July 2010

Captive & ART Investments: 101

Special points of interest:

- What does it mean to be conservatively invested?
- What about mutual funds?
- Designing the plan

"Invest too conservatively, such as Bank or Treasury liquidity products, and returns will not only be meager but they could yield a negative real return…"

""An investment in knowledge always pays the best interest."--Benjamin Franklin, **American inventor, statesman**

Everything you ever wanted to know ...but were afraid to ask

A prelude...

The number one obligation for any insurance company is the fiduciary responsibility to their policyholders of paying all legitimate claims on a timely basis. This obligation can cause executive management, particularly of smaller insurance entities, to focus their attention disproportionately on activities on the liability side of the balance sheet. After all, underwriting insurance policies that cover risks are the major liabilities on their balance sheets. Regulatory authorities and best practices dictate prudent management of these liabilities as well as the reserves representing assets to pay resultant claims.

Interestingly, as an insurer grows in size, they often come to view their companies from a slightly different, more balanced perspective. This viewpoint of the insurance business *balances* attention to both sides of an insurer's *balance* sheet. On one hand insurance companies are underwriters of risk and on the other, they are managers of assets. Indeed, many of the largest insurers are world-class asset management firms in their own right. Insurers receive a premium, reinvest the premium, pay claims and keep the spread. Validating this evolved perspective is the fact that at its core, insurers are in the spread business. Underwriting profit and net investment income contributes in varying degrees to this spread. The amount of spread depends on many factors including those uncontrollable "outside" factors such as the overall economic conditions, soft and hard insurance markets and bull or bear securities markets.

Management of small insurers typically begins by focusing internal resources on controlling underwriting and claims activities. Eventually, after substantial growth, they begin to exert control over portions of the investment management activity. At some point in this maturation process, executive management initiates the development of an internal investment management capability. Usually management of the investment grade bond portfolio is the first step. Continued external investment expertise is utilized to manage other asset classes such as equities and alternatives. The final stage in this evolution finds large insurers capable of managing their own assets across all asset classes and in some cases, also managing the assets of third parties.

Risk and Return: *What does it really mean to be "conservatively" invested*

As management's perspective evolves with the growth of their insurance company, so does their idea of how to appropriately invest their assets to prudently maximize returns and manage risk. Invest too conservatively, such as Bank or Treasury liquidity products, and returns will not only be meager but they could yield a negative real return[1] as in today's market. Such a strategy not only eliminates the potential for competitive returns or possible market upside, it does not even preserve principal!

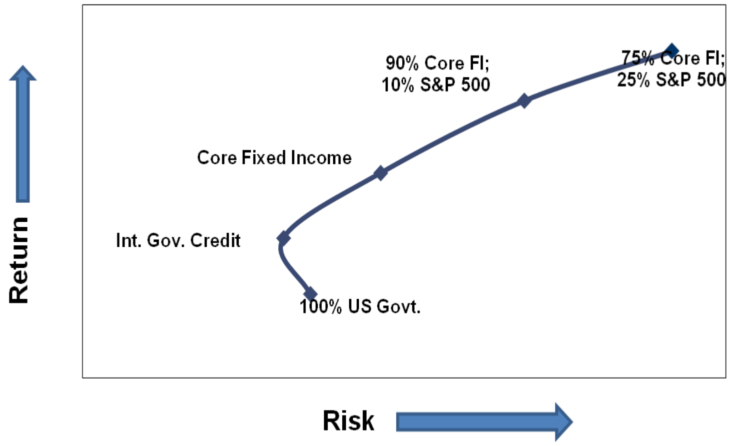
Then to make matters worse, there's the law of unintended consequences. Closer examination of this strategy will reveal that it increases overall enterprise risk! Say what? Sophisticated dynamic financial analysis (DFA)[2], typically indicates increased probability of reaching terminal surplus, i.e. increased enterprise risk for those investment strategies deemed "most conservative" by casual observers. The rationale is not terribly surprising. By generating less competitive returns on investments, these firms have not built a sufficient capital "buffer" through maximizing surplus growth to offset unpredictable, but often inevitable, adverse claims experience.

Beyond increasing overall enterprise risk, investment risks can also be increased by

1. An investment return adjusted for inflation.

employing an investment strategy too conservatively. How can that be? Take an example of a small insurance company that has invested solely in money market funds, CDs or even Treasuries. Often this strategy seems to be the only practical path, given that a small portfolio size does not allow for proper diversification when managed as a discrete portfolio. Such a strategy is certainly conservative from the perspective of reducing or eliminating credit risk and liquidity risk. But as the portfolio grows, so grows the imprudence of the strategy. Perhaps inadvertently, proponents of these strategies have overlooked other investment risks and their impact on such a portfolio. To illustrate this concept, we can use standard efficient frontier[3] analysis. An example of a portfolio of 100% Treasuries is plotted in Figure 1. By adding intermediate maturity, investment grade bonds (credit exposure) to this portfolio, the return is increased while the risk is decreased (nirvana!) illustrating the much-touted benefits of diversification.

