

Shifting the Investment Paradigm

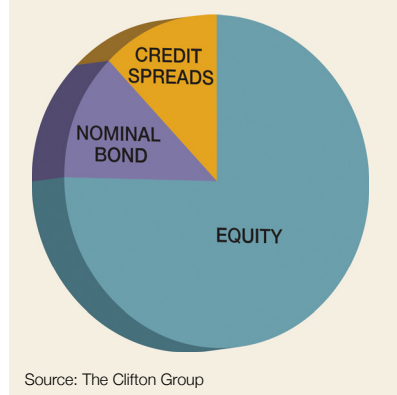
By Thomas Lee, CFA®

All investors are aware that the potential to earn excess return comes with risk. However, consideration of risk usually takes a backseat to expected return. In general, most investors believe that a long investment horizon allows them to absorb risk. Their patience has been severely tested since the end of the 1990s bull market. After hitting a high of 1,527 in March 2000, the S&P 500 plummeted to 776 in October 2002, only to recover again above 1,500 and then plummet back to a new low of 676 in March 2009. For the 11-year period ending December 2010, the S&P 500 produced an annualized return of 0.41 percent. In short, over this period equity investors experienced considerable risk (i.e., market volatility) with virtually no return.

What makes this outcome even more challenging to accept is that many investors have structured their portfolios to be heavily dependent on equity. Investments in aggressive credit-based fixed income strategies, private equity partnerships, and even many hedge fund strategies have not proven to add the significant diversification benefits that were advertised but instead have tended to add equity-like risk to the overall portfolio. When looked at through this lens it is not unusual to find that the risk in many portfolios is dominated by equity. The standard 60-percent equity/40-percent fixed income portfolio, when broken into its component risks, typically looks like the pie chart in figure 1. When considering the historical correlation between equity and credit, one finds that 80 percent or more of the risk, or portfolio volatility, of a traditional 60/40 portfolio is equity-based.

Looking forward, the question is, “What alternatives are available to investors?” This article takes a closer look at two changes that are occurring among

FIGURE 1: TRADITIONAL PORTFOLIO RISK ALLOCATION (60% EQUITY/40% FIXED INCOME)



institutional investors: liability-driven investing (LDI) and risk-parity strategies. Both are being driven by a change in the investment paradigm from a focus on return to a more deliberate focus on risk. In the case of LDI, the investor's focus is on risk relative to a given liability stream. For risk-parity strategies, the focus is on the absolute risk of the portfolio and seeking to collect a risk premium in all markets. Following is a brief discussion of each strategy and how it represents a change from the traditional investment framework.

Liability-Driven Investing

LDI is defined as a shift in focus from absolute investment performance to relative investment performance. In this context, portfolio returns are considered relative to the liabilities they are intended to fund and the objective becomes managing the surplus or difference between the assets and the liabilities. Investing in this manner requires one to estimate the liabilities the portfolio is intended to fund and to understand the risk factors that drive the liability valuation. If this analysis can be completed, the investor can move

to invest the portfolio in a manner that reflects the risk characteristics of the liabilities and therefore seek to manage only the surplus.

LDI investing is not a new phenomenon. Historically, insurance companies have used an LDI approach to manage their pools of assets. However LDI investing is not generally practiced in the institutional marketplace. A more common approach for many institutions has been to assume some long-term fixed benchmark, say 8 percent annually, as a proxy for the liability. Given this benchmark, investors sought to allocate assets in a manner that would give the best chance possible to earn 8 percent annually over the long term. To the extent assets produced a result above or below the benchmark, the funding status changed. However for some investors, including many pensions, this mismatch could be smoothed away by accounting practices that allowed them to avoid marking-to-market.

The difficult market conditions over the past several years have made this approach to managing assets and liabilities more challenging. Investors who were not using mark-to-market accounting practices eventually were forced to acknowledge a widening negative gap between their assets and liabilities that looked increasingly difficult to overcome. Portfolios that were marked-to-market experienced the pain in real time. Given these results, the push toward an LDI investment approach began to take hold. But how does someone go about restructuring a portfolio to an LDI approach? The best way to illustrate this process is to consider the case of a frozen pension plan.

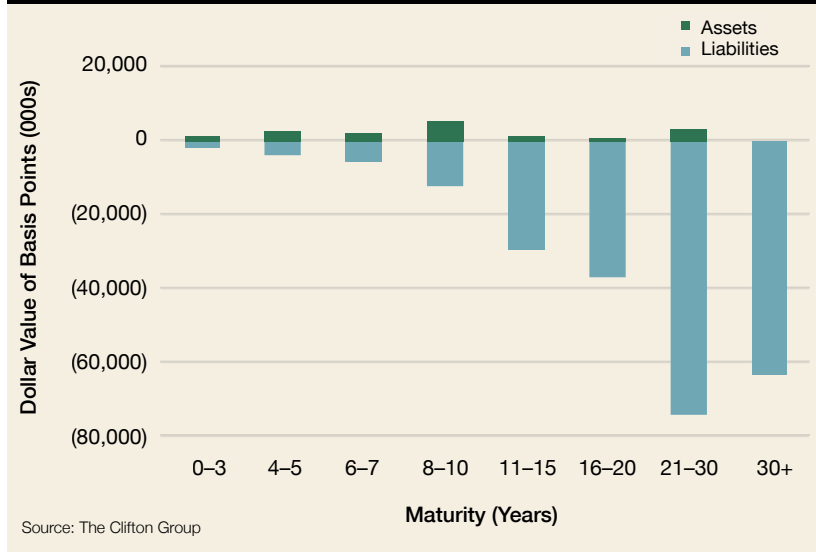
A frozen pension plan is one that no longer is accepting new participants. The present value of a pension fund liability is calculated by discounting

expected future cash flows by a high quality (usually AA rated) discount curve. Thus, if interest rates decline or credit spreads narrow, the present value of the liability increases. The opposite is true if interest rates rise or spreads widen. In this sense the value of the liability is driven primarily by the general level of interest rates and the changes in corporate spreads. To fund these liabilities many pensions own a portfolio heavily invested in equities with some allocation to core bonds benchmarked to the Barclay's Aggregate Index (typically about 40 percent). The general rationale for this allocation is that, over time, equities will outperform interest-rate driven liabilities and therefore represent the lowest-cost way to fund them.

