

# Every Basis Point Counts

Using a modified total-return approach, insurers can maximize returns from a fixed-income portfolio.

by John Gauthier

**T**oday's fixed-income environment is challenging for insurers. With low yields and tight spreads, insurers have begun contemplating an investment strategy that includes both passive and active management of their portfolios. This modified total-return approach may be the most efficient way for insurers to generate meaningful returns. By focusing on both yield and total-return strategies, a modified total-return approach enables insurers to make every basis point count in their fixed-income portfolios.

## Strategic Asset Allocation

The first step in optimizing a portfolio is to complete a strategic asset allocation. There are many frameworks available to perform this exercise, such as proprietary risk-budgeting systems, value at risk, enterprise risk management and dynamic financial analysis, but the basic requirements are to consider a variety of potential market risks, in the form of benchmark portfolios, that meet the return objectives and the risk tolerance of the insurer, all within the specific company's constraints. (See "Strategic Asset Allocation" on page 2.) It is important for the insurance

*Contributor John Gauthier is managing director, head of insurance fixed-income portfolio management, for Goldman Sachs Asset Management. He can be reached at john.gauthier@gs.com.*

company to use a process that makes it feel comfortable, and allows it to get important constituents comfortable, with the long-term asset allocation.

The required inputs are fairly straightforward. Insurance companies should:

- Set expectations about the risk, return and correlations of various investment strategies.

- Determine how various investment strategies fit into its specific circumstances.

- Determine which metrics are most important to its unique circumstances.

The output of the strategic asset allocation is not a precise recommendation, but rather, a range of potential investment strategies with different risk/return profiles. Portfolio strategy advice should be based on basic principles of modern financial economics. Although we do not believe that capital markets are in equilibrium, we do believe that thoughtful portfolio advice should use equilibrium as a starting point. In our view, deviations from equilibrium expected returns do exist, and should be reflected in investment strategy. However, these deviations should be justified both empirically and in terms of the underlying financial economics. Our approach to finding equilibrium returns is to rely on basic principles of asset pricing.

In an ideal world, this exercise

## Key Points

- The first step in optimizing a portfolio is to complete a strategic asset allocation.
- One way for insurers to achieve potentially higher returns, without impacting overall portfolio risk, is to increase active fixed-income risk.
- Successful active fixed-income investing requires a risk-budgeting framework that effectively combines a broad investment opportunity set, investor skill and diversification benefits.

would focus solely on economic decision making, with 100% of an insurer's asset portfolios marked-to-market. The company should focus on optimizing its asset returns regardless of whether the returns came from income or capital appreciation. However, it would be naïve to ignore the implications of accounting-based metrics, such as recurring investment income and realized gains and losses, and the importance of those metrics to external constituents, within the scope of this analysis. This may lead insurers to focus on short-term financial statement results at the expense of creating long-term economic value. Regardless of the ultimate decision criteria, we believe it is imperative for insurers to understand the true economic trade-offs.

These various options are then filtered through the:

- Company's risk management philosophy, and
- The eyes of important external constituents.

These combined filters help an insurance company determine how to focus its investment strategy to meet the company's overall strategic goals.

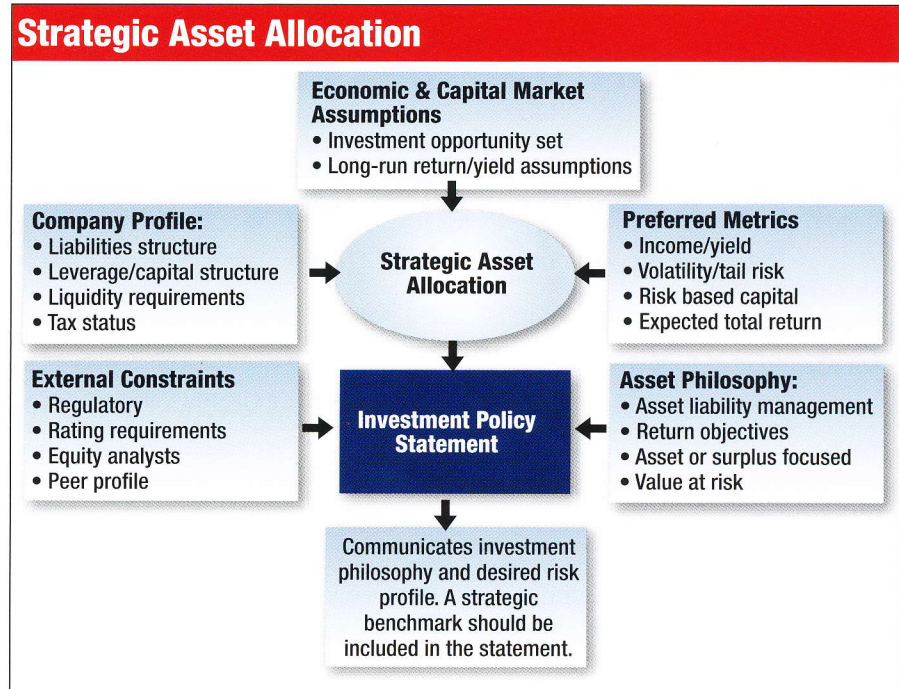
The insurer can now focus on implementation. One of the most important outcomes of the strategic asset allocation process is the creation of benchmarks for different asset classes, representing the types of risk the insurer wants to take in its portfolio. For short-duration property companies, it may be a short, high-quality bond benchmark. For life and annuity companies, it may be a longer duration, low credit quality, higher yielding benchmark. These benchmarks are now used to judge the performance of the team managing the portfolio.

