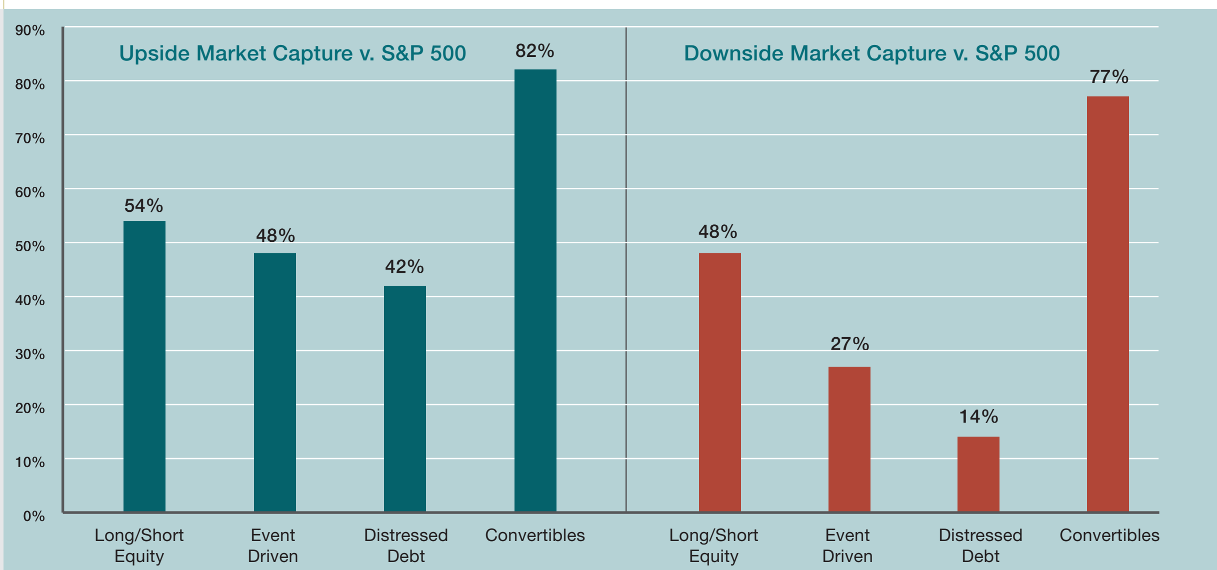
Convertibles

Convertible bonds, essentially, combine a straight corporate bond with a warrant on the issuing company's common equity. A convertible bond will generally rank senior in the capital structure to common and preferred stock and junior to straight bonds and bank debt. Long-only, active management in convertibles has the ability to produce attractive risk-adjusted returns through meaningful upside participation in rising equity markets and less downside participation in falling markets. There are several actively managed approaches to investing in convertibles such as "rebalancing" and "busted" strategies. A rebalancing approach typically involves owning "balanced" convertibles in which the underlying equity option is at or slightly in the money. Busted strategies, which buy convertibles that trade close to or below their theoretical bond floors and have little equity sensitivity remaining, are generally suitable as replacements for high yield or non-investment grade exposures.

Performance Considerations

Each of the alternative strategies detailed above has historically captured significantly less than 100% of the public equity market's upside and downside (see Figure 1). For example, long/short equity has captured 54% of the S&P 500 upside over the trailing 15-year period ending March 31, 2015 and 48% of the downside over the same time period.

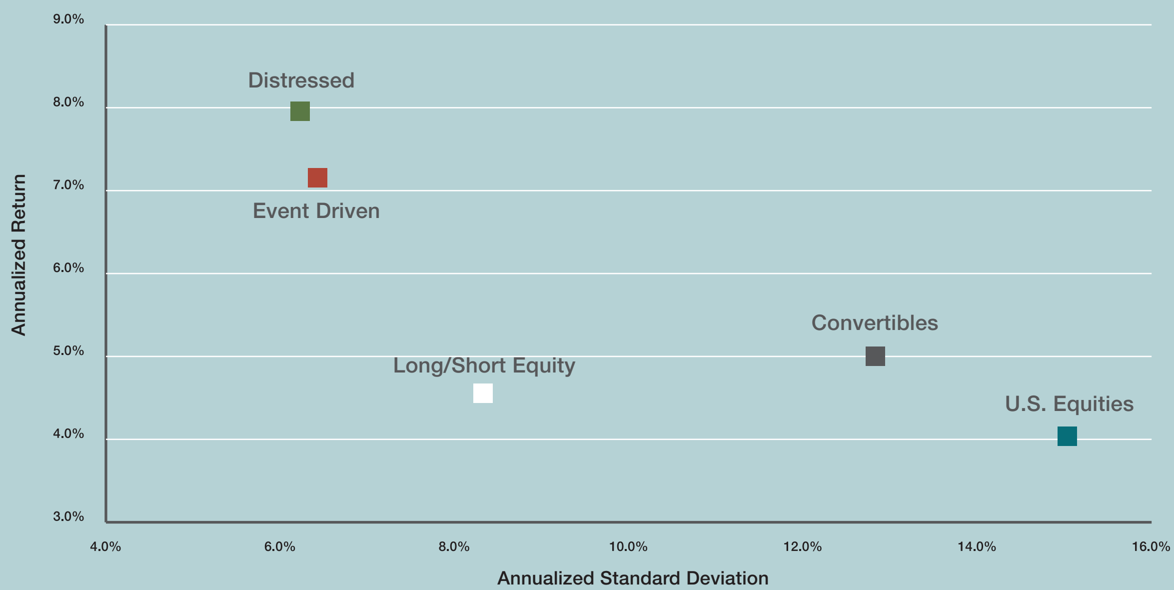
Figure 1:
Market Capture Ratios — 15 Years ending March 31, 2015



Sources: Hedge Fund Research, BofA Merrill Lynch. Indices represented include HFRI Equity Hedge, HFRI Event Driven, HFRI Distressed, BofA ML All Convertibles.

