City of San José

Classic Values, Innovative Advice

Retirement Stakeholder Solutions Working Group
Pension Obligation Bonds

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Pension Obligation Bond Topics

- Brief History
- Theory
  - Advantages
  - Risks
- Application to San José
- Analysis Before Proceeding
- Conclusions

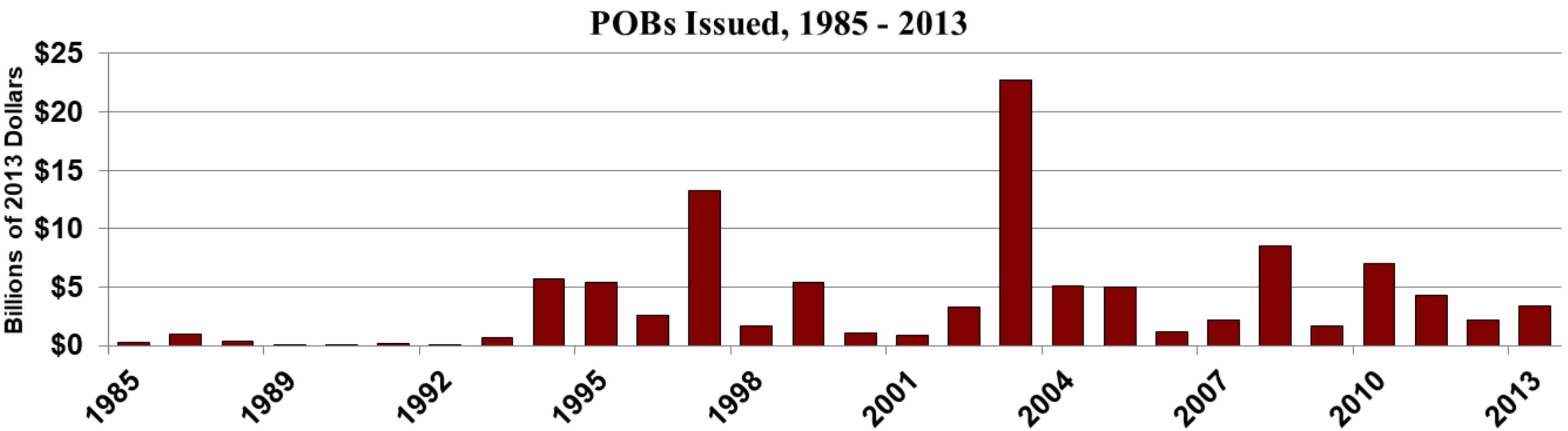
Pension Obligation Bond History

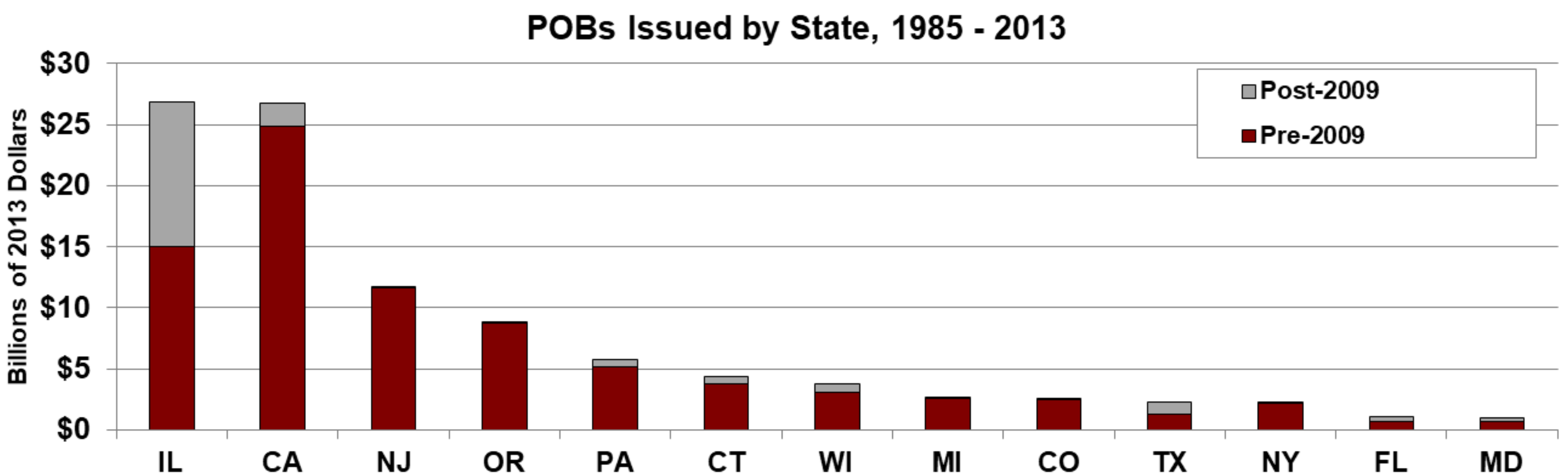
- City of Oakland – 1985
  – Issued tax exempt bond
  – Invested in higher yielding taxable securities
  – Created an arbitrage between taxable and tax exempt yields
- Tax Reform Act of 1986
  – Eliminated tax exemption for Pension Obligation Bonds
  – Eliminated arbitrage opportunity