### Moving From Passive (Beta) To Active (Alpha)

One way for insurers to achieve potentially higher returns, without impacting overall portfolio risk, is to increase active fixed-income risk. What is active risk? First, active risk is taking portfolio positions that are different from the benchmark. Second, active risk is changing those positions as market conditions and portfolio manager views merit.

One example of active risk is to position the portfolio based on one's view of the direction of interest rates. For example, if an insurer owned a 5-year Treasury note during 2005, it would have received coupon income of 3.61%, but its bonds would have experienced a decline in value of 2.55%. While the insurer can argue the "ability and intent" to hold the bond to maturity, and therefore not realize that 2.55% price decline, the total return of holding that bond was approximately 1%.

Now let's assume that the insurer sold the 5-year note on Dec. 31, 2004, and purchased 3-month T-bills. If it held those T-bills through the year, the income from the T-bills would have been approximately 50 basis points below the 5-year note strategy. However, there would have been no loss of principal value, providing a total return of 3%, or 2% higher than the total



return of holding the T-note. Additionally, the insurer could have reversed the trade at year-end 2005, selling the T-bills and buying the 5-year notes, with a new book yield of 4.31%. While we are not advocating aggressively moving between T-bills and notes or bonds for an insurance portfolio, we do believe that some active management, within book yield and gain/loss constraints, can add value to the insurer—either higher investment income, greater book value per share, or both. (See "Yields on 3-Month T-Bill and 5-Year Treasury Note" below.)

### Determining the Level of Target Risk

Once the insurer determines that it is willing to take active risk (deviate from the benchmark), it should determine how much active risk it is willing to take. Since the selection of the benchmark is measured, in part, by the risk (volatility) of the benchmark, the insurer also should measure the potential deviation from the

benchmark in a similar fashion. We believe the appropriate measure for active risk is tracking error, which measures the expected standard deviation of the excess returns and also measures the actual deviations. Since every set of benchmarks and guidelines has an implicit tracking error associated with it, it is important for insurers to explicitly quantify that tracking error.

**TRACKING ERROR:** The annualized standard deviation of a portfolio's monthly returns relative to a benchmark (usually the representative index). Tracking error is a measure of the extent to which a portfolio's historical returns did not resemble those of the benchmark.

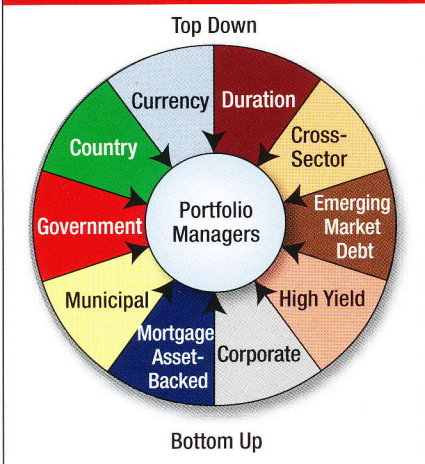
In its simplest form, tracking error helps an insurer set expectations regarding its potential performance. If the tracking error target is set at 100 basis points, the insurer can expect to have, under normal market conditions, the worst-case return of the benchmark, less 100 basis points. On the other hand, the insurer also

Yields on 3-Month T-Bill and 5-Year Treasury Note						
	Year-end 2004 Bond Price	Year-end 2004 Bond Yield	Year-end 2005 Bond price	2005 Price Change	Average 2005 Book Yield	Year-end 2005 Bond Yield
3-Month T-Bill	100	2.21%	100.00	0.00%	3.10%	3.99%
5-Year Treasury	100	3.61%	97.45	-2.55%	3.61%	4.31%

Source: Bloomberg

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## Top Down and Bottom Up Risks



should expect annual returns not to exceed the benchmark plus 100 basis points. It is the active manager's job to consistently generate returns above the benchmark by taking active risk.