This performance characteristic has allowed each to preserve capital relative to long-only equity strategies in times of equity market drawdowns. The result of this improved downside protection has been a risk/reward profile that is improved relative to long-only equities in the 15-year period (April 2000 to March 2015) where equity markets had two significant draw-downs of greater than 45% (see Figure 2 below).

Figure 2:
Annualized Risk/ Return — 15 Years Ending March 31, 2015



Sources: Hedge Fund Research, BofA Merrill Lynch, S&P. Indices represented include HFRI Equity Hedge, HFRI Event Driven, HFRI Distressed, BofA ML All Convertibles, S&P 500.

However, in a period with no significant drawdowns, such as the most recent 5 year period, the alternative strategies will generally underperform equity markets, albeit with a lower risk profile (see Figure 3). The realized returns may still meet the expected return hurdles of a growth protfolio in these periods, but investors will need to set expectations appropriately and take a long-term approach to investing if investing in alternative strategies during periods of double digit returns and unusually low volatility in the public equity market.

Figure 3:
Annualized Risk/ Return — 5 Years Ending March 31, 2015

Sources: Hedge Fund Research, BofA Merrill Lynch, S&P. Indices represented include HFRI Equity Hedge, HFRI Event Driven, HFRI Distressed, BofA ML All Convertibles, S&P 500.

While the strategies detailed above differ in their principal source of return enhancement or risk reduction, over time they have collectively performed well when compared to public equity. For this reason, these strategies may be attractive additions to growth portfolios.

Implementation Considerations

A variety of implementation considerations may impact plan sponsors' allocation decisions and should be considered with regard to alternative investments in particular. When moving a portion of a public equity portfolio to alternative strategies such as those outlined above or other strategies that may meet the required risk and return characteristics, investors are typically trading market risk for other risks. Additional points to consider are listed below.

* A plan's time horizon is an important determinant of implementing an investment program. The shorter the time horizon, the more important liquidity and simplicity are; the longer the time horizon, the more complexity and illiquidity can be tolerated. Such considerations can impact both whether alternative options are appropriate for a particular plan, and, if so, which alternative strategies are most attractive. For example, plan sponsors that are considering offering lump sums or embarking on annuitization within the foreseeable future should consider asset classes that can be accessed via relatively liquid vehicles. However, even de-risking clients considering or already settling portions of their liabilities may still have sufficient liquidity in their portfolios to continue to use alternatives in some fashion.
* Periodically, illiquidity premia form a large part of the return advantage in strategies within the alternatives universe. Vehicle liquidity should match the underlying investment strategy, and should be considered given the plan's overall liquidity needs. For those plan sponsors that can tolerate illiquidity, some alternatives managers may offer fee discounts in exchange for longer lockup periods.
* Higher fees on many alternative investment options should be considered in the context of expected alpha potential. Rocaton believes that investors should evaluate alternatives against traditional options in the context of both risk and expected net returns.
* The costs of monitoring should be explicitly considered in this process. Alternative investment firms may have increased operational risk due to the complexity of the strategies executed. Additionally, because these managers do not manage relative to a benchmark, monitoring investment performance which is more idiosyncratic can require increased levels of due diligence and ongoing monitoring. For clients with sufficient capital, separate accounts in alternative strategies may be an attractive option.
* Manager selection is another critically important implementation consideration when allocating to alternative strategies. The lack of benchmark-awareness typical of these strategies requires manager skill to drive performance, but can also lead to much higher tracking error and performance dispersion amongst peers. For example, sample data suggests that median annual performance dispersion between the 25th and 75th percentile hedge fund managers in the 2008-2014 time frame equated to 12.9% for long/short equity and 12.4% for event

driven strategies. Because of this dispersion, manager selection carries increased importance when allocating to alternative investment strategies. Topics to consider include the quality of the investment research, portfolio construction and risk management processes, organizational stability, alignment of interests with investors, and operational controls. Also critically important given the performance dispersion is setting clear performance expectations for each manager and monitoring carefully for style drift.

* Performance of alternative managers should reflect the plan sponsor's investment objectives. Ideally, alternatives' performance should be measured relative to their peer universes and to the market-related benchmark which the strategy is aiming to outperform (i.e. equity markets for a long/short equity strategy). Additionally, the returns should be compared to the ultimate benchmark which is the required rate of return for the growth portfolio. The performance evaluation of alternative managers should take into account not just return but also risk (both of the strategy on a standalone basis and its contribution to total portfolio risk) as adding such strategies to a growth portfolio aims to improve risk-adjusted returns.

In addition to the above considerations, plan sponsors should have clear objectives and expectations for adding alternative investments into their growth portfolios. These may include return enhancement, risk reduction, or diversification. Such objectives will likely be driven by a plan sponsor's risk tolerance and return objectives, which are generally influenced by the plan's characteristics. Despite the seemingly long list of considerations we have outline, we still believe that, if implemented correctly, these alternative strategies have the ability to improve both the plan's growth portfolio as well as the plan's overall portfolio.

Conclusion

Growth portfolios play a key role in liability driven investing for defined benefit plans, and the traditional approach has been to allocate the preponderance of growth portfolio capital to long-only equity strategies. However, as detailed above, alternative investment strategies have demonstrated an ability to meaningfully enhance the risk/return profile of a long-only equity allocation. Following the careful evaluation of the implementation considerations outlined above, investors may wish to consider diversifying their growth portfolios using alternative investment strategies.

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