Pension Obligation Bonds
Overview & Considerations

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Pension Obligation Bonds - Overview

- Pension Obligation Bonds (POBs) are long-term debt instruments, typically secured by an obligation of the general fund and are taxable.

- POB transactions differ from a bond issuer’s typical debt issuances
  - POB borrowing rates are taxable rates, and will change with changes in the fixed income market, issuer credit, and general investor sentiment regarding POBs.
  - Taxable POBs would have an expanded universe of investors compared to traditional municipal tax-exempt issuances, but will still be subject to market capacity and potential pricing penalties for size.
  - Taxable bonds are generally sold as non-callable or with make-whole call options, limiting the financial benefit of potential future refinancing opportunities. Other types of call options are available but will increase the yield (cost) of the bonds.
  - POBs are typically issued to fund the unfunded actuarial liability, not to cover the Actuarially Determined Contribution (ADC).
Pension Obligation Bond Math

- POBs are a risk-bearing arbitrage between the cost of financing and the return on investment.

- Investment rates that are greater than borrowing costs will achieve net benefit to the system, but if the rate of return is lower than the discount rate, the originally projected funding target may not be reached.

- While current low borrowing rates make POBs attractive, issuers must also consider the investment of the POB proceeds and investment market cycles.
  - Plan of investment of the lump sum - both timing and asset classes.
  - Consideration should include pension fund liquidity and ability to pay benefits.
POB Considerations

- There are numerous factors that must be evaluated and weighed when considering a POB that will have a direct impact on the outcome of the funding strategy.
  - Issuance timing
  - Issuer debt load and capacity
  - Investment of POB proceeds
  - Rating levels and overall impact
  - Covenant risk mitigation strategies
Issuance Timing – The Benefit Bonds Window

What is the POB Window?

- The period of time an issuer of benefits bonds can most reasonably expect to invest bond proceeds in the stock market without witnessing lower stock prices in the subsequent economic recession.

- Measured from the bottom of the stock market (which typically corresponds to the trough of an economic business cycle) until the stock market ‘breakeven’ level with the subsequent stock market bottom.

- Theoretically, the period in which the risk of subsequent cycle loss is < 50%.

- Quantifiable only in hindsight.

- No one can ever predict in real-time when there is a bottom.
Past Pension Obligation Bond Timing & Perspective

S&P 500

Source: Bloomberg
Investment of POB Proceeds

- Proceeds of a POB issuance should be invested differently than the balance of the retirement system assets.
  - Typical pension plan investment strategies have asset allocation targets that include equities, fixed income, and other asset classes.
  - Plan sponsors should not issue bonds to buy bonds.
  - POB proceeds should primarily be invested in equity asset classes.
- Over a 20-year history, equity asset classes have regularly out-performed fixed income classes, on a relative basis.
Asset Class Annual Returns

Annual Returns by Asset Class (1997 – 2016)

Source: Callan Associates
POB Arbitrage – Excess Return History

- It is important that POB issuers commit to taking a long-term view on the results of the strategy.
  - History shows that over a long-term period (30-year), equities predominantly outperform POB funding costs; whereas shorter term views (5-year) provide more erratic performance results and greater risks.

*Excess Returns is defined as S&P Forward Return minus AA Corporate bond yield.

Data source: Ibbotson Associates, Inc.
Investment Returns Drive Results

- Pension funding strategies that utilize POBs will largely be driven by long-term investment returns of invested bond proceeds.
  - Varying investment return results will create significantly different results for ultimate pension funding levels.
  - It is important for issuers of POBs to be willing to take a long-term view on the overall results of a POB funding strategy as evaluations of short-term results will be more subject to volatility in the markets.

Illustrative POB Funding Strategy Results
Long-term Investment Return Variables
Market Implications and Considerations

- Dependent on the size of a POB, there could be pricing penalties associated with large issuances.
  - Tranching could help to lessen the impact of a size penalty, but carry potential political and broader risks.
  - Structure of authorizing language could help to guard against this type of penalty, however, market sentiment regarding POBs will ultimately drive pricing levels.

- Ultimately, the buyers of the bonds will dictate the borrowing cost of the POB.
  - Often times, marketing of POBs will require a focus on sophisticated investors.
  - Based on market reactions to recent municipal bankruptcies (in California, Detroit), references to the bonds as “pension bonds” could cause investor concern regarding the safety of the security relative to other obligations of the issuer, including pension payment liabilities.

- Marketing of POBs will benefit from the distribution of a broad, but on-target POB message similar to what will be articulated to the rating agencies.
Rating Agency Considerations

- The security for a POB could be unique, and not fit into any of the rating agencies standardized methodologies.
- Issuance will often necessitate a well developed strategy for approaching and working with the rating agencies.
- The rating process could be iterative in order to achieve a ratings target consistent with the anticipated borrowing rates the structure of the POB would require.
- Additional security features may be explored and supplemented to the issuance in order to increase likelihood of a strong rating and increased investor demand.
- While the annual funding of pension contributions are viewed by many government entities as a ‘soft liability’, the debt service associated with POBs are a ‘hard liability’ for issuers and must be paid when due.
Rating Agencies’ Heightened Focus on Pension Funding

- Numerous rating agency metrics explicitly factor in pension liabilities, and incorporate current and potential future burden of benefits into their process.