The mismatch between the assets and the liabilities is driven by interest-rate sensitivity and can best be seen in figure 2. In this example, the fund's liabilities have material exposure to interest rates, particularly at the long end of the yield curve. However, the assets of the plan have very little explicit interest-rate exposure and what exposure the portfolio does have is allocated to the intermediate portion of the yield curve. An LDI investor would seek to mitigate this interest rate "gap" through either a direct investment in fixed income securities that added interest-rate exposure at the long end of the yield curve or through a futures or swap overlay that achieved the same outcome. In either case the investor is seeking to neutralize the interest-rate risk present in the fund's liabilities and thus reduce surplus volatility.

LDI investing is not limited to pension funds. Endowments and foundations are beginning to look more closely at their liabilities (often the fund's distribution requirements) and to consider more thoughtfully how they can invest assets to give them the highest probability of meeting obligations over time. For example, the chief investment officer (CIO) of a university endowment might be required to pay out 5 percent of

FIGURE 2: ASSET LIABILITY MISMATCH



the endowment's net asset value (NAV) annually. Within an LDI framework, the CIO would consider this requirement carefully and seek to invest in a manner that provided the highest likelihood of meeting this obligation. The investment allocation would be different if the CIO was simply required to be in the top quartile of a universe made up of similar endowments.

For those who may not be able to easily quantify the fund's liabilities, LDI becomes a challenging investment approach. For this segment of investors, absolute risk becomes the focus and achieving higher levels of return relative to risk is the objective. This group of investors is increasingly turning to what is commonly referred to as a risk-parity approach to investing.

Risk Parity

At its core, risk parity is about seeking balance in a portfolio. As previously noted, most investors' portfolios are heavily tilted toward equities through direct investments in equity and other asset classes that are highly correlated to equity. Most investors assume that this type of equity-dominated allocation is required for them to achieve long-term return objectives. However, this

investment approach leaves the portfolio vulnerable in periods when equities fail to deliver, such as the past 11 years. A negative outcome is even more painful when observed from the perspective of maintaining NAV. Consider that if a portfolio declines by 50 percent in value it needs to realize a 100-percent return to achieve the original NAV. A more-balanced portfolio reduces the chances of a drawdown and therefore makes it easier for the portfolio to keep pace with the corresponding long-term growth objectives. The trick is how to balance the portfolio without sacrificing significant upside return potential. Risk parity, through the use of controlled leverage, offers a potential solution.

Ignoring return and focusing on risk, most investors would choose to own the risk-diversified portfolio, illustrated in figure 3. However, as also illustrated in figure 3, the risk-diversified portfolio does not provide the return most investors seek because it holds significant exposure to low-risk assets such as bonds, which have lower expected returns. Therefore, most investors tend to gravitate toward the traditional 60/40 portfolio. Figure 3 illustrates that if the leverage constraint is relaxed, the risk-diversified portfolio

FIGURE 3: WHY RISK PARITY?



can provide superior risk-adjusted returns to the traditional 60/40 portfolio. A leveraged risk-diversified portfolio is commonly referred to as a risk-parity strategy. Through a willingness to employ leverage, the investor can equalize the risk-adjusted return of multiple assets thus creating more opportunities to mix and match asset classes to achieve the broadest amount of diversification possible. This implementation can be done while still targeting an equivalent amount of excess return or return above cash.


The keys to success for a risk-parity strategy are finding diverse asset classes, measuring their volatility, and blending them together to contribute equal risk to the portfolio. If this is done correctly, on any given day half the assets in the portfolio will be outperforming their long-term expectations and half will be underperforming their long-term expectations. Thus, on a net basis, the investor will be collecting the average risk premium available in the market (see figure 3). The result is a superior risk-adjusted return when compared to the traditional 60/40 portfolio.

A significant and often-overlooked component in a risk-parity strategy is rebalancing. When implemented among a diverse set of assets, rebalancing has the

potential to add a material amount of incremental return. In simulated performance, a disciplined rebalancing approach contributed approximately 25 percent of the excess return to a risk-parity strategy. Disciplined rebalancing also helps to mitigate liquidity risk by forcing the portfolio to shrink when market environments are uniformly negative.

Conclusion

Over the past 11 years, investors have witnessed two severe bear markets that

ravaged most portfolios. Many who thought they had a diversified portfolio came to discover they did not. These results have left a number of investors thinking about new ways to manage their portfolios. LDI shifts the focus away from absolute results to relative performance. Assets are invested with an understanding of which risks drive the valuation of the liabilities. The level of the surplus becomes the key metric. Risk parity has appeal for those looking to simply improve risk-adjusted returns. For this group, maximizing return per unit of risk is the focus. In either case, it is clear that the investment paradigm has shifted and the trend of the future is a more explicit focus on risk. 

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