Book Yield Strategies for Public Fund Investing: A Perspective from the Banking Industry

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Agenda

- Revisiting March 2012: Book Yield Strategies for Public Fund Investing
- GFOA Best Practice: Using Benchmarks to Assess Portfolio Risk and Return
- Alternative Framework – A Perspective from Financial Institutions
- Risks for Bond Investing
- Conclusion
Investor types vary based on the investment strategy, the purpose of the invested funds and the risk tolerances of the investment manager.
Total Return Investors are generally considered *Active Investors*

Wall Street has a long history with actively managed clients and many of the tools for analysis are geared toward supporting that segment.

**Investopedia:**

Total Return in fixed income accounts for two categories of return: income and capital appreciation. Income includes *interest paid* by fixed-income investments.

Capital appreciation represents the *change in the market price* of an asset.

Source: Investopedia US, a division of ValueClick, Inc.
Why does it matter how I define myself as an investor?

- Time horizons
- Risk tolerances
- Cash flow volatility
- Investment guidelines

All of these factors influence an investor’s perceptions of:

- Value
- Suitability
- Performance
Total Return Methods of Bond Valuation capture both income and capital appreciation, but is capital appreciation a goal in public portfolios?

Is a horizon or valuation date useful?

YES...

...for total return investors.

...and for managing political risk.

Source: Bloomberg, LP, Wells Fargo Securities, LLC
GASB 31 requires that: “All investment income, including changes in the fair value of investments, should be reported as revenue in the operating statement.”

- Excerpt from Summary of GASB Statement No. 31

**Active?**

- “Active strategies involve taking speculative positions in which the primary objective is abnormal returns.”

**Immunizing?**

- “Duration-matching strategy of equating the duration of the bond or asset to the duration of the liability.”
  - Matching duration may not allow you to cover your cash needs given the timing of the cash flows.
  - Losses in public portfolios have often stemmed from sales of securities that are *underwater*, rather than credit events.
GASB 31 requires that: “All investment income, including changes in the fair value of investments, should be reported as revenue in the operating statement.”

- Excerpt from Summary of GASB Statement No. 31

**Dedicated (Cash-Flow matching)?**

- “Strategy of constructing a bond portfolio with cash flows that match the outlays of the liabilities.”
  - This describes a portion of the portfolio but not excess cash.

**Indexing?**

- “The construction of bond portfolios whose returns over time replicate those of some specified bond index.”
  - Do you ever let a bond mature?
  - Do you want the index to make your duration and credit decisions?
  - Are you marking your portfolio to market similar to an index?
A hybrid investment strategy segments cash into buckets that address both cash-flow/liquidity needs and duration matching needs.

**Hybrid Strategy**

- A strategy that looks at an entity’s liabilities in distinct time periods. During the shorter period cash flow matching is used to fund liabilities. The longer period is managed using a duration-matching strategy.

*America’s First Hybrid, the 1957 Ford Ranchero*
Excerpts from Recommendation

The Government Finance Officers Association recommends that government investors assess their investment portfolio for performance and risk by comparing the total return of the portfolio to carefully selected benchmarks. Total return provides a complete snapshot of the outcomes resulting from investment decisions since it measures the percent change in the value of a portfolio over a defined historical period.

Based on total return analysis, investment managers can make adjustments to the portfolio's risk profile when it is determined to be outside the acceptable variance with the benchmark.

Be investable – The benchmark should contain securities that an investor can purchase in the market or easily replicate
Alternative Framework - Perspective from Financial Institutions

Investment Securities
Designations: Trading, AFS, and HTM

Trading Designation

• Least common designation for depository institutions
• Securities are marked-to-market on a regular basis and can be bought and sold daily
• Presents the greatest possibility for earnings volatility
Investment Securities Designations: Trading, AFS, and HTM

Available for Sale (AFS) Designation

- Most common designation for depository institutions
- Changes in the value of securities are booked to Other Compensatory Income (OCI); does not go through P&L until the securities are sold
- Reduces earnings volatility, although tangible capital levels can still be impacted
Investment Securities
Designations: Trading, AFS, and HTM

Held to Maturity (HTM) Designation

- Becoming more popular among depository institutions (Up to 20% of securities)
- Sales are highly discouraged and can “taint” the portfolio
- Provides the lowest level of earnings and capital volatility
- Constrains a portfolio manager from actively managing his/her portfolio
## Asset Liability Management

- Asset Liability Management (ALM) is a practice traditionally used by depository institutions to quantify their level of risk due to movements in benchmark interest rates.

