CI INSTITUTIONAL ASSET MANAGEMENT

NEXUS RISK MANAGEMENT

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Liability Driven Investing

Managing risk with a clear focus on financial objectives to create value

The Traditional Asset Management Approach Exposed Plans To Substantial Risks

Over the past few decades, financial institutions and pension funds with inadequate or no Asset Liability Management ("ALM") discipline have been buffeted by financial market volatility, suffered severe losses and experienced several failures as a result of unmanaged exposures to changes in interest rates, credit risk and turbulent equity markets. In many cases risks taken were unnecessary and could have been avoided with effective ALM. Many companies today are assuming risks for which they are not being fairly compensated. Best practices that have emerged in the area of ALM over the last few years have enabled insurance companies and pension plans to use ALM as a strategic decision making framework to add value, gain competitive advantage and achieve financial objectives.

Shortcomings of Traditional Asset Management

For insurance companies and pension plans the traditional asset management model can fail to achieve the overall financial objectives even when the investment objectives have been met. The traditional asset management approach separates the management of the assets from the liabilities and focuses on maximizing the total return of the assets, irrespective of the liabilities. By executing asset management within a risk framework the true risk exposure can be reduced and substantial value can be added.

It was not until the pension crisis of 2001-2003 that the shortcomings of the traditional asset management approach became apparent, as large pension surpluses turned into deficits and some pension plans became insolvent due to negative equity returns and low interest rates.

The traditional asset management approach encouraged significant mismatching of the assets and liabilities, exposing pension plans and some insurance companies to substantial risk. The typical investment strategy was determined using an efficient frontier that sought to select an asset mix that would maximize the expected return of the asset portfolio for a given level of risk

LDI Needs To Start With A Sound Risk Management Framework

measured by the standard deviation of the investment returns.

This resulted in a large portion of plans using a similar asset mix, despite significant differences in their liability profile or financial position.

This approach may have indeed maximized the expected asset return over a sufficiently long time horizon, but did so by taking on significant equity risk and interest rate risk. The liabilities backed by these asset portfolios typically had long durations of 15 years of more. For a 1% decrease in interest rates, the liabilities would increase by 15%. In this case, if the 40% or the assets that were invested in bonds had a duration of 5 years, the equity return would need to be greater than 20% to match the increase in the liabilities.

After the perfect storm of 2001-2003, pension plans were still in deficit positions even after the recovery of the equity markets, due to low interest rates.

Furthermore, the investment strategies under the traditional approach resulted in risk exposures that were unnecessary and uncompensated. Pension plans and insurance companies were taking on very large exposure to interest rate risk which was not compensated by any risk premium, unlike other types of investment risk, such as equity risk or credit risk.

LDI Gains Favour

Changing the Face of Asset Management

LDI is not new theory. First introduced to the pension industry in the early 1980s by academia, LDI remained largely ignored for almost two decades.

The Pension Perfect Storm called into question the appropriateness of the traditional approach for pension plan and insurance companies, in particular, for liability cash flows that are independent of the financial markets. An investment strategy that ensured that the asset and liability cash flows could be supported regardless of what happened to equity markets or interest rates captured the attention of the pension and insurance industries.

At its core, LDI is the application of Asset Liability Management ("ALM"), the theory for which has been around the insurance industry since the 1950s. The term "liability-driven investing" was meant to distinguish this approach from the traditional asset management approach. Whereas the traditional approach ignored the liabilities by separating the assets and sought to maximize total return of assets in isolation, LDI focuses on the combined performance of the assets and liabilities.

The Evolution of LDI

Cutting Through "LDI Solutions"

LDI has come to take on different interpretations but the original meaning was to manage the assets and liabilities together. Several "LDI solutions" have emerged from immunization to portable alpha strategies and everything in between.

Our Approach

We Focus on Sound Risk Management

Nexus Risk Management works with various pension plans, insurance companies and reinsurance companies globally to implement best practice ALM, ERM and LDI frameworks, formulate effective ALM strategies and execute asset management within a sound risk framework.

Our focus is on our clients' financial goals and helping them ensure that the risks they assume are appropriate, well understood and consistent with their risk appetite.

Liability Driven Investing

- ✓ Avoid pitfalls of traditional asset management approach
- ✓ Start with a sound risk management framework
- ✓ Quantify exposure across all the key dimensions of risk
- ✓ Measure and manage portfolio against underlying liabilities

Customized Asset Management

- ✓ Based on company specific financial objectives and risk tolerance
- ✓ Wide range of fixed income and equity strategies
- ✓ Transparent attribution analysis

De-Risking Solutions

- ✓ Stand alone and company level risk tolerance assessment
- ✓ On-going monitoring of risk
- ✓ De-risking strategies for interest rate risk, equity risk, credit risk, longevity risk, inflation risk
- ✓ "Load and lock" and other dynamic investment strategies
- ✓ Enhanced duration pooled funds
- ✓ Plain vanilla and structured derivatives solutions

Optimization

- ✓ Single period and multi-period horizon
- ✓ Complex multi-faceted objectives
- ✓ Derivation of optimal risk budgets across credit, interest rate, liquidity and equity market risks

Liability Driven Investing

Customized Asset Management

De-Risking Solutions

Optimization

CI INSTITUTIONAL ASSET MANAGEMENT

CI Institutional Asset Management (CIIAM) is a division of CI investments Inc., one of Canada's largest and most respected money managers, with over $55B in assets under administration. CIIAM has $8 billion in assets, and offers a full suite of investment management solutions for institutional clients, including leading financial intermediaries, pension funds, endowments, foundations and corporations. CIIAM operates as a multi-boutique firm, providing clients with access to a range of CI's 13 individual sub-advisors. Institutional clients have access to bulk purchase arrangements, pooled fund strategies and segregated account management. CIIAM also offers risk management capabilities through liability driven investment solutions in partnership with Nexus Risk Management.

In addition, CIIAM has a dedicated team of 10 institutional investment professionals focused on sales, superior client servicing and ensuring effective portfolio management.

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NEXUS RISK MANAGEMENT

Nexus Risk Management provides a clear focus for managing risk to maximize value. As a company, we focus exclusively on risk. We deliver tools, training, expertise and execution to enable our clients to have the sharp focus needed to achieve their financial objectives.

Worldwide we work closely with insurance companies and pension plans, rating agencies and regulators, leading experts from academia and the investment industry as well as reinsurers and other counterparties to bring together deep industry knowledge, leading edge techniques and best practices from around the world. Using robust ALM and LDI frameworks that are fully integrated within ERM we deliver state of the art dynamic hedging programs, asset management within a risk framework and risk optimization.

Through our offices in Toronto and Seoul we provide highly specialized services to our clients globally.

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