### Maximizing Returns at Any Target Risk

Once an insurer establishes the maximum amount of tracking error available from its guidelines and from the marketplace, it should determine the ultimate amount of tracking error it is willing to take, and, as importantly, the excess return it expects to generate by taking that risk. The success of this process is ultimately determined by thoughtfully combining three basic elements:

**1. Broad opportunity set.** In the fixed-income markets, there are thousands of securities for investors to evaluate, trade and incorporate into a portfolio. Likewise, there are many diverse active strategies, such as interest rate, country, currency and sectors, that can be employed. The range of risks is as diverse as the range of strategies. These risks vary in both size and correlation to one another and they can be employed simultaneously for optimal performance.

One way to think about active risks is to group them into "top down" and "bottom up" categories. (See "Top Down and Bottom Up Risks" above.) With top down risks,

also called "macro" risks, the manager imparts a broad view. For example, a duration view may be "rates will rise," or a cross-sector view may be "corporates are cheap." Bottom up risks reflect securities that the sector specialist feels provide the most potential return versus the universe of bonds available.

The risks available within a mandate are a function of both guideline flexibility and market opportunity. For certain strategies, the market affords the insurer meaningful opportunity to take risk. Duration and yield curve risk, for instance, are plentiful. The deviation from the benchmark can be quite high, but is usually constrained by the allowable duration band in the guidelines. Other risks are not as plentiful, due to the fact that there may be a reasonably high correlation in spread movements within certain sectors (for example, the government/agency strategy). Although investment guidelines may allow for unlimited item selection risk, the risk available from the marketplace is not large. Therefore, insurers have to judge how market and self-imposed constraints affect their risk-taking abilities.

**2. Historical evidence of manager skill.** While it is great to be able to quantify the level of risk-taking opportunities available, an insurer should deviate from its strategic benchmark only if it feels it has the skill to capitalize on these opportunities. There are several ways to judge

skill in a fixed-income manager. We find it most useful to look at the historical information ratio.

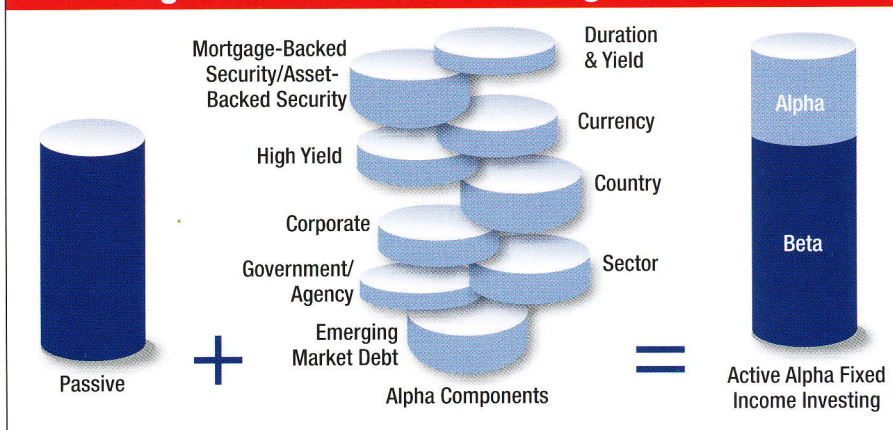
**INFORMATION RATIO:** The excess return of the portfolio divided by the tracking error. It measures excess return per unit of risk that is due solely to the specific risks associated with the securities of the portfolio. A higher number is better.

While it is important to know the skill at the overall portfolio level, managers should also know their skill set at each individual sub-strategy. Before employing a specific active management strategy, an insurer, or its investment manager, should provide some (quantifiable, based on performance attribution) estimate of its historic ability to add value from employing the strategy.