- Required by regulators since interest rate risk can have significant impacts on a bank’s earnings and capital levels.

- Successful ALM does not eliminate risk, but allows an institution to identify, measure, and mitigate exposures to movement in interest rates.

- Depository institutions not only measure interest rate risk due to higher or lower rates across the curve, but also stress the steepness of the interest rate curve.

- Liquidity risk has also become an important component of effective ALM.
Measuring Interest Rate Risk

Required by regulators since interest rate risk can have significant impact on a bank’s earnings and capital levels

**Risk - Economic Value of Equity (EVE)**

- Values assets and liabilities by discounting future cashflows
- Net of these is the institution’s economic value of equity; a measure of long-term balance sheet strength
- Measures the change to the economic value of equity across different rate scenarios
- Only measures risk of current balance sheet
Measuring Interest Rate Risk

Required by regulators since interest rate risk can have significant impact on a bank’s earnings and capital levels

Risk - Earnings at Risk

• Forecasts future earnings based on current balance and estimated runoff and growth
• Measures the change in the earnings forecast in different rate scenarios
• Results are dependent on assumptions; more rigor is required for this to be an accurate measure
Measuring Interest Rate Risk

Required by regulators since interest rate risk can have significant impact on a bank’s earnings and capital levels

Risk - Gap Analysis

• The oldest used method for measuring interest rate risk
• Compares the amount of assets repricing in a given time period to the amount of liabilities repricing
• Interest rate risk is high if these amounts do not line up to a certain degree
• A limitation of this method is that it does not take into account the magnitude of the repricing
Since the financial crisis, liquidity risk has become a more prominent component of ALM.

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**Liquidity Risk**

- Basel III laid out specific liquidity metrics and guidelines for the largest institutions
  - Liquidity Coverage Ratio (LCR)
  - Net Stable Funding Ratio (NSFR)
- Smaller institution’s liquidity levels are also closely monitored by regulators
- Part of the challenge of active asset-liability management and portfolio management is to strike a good balance between liquidity, income, and risk to ensure that capital is efficiently and safely deployed
Treasurers have numerous “levers” they can pull to manage interest rate risk.

### Tools for Managing Interest Rate Risk

- **Portfolio management**
  - Modify asset allocation
  - Change accounting classification

- **Funding composition**
  - Alter mix of non-maturity and time deposits
  - Fixed/Floating mix

- **Deposit Pricing**
  - Adjust beta factors based on characteristics such as demographics, geography, and competition

- **Off balance sheet hedges can be used to:**
  - Narrow any asset-liability mismatch
  - Lock in funding rates or investment yields
### Major Risks of Fixed Income Securities

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<tr>
<th>Risk Type</th>
<th>Risk Description</th>
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<tr>
<td><strong>Interest Rate Risk</strong></td>
<td>- Bond prices change in response to changes in interest rates.</td>
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<td>- As interest rates rise, bond prices fall and vice-versa.</td>
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<td>- Interest rates do not always move uniformly, impacting different bonds in different ways.</td>
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<td><strong>Credit Risk</strong></td>
<td>- Risk of default.</td>
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<td>- Risk of weakening credit quality (downgrade).</td>
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<td>- Diversification helps to mitigate default and downgrade risk.</td>
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<td><strong>Liquidity Risk</strong></td>
<td>- Depth and breadth of secondary market.</td>
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<td>- Number of willing buyers.</td>
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<td>- Price transparency and information.</td>
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<td>- Reduced liquidity can impact price.</td>
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<td><strong>Reinvestment Risk</strong></td>
<td>- Coupons must be reinvested when received.</td>
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<td>- Lower reinvestment rates impact overall yield.</td>
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<td>- Cash flow uncertainty (call options) magnify this risk.</td>
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Risks for Bond Investing

How Would “Gap Analysis” Alter Your Portfolio Management Techniques and Your Portfolio?

- Interest Rate Risk
- Credit Risk
- Liquidity Risk
- Reinvestment Risk
- Gap Risk
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