- Although annual pension payments can be temporarily underfunded, policies that risk unsustainable future payments or lack a responsible long-term approach to an appropriate funding level will be viewed as credit negatives.

- National pension fund performance, budgetary limitations, and current funding levels have caused rating agencies to take a closer look at how these metrics impact an issuer’s credit worthiness.
  - Moody’s adopted a new methodology for calculating unfunded pension liabilities.
  - Their Adjusted Net Pension Liability (“ANPL”) eliminates actuarial asset smoothing in favor of market value, and uses a discount rate based on the Citibank Pension Liability Index, a high grade corporate bond rate.
    - The changes to the calculation methodology result in a significant increase to Moody’s calculated ANPL, versus the traditional UAAL.
    - The metric has been formally adopted into rating criterias.

- The heightened focus of rating agencies on pension funding and funding levels have created downward pressure on ratings for entities with stressed pension systems.

- Rating agency reports have drawn attention to the current pension funding levels
The Benefit Bond Decision

Issuance Sizing
- Based on stage in business cycle
- Optimal recessionary sizing (80 to 85% for POBs; 65% for OPEB-OBs, preferably split in two issues)

Financial Analysis
- Primary driver of issuance – equity market risk/reward characteristics based on stage in business cycle
- Dynamic reinvestment scenario analysis

Investment Management
- Equity-only initially, no arbitrage in selling bonds to buy bonds
- Time-based migration to normal asset allocation

Overfunding Risk Mitigation
- Restrictive covenants to preclude benefits “give-aways”
- Excess returns available to pay down debt
- Protective POB trusts
POB Considerations

- POBs, though an attractive option on the surface, carry many issues that should be properly addressed.

- Issuers must be willing to consider a POB issuance as part of a long-term strategy that will ultimately be measured based on long-term results - this can be difficult from a shorter-term political perspective.
  - To provide the best chance for success, the issuer should evaluate the economic drivers of POBs at the time of a contemplated issuance.

- In order to be most effective, POBs must be part of a long-term, comprehensive strategy.

- Future underfunding of ADC payments by the issuer will diminish impact of a POB.

- Higher pension funding levels may trigger employee demand for increased benefits.

- Even if executed with a thoughtful and well managed issuance and investment strategy, among some audiences POBs have a negative connotation.
  - The GFOA has firmly recommended against the use of POBs.

- The use of POBs should be considered on a individualized basis with the issuer’s specific pension system characteristics, risk profile, and overall debt and financial position driving the development of a broad-based pension funding strategy.
PENSION OBLIGATION BONDS (POB) PROPOSAL IN COLORADO

ADAM FRANKLIN, GENERAL COUNSEL
SEPTEMBER 12, 2017
Colorado PERA Funding Facts

- Instrumentality of the State, founded on August 1, 1931
- Substitute for Social Security
- Five Division trust funds: State, School, Judicial, Denver Public Schools, Local Government
  - State: 58 year amortization period
  - School: 78 year amortization period
- Base employer contribution rate: 10.15 percent
- Employee contribution rate: 8 percent
- Additional contributions remitted by employer
  - Amortization Equalization Disbursement (AED)
  - Supplemental Amortization Equalization Disbursement (SAED)
  - Total: 10 percent
- Total contributions remitted by employers
  - 20.15 percent
» Fixed rate revenue bonds would be issued and proceeds would be deposited in PERA’s State and School Division trust funds
» Securitize AED and SAED contributions
» AED and SAED contributions remitted by PERA employers would be used to pay the debt service on the bonds
  • Special reserve funds created to receive AED and SAED contributions
  • PERA remits amount to entity that issued bonds to cover debt service obligations
  • Excess amount in special reserve funds not used to pay debt service would be transferred to PERA State and School Division trust funds
Why POBs?

» Pre-funds the contributions to the pension system
  • Gain certainty of AED and SAED funding
» Immediately increases the funded ratio of the system
» Reduces unfunded liability of the system, which under GASB 68 reduces unfunded liability amounts that will be reflected on the balance sheet of employers’ financial statements
» Reduces the time period to pay off unfunded liabilities
» Pension fund investment return assumptions are higher than the interest rate on the bonds
» Essentially an arbitrage play by the state with the assumption that over the life of the bonds the net return will exceed the debt service
  • Improve overall funded status and thus minimize ongoing contributions in the future
Investment Issues Presented

» Investment of proceeds
  • Timing of the market

» While current low borrowing rates make POBs attractive, the timing of investing the proceeds must be considered

» A POB replaces a dollar-cost averaging investment strategy with a single entry point investment strategy

» How do we put such a large sum of money to work in the markets?

