

# Volatility is a drag

## Steady returns can help win the race for public pension plans

Current events are an important reminder to all institutional investors that a well-thought-out investment plan is the best way to navigate volatile times. We finalize this series with a third publication addressing actions public pension plans can consider in preparation for, or during, volatile markets.

The first publication introduced a framework to ensure sufficient liquidity. The second, highlighted the merits of portfolio insurance and various ways to structure it.

The third installment in the series focuses on investment approaches that can help reduce the portfolio's sensitivity to broad market movements – in other words, reduce volatility. It is well documented that volatility results in a drag on cumulative returns, and therefore on funded status. Let's imagine two investments that produce average returns of 10% over three years:

**Volatile:** +30% | -30% | +30% | Cumulative return is **18%** ( $130\% \times 70\% \times 130\% = 118\%$ )

**Not Volatile:** +10% | +10% | +10% | Cumulative return is **33%** ( $110\% \times 110\% \times 110\% = 133\%$ )

Both have an average annual return of 10%, but the volatile alternate has a lower cumulative return. Volatility drag produces funded status drag. Volatility is a drag!

We want to explore alternative approaches that reduce volatility, and therefore reduce the negative drag on funded status that volatility entails. While some strategies involve less upside participation, this would be particularly effective in lowering the impact of market drawdowns on a portfolio, helping to ensure benefit obligations are met – with minimal cost or disruption to the portfolio and better funded status outcomes. These strategies could also help plans slowly increase their funding position by experiencing positive returns uncorrelated to the market.

- **Unconstrained bond strategies:** Creating a best ideas portfolio across various types of fixed income securities
- **Systematic equity protection:** Systematic strategy for portfolio insurance in drawdown periods
- **Alternative risk premia:** Physical and synthetic strategies, anchored in academic research, designed to have uncorrelated returns to the broad market
- **Overlay - Tactical asset allocation:** Synthetic strategies expressing high conviction views across a variety of asset classes often in the form of overlays

Similar to the first two installments, the presented framework can help plans maintain a steady course of meeting obligations and, when combined with the other themes developed in the previous publications, improve the funding position with less volatility.

### Reducing sensitivity to market movements

In a volatile market environment, plans may desire to simply reduce their exposure. It is difficult to anticipate when adverse market conditions are likely to occur and therefore a combination of strategic and tactical approaches can be attractive for plan sponsors. By adopting these strategies, the plan's objective would partially shift from duplicating broad market returns to stabilizing the plan and growing slowly but steadily in exchange for less stress for both the plan sponsor and the portfolio during market downturns.

These types of investments that exhibit lower sensitivity to broad market movements take on many forms and span across a variety of asset classes. They can use physical (stocks and bonds) or synthetic exposure and are designed to exhibit low to zero correlation to equity and credit markets. The following summarizes a few different approaches that target the same goals but in varying ways.

#### I. Strategic reduction – shifting the asset allocation, reducing timing risk

In this section we highlight a few concepts that are designed to remove the risk of trying to time the market, while still providing benefits in times of market stress.

### Unconstrained bond strategies

Unconstrained bond strategies take a variety of forms, but often have the same primary objective – create a best ideas portfolio across various types of fixed income securities while targeting very low volatility over time. Asset allocation and position sizing within the portfolio is usually based on conviction level.

Analysts can derive their active views through both fundamental and technical analysis with the goal of maintaining the flexibility to invest across a broad spectrum of asset classes and the ability to respond to rapidly changing markets. *Figure 1* highlights a standard opportunity set:

**Figure 1: Unconstrained bond opportunity set**

<b>Investment grade credit</b>	<b>High yield credit</b>
Senior	US high yield
Subordinated	Non-US high yield
<b>Securitized</b>	<b>Governments/Municipals</b>
ABS	Agencies
CMBS	Treasuries
MBS	Taxable municipals
<b>Derivatives</b>	
Credit default swaps	
Treasury futures	
Interest rate swaps	

Source: LGIMA

Return objectives are often expressed as a target return over a reference index often reflecting the return on cash (e.g. return on cash + 2.5%). The expectation is that such return would be achieved over a full market cycle with reduced volatility.

For brevity, we only mentioned bonds here but similar strategies exist across other asset classes, often referred to as absolute return strategies.

### Systematic equity protection – equity collar example

As we highlighted in our second piece, equity protection strategies act as portfolio insurance in drawdown periods – ultimately reducing market sensitivity. Equity collars, or selling one option to finance the purchase of another, are a way to reduce the cost of the protection you want. This can be done on a discretionary or systematic basis. Discretionary management can be beneficial for targeting more specific outcomes on a well-defined timeline [or so that a manager may seek to outperform the market benchmark. A systematic approach is more appropriate for consistently reducing market sensitivity and avoiding market timing risks.

