Insights

A focus on funded status volatility of corporate DB plans

FTSE Russell

Year after year, corporate DB plan sponsor surveys show controlling funded status volatility (surplus risk) as the top priority for their organizations. When liabilities grow faster than plan assets, additional cash contributions are required. At the same time, pension assets and liabilities have become prominent parts of company financial statements that investors use to evaluate company health.

The need to accurately estimate financial risks presented by the pension continues to increase. Global market swings and low interest rates have greatly impacted the funded status of corporate defined benefit plans over the past decade. Particularly in the last year, wide swings in equity markets have become less predictable, and increased volatility has become more concerning.

A look at how FTSE Russell works with corporate DB plans

Plan sponsors are seeking to hedge against risk and volatility while protecting any improvements in funded status. In this piece, we look at the three main sources of funded status volatility, and explore what FTSE Russell can offer to help plan sponsors address each one.

The three main sources of US defined benefit plan funded status volatility are:

- unhedged exposures to interest rates
- credit spreads
- equities

Pension liabilities are discounted using high quality corporate bond yields, which consist of a treasury component and a credit spread component. Discount rates and, in turn, the corresponding present value of liabilities are impacted by changes in both. Equities are used to meet those sometimes lofty return targets, but can introduce significant volatility and have risk factors uncorrelated with changes in liabilities. Each of these risks should be considered to minimize asymmetric exposure between the market value of assets and the present value of liabilities.

Determining liabilities and minimizing interest rate risk

Before plan sponsors build portfolios to address the sources of volatility on the asset side, they must know which discount rates to use to value liabilities. Some plans still discount liabilities using the expected returns of their assets, which can create a mismatch between a plan's risky assets and its almost risk-free liability. It could also encourage excessive risk-taking in investments.

A more prudent discount rate to use is one that is built specifically for such purposes. An example of that is the FTSE Pension Liability Index—it's based on a custom Aa-rated corporate bond yield curve (the FTSE Pension Discount Curve), a trusted source for plan sponsors and actuaries to value pension liabilities in compliance with the SEC's and FASB's requirements. It is also one of the most commonly used for calculating overall discount rate, liability duration, and key rate durations.

Once the liability is known, plan sponsors looking to properly manage plan assets to liability may want to consider a custom benchmark that uses their specific criteria rather than generic fixed income indexes as benchmarks. Beating a generic benchmark doesn't necessarily mean you are managing effectively to plan liabilities, they may have different durations as well as securities that are not investable given a plan's constraints.

Historically, it is resource intensive to maintain a plan-specific benchmark, but FTSE Russell's Yield Book Q Index Module was built specifically with that function in mind. Custom benchmarks based on a comprehensive suite of FTSE Russell fixed income indexes can be built and published by FTSE Russell in real-time based on client-specific durations, credit rating requirements, and other constraints.

Plans may also want to match durations of the assets with liability to address interest rate risk. In practice, the plan's assets tend to have shorter duration than liability. To decrease interest rate risk without changing current manager line up or asset allocation, plans often extend duration or fine tune key rate duration to match that of the liability by using Treasury STRIPS, or derivatives such as futures and options. The FTSE US Treasury STRIPS Index offers a range of duration choices, and interest rate-based derivatives can be accessed through various exchanges.

Reducing tracking error of assets to liability

Plans often allocate to long duration corporate bonds to better match their assets to liabilities. Plans that are still accruing or have high liability cash flows look for ways to maximize return in this asset class. But at the same time, they may not want to greatly change the duration profile of assets and thereby expose themselves to more interest rate risk or spread risk.

FTSE Russell's work on fixed income factors has demonstrated that the "Value Factor" can be identified in investment grade corporate bonds using Option Adjusted Spread (OAS). In our recently published paper, "Fixed Income Factor Research Series – The Value Effect," we show that a "value" bond can be identified using its OAS observed in the market against a model- fitted OAS curve—those bonds in higher "value" deciles are shown to outperform those in lower "value" deciles. Our research in this area continues with the upcoming "Quality Factor" paper.

Decreasing volatility and drawdown risk of equities

By managing interest rate risk and credit spread risk, plan sponsors can minimize tracking error to liability with the residual volatility coming from equities, which tend to have risk factors that don't correlate with that of the pension liability.

However, the correlation of a low-volatility index to a typical pension liability has been consistently higher than the correlation of a comparable market-cap weighted index. In addition, the record-long bull market resulting in improved funded status, coupled with the recent increase in market volatility, could be seen as a signal to plan sponsors that it is time to focus on protecting funded status and reduce drawdown risk of equities. Such defensive considerations can be implemented through the use of indexes, such as FTSE Low Volatility Factors and FTSE Minimum Variance Indexes. However, all defensive strategies are not the same, and in another of our recently published papers, "Implementation Considerations for Defensive Strategies: A look at three approaches," we compare and contrast different approaches to help readers discern their differences and assess which one may be best suited for them.

Working with FTSE Russell

FTSE Russell already works with numerous defined benefit plans to find solutions to meet their objectives. We have the capability to focus on one asset class or to look across multiple asset classes for a customized solution for our corporate plan clients.

For more information, please contact sales@ftserussell.com.

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