» May impact asset allocation

» Efficient investment of proceeds will require greater usage of liquid asset classes in the short- to intermediate-term
  • Illiquid investments can be made as favorable investment opportunities are identified over time
Legal Issues Presented

» Protection of assets once deposited in pension trust funds
- Exclusive benefit rule IRC 401(a)(2) and State law protects trust fund assets from being diverted for purposes other than for the exclusive benefit of the membership
- Fees associated with fundraising must be taken prior to deposit into the trust
- Debt service cannot be paid out of pension trust fund assets
  » If pension system Board is responsible for paying debt service, then additional trusts need to be created to hold those assets
- Bondholders cannot have recourse against pension system trust fund assets
Legal Issues Presented (continued)

» Ensure no prohibited transaction under Section 503(b) of the IRC
  • If the Board is responsible for providing services to the issuer or the bondholders, then they need to think about this issue
  • For example, in Colorado’s structure, the Board was going to be responsible for sending the amount to service the debt to the entity responsible for paying bondholders
  • Must assure that if the fund is involved, in any capacity, it receives adequate compensation
  • Ensure the Board is not acting as a fiduciary when performing these functions
Legal Issues Presented
(continued)

» Board’s fiduciary duty
  • Ensure the Board does not become a fiduciary to the bondholders
  • Can the Board accept direction from the issuer of Bonds on the investment of the proceeds?
    » Issuer wants the arbitrage so can they direct investments in instruments other than fixed income which does not provide the “necessary arbitrage”
  • Interesting fiduciary question as to whether the Board supports POBs or does not
  • Investing the proceeds in a prudent manner

» Board immunity

» Application of Federal Securities laws
Other Issues to Consider

» Historically, once bonds have been issued, the plan sponsors have reduced contribution rates
  • This systematically defunds the system
» Bond covenant solution
  • Legislation required the trust indenture to include a covenant that it was an immediate event of default on the bonds if the contribution rates were reduced by the General Assembly
  • Creates a disincentive to the State to issue bonds and lower contribution rates
  • A contribution covenant default would have a negative ratings impact on the State and would increase the State’s cost of capital in future debt issuances
Observations on Pension Bonds

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National Education Association
Collective Bargaining and Member Advocacy

September 12, 2017

Issues to be Covered

1. Housekeeping & Some Basics
2. Timing is everything / Timing risk
3. Pension bond maturities
4. Conclusions
General Approach

There are various reasons to consider POB’s, but focusing on:

1. “Success” = Saving Money

2. Two Key Goals:
   - Increase likelihood that returns exceed borrowing costs
   - Avoid major mistakes

3. For simplicity: Using S&P 500 as proxy for equity returns

4. Ignoring some key issues (soft/hard debt, provisions in bond covenant, increased risks in troubled jurisdictions)

Consistent Effort & Expectations
S&P 500: Rolling Returns

(Data Shown is rolling returns of prior years/on ending date, with dividends reinvested)

The Story of the Data

1. Longer periods have less volatility (no surprise)

2. 20-Year Returns: Above 8% annual returns in 54-of-78 periods

3. 30-Year Returns: Above 8% in 71-of-78 periods

4. Odds are generally favorable (in jurisdictions with low borrowing costs)

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<th>Summary</th>
<th>30-Year Rolling</th>
<th>20-Year Rolling</th>
<th>10-Year Rolling</th>
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<tr>
<td>Average Return</td>
<td>9.42%</td>
<td>9.31%</td>
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<td>Maximum Return</td>
<td>14.32%</td>
<td>17.95%</td>
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<td>Minimum Return</td>
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<tr>
<td>Standard Deviation</td>
<td>2.23%</td>
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* Data from DQYDJ.com, which utilizes Robert Shiller’s S&P data
Spreads Impact POB Modeling

Consultants are likely to model likely savings/costs:

1. When spreads (between anticipated returns and borrowing costs) are high, models will look promising
2. Models may or may not take into account whether equities are under or over-priced
   - Can look to P/E ratios with smoothed earnings to get a sense
3. At times, models have shown >90% of “Success”

Timing: End-Point Sensitivity

“Even when modeling shows high likelihood of favorable outcome, POB success is heavily impacted by timing”

- Deloitte/Segal/Hewitt Study from December 9, 2009: Perspectives on Pension and Retiree Health Obligation Bonds
More recently…

S&P 500 Prices: 1990 to Present (Dividends Ignored)

Confident at the Worst Moments?

OVERCONFIDENCE
Addressing Timing Risk

Diversification of Timing

1. Legislation Design: Series of smaller bonds
   - Some increase in transaction costs

2. Investment Strategy: Gradually move lump sum into equities
   - Sacrifice some returns – 5 year ramp into equities would lower expected returns over 30-years slightly

   ➔ If focus is reducing next year’s ARC, be cautious

POB Maturities

As bond maturity is extended:

1. Volatility of returns should decrease
2. Borrowing costs rise (interest rates)
3. Total interest costs rise (more years), as returns do
Conclusions

1. POB’s are a tool, not a replacement to funding discipline

2. When borrowing costs are low, POB’s are likely to be successful

3. Timing is important; Mixed track record
   - Can somewhat mitigate risk by ‘diversifying timing’

4. Pay attention to bond maturities to increase the likelihood of “Success”

THANK YOU!

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