**3. Diversification benefits.** Lastly, we believe there are diversification benefits from combining different sources of active risk. If an insurer possesses skill in several areas, and if those skills are uncorrelated (for example, the ability to pick the highest performing corporate bonds has no correlation with the ability to pick the future direction of interest rates), employing multiple strategies should improve the expected risk-adjusted returns.

"Combining Passive and Active Strategies," below, shows a graphic representation of combining different strategies. The return from passive exposure to the strategic benchmark is the market, or beta, component of return. Here we focus on the alpha

### Combining Passive and Active Strategies



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components—how to add value across a number of different strategies. For more yield-focused clients, you can think of some of these opportunities as “yield alpha.”

Notice that the discs representing each active strategy are different sizes, as each strategy’s contribution to portfolio risk and total return has a different weight. Intuitively, you should place a larger weight on strategies with higher information ratios and favorable diversification benefits.

### Putting It All Together

A broad investment opportunity set, investor skill and diversification benefits are necessary ingredients, but do not alone guarantee successful active fixed-income investing. A risk-budgeting framework that effectively combines these elements also is required. Individual skilled decision makers need to know how much risk to take. The risk budget communicates quantitatively the amount of risk-taking allowable within each top down and bottom up strategy.

An example of a risk budget that could be employed in an insurance company portfolio is shown in “Using Active Risk Most Efficiently” above. The column marked “Constraint” indicates a maximum tracking error by strategy, which often reflects a constraint externally imposed by the investment mandate. The “Optimized Target” shows the amount of risk that could be assigned to each strategy to best balance investment skill, diversification benefit and potential return within an overall level of risk. For instance, the guidelines may allow for 50 basis points of tracking error in

## Using Active Risk Most Efficiently

Active Risk Mix			
	Information Ratio	Typical Guideline Constraint (Basis Points)	Optimized Target (Basis Points)
<b>Active Strategy</b>			
Duration/Yield Curve	0.25	50	45
Country Exposure	0.50	25	25
Sector Rotation	0.40	40	39
Security Selection:			
Government/Agency	0.50	10	10
Mortgage-Backed/Asset-Backed Securities	0.80	25	25
Corporate Credit	0.60	30	30
High Yield	0.60	10	10
Emerging Market Debt	0.80	10	10
Sum of Standalone Active Risks			192
Less Diversification Benefit			-92
Total Active Fixed-Income Tracking Error (annualized)			100
Target Gross Excess Return (annualized)			90
Active Risk Information Ratio			0.9

the duration positioning of the portfolio. However, since the strategy has less demonstrable skill than some others (as quantified by the lower information ratio), the insurer may not want to use all the active risk allowed in the guidelines. By allocating active risk to many different fixed-income areas of expertise, insurers may be able to diversify overall risk, and expect higher risk-adjusted returns. The beauty of the risk budgeting process is that it allows insurers and their portfolio managers to have a quantitative conversation about the risk/return trade-offs of different investment constraints.

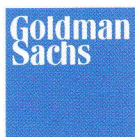
### Road Map for Implementation

We believe that a simple seven-step process can help insurers create more optimal risk-adjusted portfolios. This process was first outlined in Chapter 24 of *Modern Investment Management—An Equilibrium Approach*, a book by Bob Litterman and a number of Goldman Sachs Asset Management

investment professionals. Jonathan Beinner, chief investment officer and co-head of global fixed income and money markets at Goldman Sachs Asset Management, authored the chapter. The steps are as follows:

1. Determine the appropriate strategic benchmark.
2. Determine the investment constraints.
3. Determine which active strategies you wish to (can) employ.
4. Determine the maximum risk (tracking error) by strategy.
5. Determine skill level in each strategy as well as the correlation with other strategies.
6. Determine the overall portfolio target risk (the amount of risk you want to take).
7. Based on skill in each strategy and correlations between strategies, use the overall target risk and return to determine the optimal amount of risk to allocate to each strategy.

Only then can an insurer feel it has made every basis point count. **BR**



**Asset  
Management**

#### References:

Beinner, Jonathan, Iain Lindsay, and Scott McDermott. *Active Alpha Investing: Redefining the Role of Fixed Income in a Portfolio*. Goldman Sachs Asset Management, 2004.  
Litterman, Bob, and Jonathan Beinner. *Modern Investment Management: An Equilibrium Approach*. Hoboken, New Jersey: John Wiley & Sons, Inc, 2003. 435-451.

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