

Bond Basics

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Bond Basics: Liability-Driven Investing

A new paradigm in investment strategy known as “liability-driven investing” is rapidly emerging among European pension funds, insurance companies and other institutional investors.

What is liability-driven investing (LDI)? And why has it become such a hot topic in Europe and the U.S.? In this article, we examine these basic questions and other fundamental aspects of the ongoing shift toward LDI.

What is Liability-Driven Investing?

Many institutional investors have liabilities they must pay in the future, such as the retirement benefits that pension funds pay, or disability payments in the case of an insurance company. To meet these future obligations, pension funds, insurance companies and other institutions invest a pool of assets with the goal of paying their future liabilities from the returns on those assets. If returns are insufficient to cover the liabilities, the institution must contribute capital to fund the liabilities.

One way institutions can meet their liabilities is to construct a portfolio of assets—usually bonds—that generates cash flows matching the liability cash flows. For example, a pension plan could match a \$100 annual liability by investing in a bond that pays \$100 annually in coupon payments.

Most institutions have rejected cash-flow matching because this approach generally eliminates the opportunity to generate excess returns. Instead, most institutions establish a return target for their assets and then invest in a mix of stocks, bonds and other asset classes with the goal of meeting or beating that return target. With this type of asset-driven approach, success is measured by how well the portfolio’s investments perform versus market benchmarks and similar portfolios.

Liability-driven investing shifts the focus of asset allocation back to the real purpose of the assets, which is to meet liabilities rather than to outperform a market benchmark or peer portfolio that has no relation to the institution’s liabilities. Thus, the defining element of a liability-driven investment approach is that portfolio performance is benchmarked against the institution’s liabilities, rather than a benchmark with no direct relation to the liabilities.

Benchmarking the portfolio to the liabilities can potentially address the main drawbacks associated with cash-flow matching and the asset-driven approach, while preserving some of the benefits of each. First, unlike rigid cash-flow matching, liability-driven investing offers the flexibility to actively manage the portfolio and potentially earn returns in excess of those needed to meet liabilities, which is the key benefit of an asset-driven approach. Second, unlike the asset-driven approach, portfolio risk and return in a liability-driven strategy are measured directly against the liabilities. Therefore, a liability-driven approach should allow for better management of the risk that the portfolio will not produce sufficient returns to meet the liabilities, which is the primary benefit of cash-flow matching and the main drawback to an asset-driven approach.

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Common Characteristics of Liability-Driven Investing

Liability-driven investing is a flexible strategy, so portfolios can take many different forms depending on the institution's desire for excess returns and tolerance for risk. But the first step in creating a liability-driven portfolio is to understand the characteristics of the liabilities.

No two institution's liabilities are the same, but virtually all liabilities have one characteristic in common: falling interest rates cause liabilities to increase, while rising rates cause liabilities to decline. Therefore, falling interest rates may be the single largest risk institutions face in relation to their liabilities. To hedge this risk, many institutions implementing a liability-driven approach turn to bonds. Bonds typically appreciate in value when interest rates decline, and therefore tend to be among the most common ingredients in a liability-driven portfolio.

A second common characteristic is that most liabilities are long-term. The longer-term the liabilities are, the more sensitive they are to changes in interest rates. For example, a drop in interest rates will cause liabilities owed 30 years into the future to increase more than liabilities owed 10 years into the future. Similarly, longer-term bonds are also more sensitive to changes in interest rates. Therefore, another common element in liability-driven investing is that bonds held in the portfolio tend to be long-term bonds.

Aside from the common use of long-term bonds, liability-driven portfolios can vary significantly from institution to institution. For example, some institutions have liabilities that are sensitive to inflation and may employ inflation-linked bonds to hedge inflation risk. Other institutions may have a higher tolerance for volatility in the portfolio relative to the liabilities and therefore might employ alternative asset classes, leverage or absolute return strategies in their liability-driven portfolio.

What is Driving the Shift to Liability-Driven Investing?

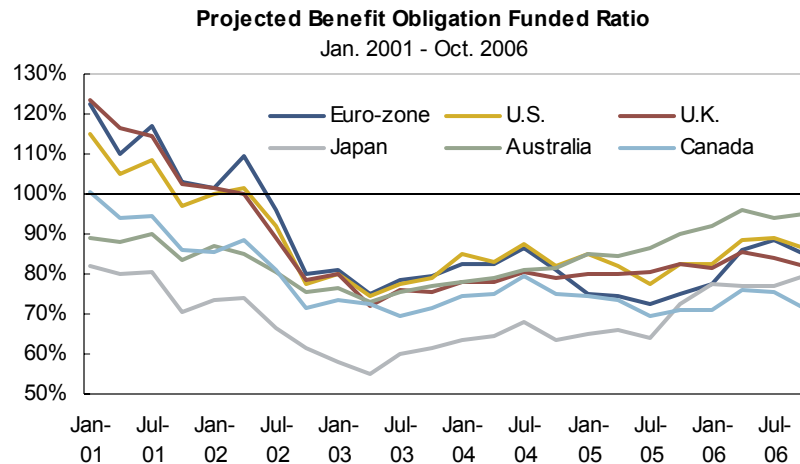
Several factors are driving institutions toward liability-driven investing. The most significant of these factors is probably the fact that asset-driven strategies left many pension plans and other institutions with deficits relative to their liabilities.

The chart below shows the decline in pension's projected benefit obligation (PBO) funding that occurred globally in 2001 and 2002 due to a combination of falling interest rates and modest or negative equity returns. According to data from Towers Perrin, the euro zone PBO funding ratio went from more than 120% at the beginning of 2001 to about 84% as of the third quarter 2006. The U.S. and U.K. experienced a similar shift from surplus to deficit during the 2001-2002 period.

Pension funding ratios have improved somewhat in recent years on a combination of rising interest rates and higher equity market returns. However, the experience of 2001-2002, from which many pension plans have yet to fully recover, was a key catalyst for the move toward liability-driven investing.

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Source: Towers Perrin

Pension deficits in the U.S. and Europe also played a significant role in prompting regulators to tighten funding requirements and pension accounting standards. The Netherlands has led this charge with the adoption of the *nieuw Financieel Toetsingskader* (nFTK), which are new guidelines by the pension and insurance regulator imposing strict solvency and other tests on pension plans and life insurers. The tests look for mismatches in the interest rate sensitivity (measured by “duration”) of assets compared to liabilities, and volatility of the assets in the portfolio. In addition, the International Financial Reporting Standards (IFRS), which are relevant for exchange-listed European companies, introduced new requirements for the accounting of company pension plans. As a result, Dutch pension plans have moved swiftly toward liability-driven investment strategies and companies across Europe are moving in the same direction.

Pension deficits have also required many corporations to contribute profits to the pension plan. Thus, corporate management, investors and credit rating agencies are paying greater attention to liabilities as a source of risk, particularly for those companies with very large pension plans. Liability-driven investing offers the potential to reduce the risk associated with liabilities, and more corporations are considering this approach, if not yet implementing a liability-driven approach.

Conclusion

Liability-driven investing is a paradigm shift in institutional investing. Institutions have long measured the success of their investment strategies against market benchmarks with no connection to the underlying goal of the portfolio. Today, at the urging of regulators, investors, rating agencies and corporate managers, a growing number of institutional investors are seeking to reduce the risks associated with their liabilities by implementing liability-driven investment strategies, which benchmark portfolio performance to the liabilities.

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