Each systematic strategy exhibits unique characteristics, and as seen in *Figure 2*, we were looking for protection at little to no upfront cost with a sensible approach to the monetization schedule. These strategies often exhibit slightly lower returns but significantly lower volatility, resulting in a higher Sharpe Ratio and meaningfully reduced market sensitivity (or beta). *Figure 2* illustrates some of these characteristics for a sample strategy which systematically buys insurance against drawdowns while foregoing some upside to finance the protection. The combination of protection and foregone upside results in an attractive investment profile that can bring a stable improvement to the plan's funding position over long periods, while providing the much-needed protection in times of market stress. The systematic nature of the strategy can help alleviate concerns around market timing.

**Figure 2: Strategy comparison**

	SPX Total Return	Strategy
Annualized Return	8.2%	7.2%
Volatility	20.5%	11.1%
Sharpe Ratio	33.5%	52.9%
<b>Beta</b>	100.0%	43.0%
Correlation	100.0%	79.8%
<b>Maximum Drawdown</b>	55.2%	24.8%

Source: LGIMA

In our illustration, the sensitivity to market movements (beta) is only 43% accompanied by a significant reduction in portfolio drawdown. While this strategy would experience a higher drawdown than an absolute return strategy, it is also designed to capture more of the upside move. The reduced volatility compared to the benchmark is a welcome feature in this series about what plans should consider doing in anticipation of volatile times.

### Alternative Risk Premia

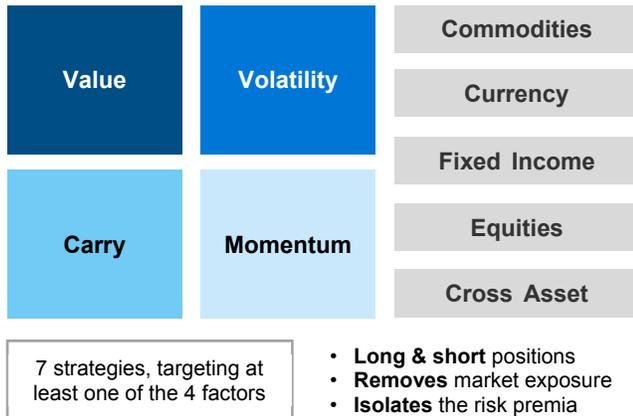
Alternative risk premia strategies, anchored in academic research, are another example of strategies that could help reduce market beta because of their diversifying nature.

Similar to the above, there are many ways to build and manage an alternative risk premia portfolio. However, most operate in a similar fashion – identifying structural and behavioral inefficiencies in the marketplace and building systematic trading strategies to profit off those inefficiencies. Given the flexibility of exposures, synthetic instruments are frequently used. This enables investors to introduce leverage to increase potential return in a capital-efficient manner.

One example of a structural inefficiency exists in the commodities market. Producers, consumers and investors within commodity markets have differing hedging time

horizons which distort the related forward curves. Another example is isolating equity factors, where the strategy invests in a variety of factors (size, momentum, value, etc.) and shorts out the aggregate market beta. In both cases, managers believe they can create repeatable, systematic strategies as these inefficiencies should persist.

**Figure 3: Standard opportunity set**



Source: LGIMA. For illustrative purposes only.

## II. Tactical reduction – overlay strategies

As we saw in *Figure 3*, some strategies focus on temporary “best ideas” and others look to exploit persistent opportunities. In practice, each strategy is assigned a fixed weight at the strategic allocation level. For maximum flexibility and the ability to take advantage of short- to medium-term price dislocations, some investors might consider a tactical allocation approach.

### Tactical Asset Allocation

Tactical asset allocation (TAA) strategies focus on expressing high conviction views across a variety of asset classes. Many strategies use synthetic instruments. For this reason, many investors structure tactical allocations as overlays in their portfolios – a capital-efficient way to experience uncorrelated returns.

Examples of these views are nearly countless – Small vs Large Cap stocks in a certain region, long one country and short another via currencies, or long one sector and short another. *Figure 4* displays a standard vetting process for including tactical positions in a TAA portfolio.

**Figure 4: Huge universe of potential trades**



Source: LGIMA. For illustrative purposes only.

## III. Putting it all together

These strategies are designed to reduce a portfolio’s sensitivity to broad market movements, helping the plan reach its objectives while following a smoother path. While relevant and attractive in isolation, a combination of the strategies we illustrated in the three publications of this series can provide significant benefits to plan sponsors in navigating uncertain markets:

- Design a portfolio that will provide sufficient liquidity without incurring too much return drag – [Read more](#).
- Consider the benefit of low-cost portfolio insurance to reduce the impact of prolonged market drawdowns – [Read more](#).
- Take advantage of absolute return or strategies with less correlation to market movements to provide a smoother path towards the plan’s objectives.

### Continuing the discussion

For brevity and ease of understanding for those less familiar with these approaches, in each of the three papers we simply introduced these concepts. However, there is a lot more to expand upon. We welcome conversations to help investors think through relevant solutions for their needs and the opportunity to explore these themes further.

Whether your plan might benefit from an unconstrained bond strategy, an absolute return strategy, alternative risk premia or tactical asset allocations to help reduce volatility, we are able to assist in each of these areas. Should plans have any interest in further education and related materials, please contact Shauna Conza at [shauna.conza@lgima.com](mailto:shauna.conza@lgima.com) ■

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