Figure 1: Efficient Frontier Analysis



In addition to the diversification benefit not being attained what are the other risks to the "conservative" portfolio? Well, confining this response to the fixed income world, they include interest rate risk, reinvestment risk, convexity risk, prepayment risk, downgrade risk, etc. to a condition of an increased probability of meeting a terminal surplus scenario. Even with the probably of avoiding this scenario, these "conservative" investment strategies will put insurers at a competitive disadvantage in the commercial marketplace as overall financial performance will be diminished.

Current risk commentary: expectations are for a slow, volatile market recovery that will keep the Fed from raising interest rates until summer 2011 at the earliest. Deflationary pressure will blunt rapid interest rate rises until higher inflation risk appears in 3 to 5 years, due to budget deficits, forcing them higher. With short interest rates remaining low, normal yield curve weightings concentrated around the five-year and 10-year area, are recommended to take advantage of the yield curve roll-down. Prepayment risk and reinvestment risk will remain low. The credit cycle will continue its strengthening trend subject to some sector risk.

Gaining an understanding of this seemingly inverted risk-reward relationship is extremely important for the management of growing but still small insurers. Otherwise, they continue to incur the opportunity cost of investing sub-optimally while simultaneously subjecting their companies

What about mutual funds?

Mutual funds have the advantage of achieving the level of diversification desired at small portfolio sizes and provide reasonable

2. The efficient frontier is a line, represented by an infinite number of portfolios of differing asset class combinations, plotted in accordance with their respective expected returns and standard deviations of returns (risk). The efficient frontier serves as a constraint: efficient portfolios lie on the line while inefficient portfolios lie below the line.

3. DFA is a stochastic analytic process devised by the Casualty Actuarial Society that can be used to model insurance company behavior under various scenarios using Monte Carlo simulation.

Captive Investments: 101

liquidity. However, mutual funds are "products" rather than "solutions" built around the unique circumstance of your company. For example, most fixed income and equity funds are designed around an investment objective of total return[4]. These vehicles cannot allow the insurer to have control over security selection. Assets are selected based on the product parameters rather than investment guidelines uniquely reflecting the insurer's situation and risk profile. Mutual funds are also not accommodative of insurer's tax strategies, as their portfolio managers trade indiscriminately taking gains and losses as they see fit. Alternatively, separately managed portfolios allow the client and their portfolio manager to work together to accommodate events on the liability side of the insurers balance sheet and produce a tax-optimized result. Insurers and their investment managers should strive to maximize after–tax, risk adjusted returns. Therefore, performance results of mutual funds are not comparable to more tax efficient "composites" of separately managed accounts. Perhaps the final reason for migrating insurance assets out of mutual funds as soon as practical, lies in the fact that they are typically more expensive.

For these reasons and many more, it is only a matter of time before insurance executives undertake the task of hiring a professional insurance asset manager to construct an optimal portfolio customized to their needs. One of the acid tests for investment managers to demonstrate their understanding of insurance asset management lies in their ability to guide the process of determining the appropriate investment risk levels for an insurer to consider. And, in a larger scope, how do they guide an insurer to correlate their investment strategy with their company's business objectives and risk profile?

Designing the Plan

This correlation formula is unique to each insurance company. The primary factors include overall enterprise goals, investment objectives (Investment Policy Statement), risk tolerance (asset liability management), and to some extent, the investment time horizon. After an insurer's executive management has articulated goals and objectives, a thorough company evaluation including balance sheet and income statement analysis is a good starting point for determining the *quantitative* parameters of risk tolerance.

Regulatory restrictions along with the insurer's accounting conventions and tax situation will also be key inputs. Loss payout patterns, loss ratios, reserving confidence levels and liability durations all need to be considered. Net retention/reinsurance, projected premiums and claims and capitalization issues may need to be addressed for more complex modeling situations. While investment analytics can be supportive in building a risk profile, and ultimately an investment strategy, they ultimately rely on assumptions. Therefore, *qualitative* factors will always play a very large role. That is to say, no matter what the numbers say, management's comfort with the selected risk levels must allow them to sleep at night.

Ultimately the desired result is a risk budget, thoughtfully and clearly defined in investment guidelines, that apportions risk over the liquidity, reserve and surplus components of an insurer's portfolio. With sufficient size, each of these portfolios can be managed discreetly but evaluated and modeled, for risk management purposes, in the aggregate.
It is only when an insurer has completed the daunting task of properly identifying their risk profile and then implementing a portfolio strategy reflective of this profile, in the context of the insurer's unique business circumstances, that can one truly assess whether they are "conservatively" invested.

"...how does an insurer correlate their investment strategy with their company's business objectives and risk profile?"

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4. Total return is a performance calculation based on the rate of return including both earned income and changes in the market value. Most insurers pursue an objective of book yield/income maximization for their fixed income portfolios

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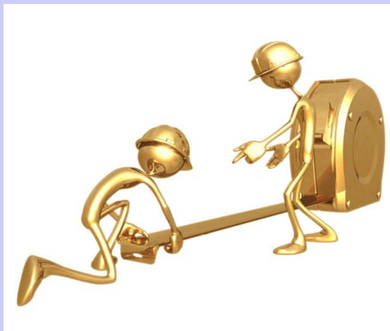

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