

DWIGHT ASSET MANAGEMENT COMPANY

GETTING THE INVESTMENT BENCHMARK RIGHT GUIDELINES FOR INSURANCE COMPANIES

Those familiar with the challenges of managing the liabilities associated with a pension plan know that long accepted practices are now undergoing a significant change. Historically the investment benchmarks set for these plans mirrored broad, easily recognizable indices: the S&P 500 for equities, the Lehman Aggregate index for bonds, etc. What some in the industry have discovered is that these broad, “catch-all” indices may not be appropriate for all plans. A pension plan, after all, is in essence a set of unique liabilities requiring a unique asset benchmark. The same can be said for any insurance company.

Insurance company liabilities are unique and so, too, should be their asset benchmarks. Fortunately, there are a host of public indices available on the asset side which, along with a variety of analytical tools, can be utilized to create a custom solution.

Getting Started

Getting the investment benchmark right first requires a self-assessment by the insurance company as to their risk tolerance. This assessment drives the decision regarding the percentage allocation between fixed investments and equity. The insurer’s capital position is a central consideration here. Obviously, all other things being equal, more capital would allow a greater allocation to equity with an expectation of the higher returns afforded over time by this asset class. Of course, higher volatility of returns is a by-product, and the insurer must consider this in connection with its liability requirements. For purposes of this discussion, our focus is exclusively on the allocation to fixed investments since this represents the overwhelming investment for insurers.

The next consideration in establishing an investment benchmark is the desired quality of the invest-

ment portfolio. Establishing an overall quality objective (based on Moody’s or S&P bond ratings criteria) helps to define more granular decisions. For example, the need or desire on the part of an insurer to run a AA-quality portfolio may lead to less tolerance for high-yield corporate bonds or lower-rated structured securities. The quality of the portfolio is a major determinant of the insurer’s financial strength or claims-paying rating, which ultimately affects its ability to sell its products. There may be differences here between companies depending upon the nature of the products sold and whether the company is primarily targeting retail or institutional markets.

Next, the insurer will work with their asset manager to determine which sectors of the bond market are appropriate. For example, will the nature of their liabilities allow them to take on option risk, as found in mortgage-backed securities? How important is liquidity? Less liquid securities such as private placements may not be appropriate if the nature of the company’s liabilities dictates the need for greater liquidity. What are the regulatory constraints? States often prohibit or limit investment in specific classes of securities.

A final consideration is duration. The duration of the insurer’s liabilities provides a good starting point for discussion of the portfolio duration. Simply matching the asset and liability durations is not sufficient. Portfolios of securities with vastly different individual durations can be structured to yield similar durations, but may not defease the liabilities. This can be easily understood by comparing a portfolio comprised exclusively of bonds of a single duration with a portfolio of bonds with both shorter



Adam White
Quantitative Analyst

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▶ and longer durations. Both may have the same duration, but the asset cash flows are very different. One portfolio may satisfy the liability cash flow requirements of the insurer while the other may not, even if they have the same duration.

Customizing a Benchmark

Having examined at a high level the considerations for developing an asset benchmark we can now demonstrate how this may work in practice. Consider the case of hypothetical Truth and Justice Life Insurance Company (TJL). TJL is domiciled in New York State and has assets of \$2 billion and a mix of business, which includes life and annuities.

TJL's Investment Committee permits investment in U.S. Government securities including Treasuries and agency securities, Corporate bonds (investment-grade and high-yield), mortgage-backed and commercial mortgage-backed securities and asset-backed securities. Prohibited investments included direct investments in commercial mortgages, private equity funds, and hedge funds. Derivatives are permitted for hedging purposes. The Committee mandates an investment portfolio with an overall quality rating of A1 and a duration of +/- ½ year.

Actuaries at TJL have developed the following profile of the company's liabilities:

Product Target	Life	Annuity	Deferred Annuity	Total
Duration (yrs)	7.00	7.50	4.50	6.15
Yield (%)	5.75	6.15	5.70	5.85
Quality	Aa2	A2	Aa3	A1
% of Business	30	30	40	100

In developing this summary information, actuaries have taken into consideration relevant data such as product cash flows, capital constraints, risk tolerance, and investment income requirements.

This information was presented to TJL's third

party investment manager, Top Return Investment Management (TRIM). TRIM's analysts then set about designing benchmarks for the individual product lines at TJL. They wanted to use publicly available indices for ease of modeling and because of the ready access to historical information. Because no one benchmark alone captured the desired quality, duration, and asset mix required, TRIM utilized several indices appropriately weighted and developed customized composites by product. Results are shown below.

Product Benchmark*	Leh. Agg.	Int. Credit	Long Credit	High-Yield	CMBS	ABS	Total
Life	65%		35%				100%
Annuity		40%	50%	10%			100%
Deferred Annuity		80%			10%	10%	100%

*Index Descriptions:

- Lehman Brothers Aggregate Index
- Lehman Brothers Intermediate Credit Index
- Lehman Brothers Long Credit Index
- Lehman Brothers High Yield
- Lehman Brothers CMBS Master
- Lehman Brothers ABS Master

The final step in the process involves translating the benchmark allocations across products into overall statistical targets by which TRIM will manage the portfolio. Weighting the findings above by the percentage of business represented by each product, TRIM developed the following:

Product Benchmark*	Leh. Agg.	Int. Credit	Long Credit	High-Yield	CMBS	ABS	Total
Duration (yrs)	4.69	4.24	11.40	4.36	4.97	2.85	6.13
Yield (%)	5.58	5.66	6.29	7.49	5.72	5.63	5.86
Quality	Aa1	A1	A2	B1	Aaa	Aaa	A1
Target	20%	44%	26%	3%	4%	4%	100%

* Data is as of June 4, 2007.

Source: Lehman Brothers Global Family of Indices. Copyright 2007. Used with permission.

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▶ TJJ's customized composite investment is now defined as these specific weightings of different representative indices, rolling up to aggregate portfolio metrics: A1 portfolio quality with a duration of 6.13 years and a yield of 5.86%. Working with TRIM, TJJ can use this information to monitor and attribute investment results and model possible portfolio changes. This process has built-in flexibility should TJJ decide to make changes in their risk tolerance or asset allocation, or if their business mix changes. TRIM, in turn, is able to manage the portfolio in confidence, knowing that they have full alignment with TJJ. ■

*Written by
Adam White,
Quantitative Analyst*

For more information:

**Fixed Income, Stable Value,
Consultant Relations:**

Lisa Trubiano, CFA
Senior Vice President
802.383.4066
ltrubiano@dwight.com

Anicia Mendez
Vice President
802.383.4067
amendez@dwight.com

Cash Management:

John Donohue
Executive Vice President
617.391.0229
jdonohue@dwight.com

Kevin Zimmerman
Vice President
617.391.0269
kzimmerman@dwight.com

Insurance:

Donald Hill
Senior Vice President
802.383.4062
dhill@dwight.com

John Loud
Vice President
802.383.4047
jloud@dwight.com

100 Bank Street
Suite 800
Burlington, VT 05401
802.383.4000

535 Boylston Street
Suite 4A
Boston, MA 02116
617.391.0043

One SW Columbia
Suite 1720
Portland, OR 97258
800.929.4427

www.dwight.com

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Lehman data courtesy of Lehman Brothers Global Family of Indices.