Pension Obligation Bond History

- Since Tax Reform Act of 1986, argument for Pension Obligation Bonds has often been based on "actuarial arbitrage"
  - "Actuarial arbitrage" is based on the difference between the borrowing rate and the assumed rate of return
  - Arbitrage implies that there is a guaranteed gain, but there is no guarantee in this situation
- From 1985 to 2013, $105 billion in POBs issued
- Success or failure has largely depended on timing of issuance

Pension Obligation Bond History





Figures compiled by Center for Retirement Research at Boston College from Bloomberg Online Service (2012), and SDC Thomson Reuters (2013) databases.

POB Theory – Advantages

- “Actuarial Arbitrage” creates short-term reduction in contributions
  - Plan charges 6.75% on UAL
  - If borrow $1 million at 3.0%
    - Eliminate interest charge of 6.75% from plan on $1 million = $67,500
    - Pay bondholders 3.0% on $1 million = $30,000
    - Net savings = $37,500

POB Theory – Risks

- Ultimately, however, any savings depend on actual earnings exceeding the borrowing rate
  - If borrow $1 million at 3.0%
    - Pay bondholders 3.0% on $1 million = $30,000
    - If earn 6.75%, return on borrowed funds = $67,500 and gain is $37,500
    - If earn 0%, return on borrowed funds is $0 and loss is $30,000
    - If earn 13.5%, return on borrowed funds is $135,000 and gain is $105,000
- Pension Obligation Bonds are not an arbitrage – they are investing on margin
  - Increases leverage
  - Increases risk
  - Potential for greater returns and for greater losses
- POB payment terms are not flexible while UAL payments have some flexibility

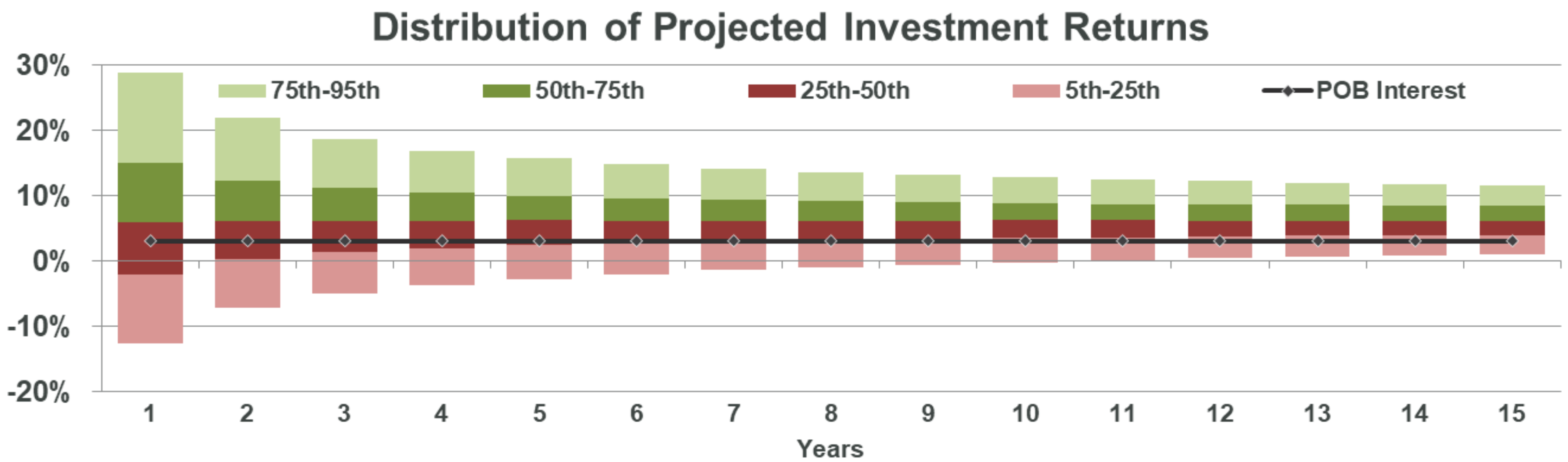
Hypothetical San José POB

Expected Impact of Hypothetical POB	Police & Fire	Federated	Total
Estimated Status as of 6/30/2020			
Actuarial Liability	$ 5,177,019	$ 4,323,371	$ 9,500,390
Market Value of Assets	3,702,023	2,208,016	5,910,039
Unfunded Actuarial Liability (UAL)	$ 1,474,996	$ 2,115,355	$ 3,590,351
One Year Interest on UAL	$ 99,562	$ 142,786	$ 242,349
Hypothetical POB @ 3.0%	$ 125,000	$ 125,000	$ 250,000
One Year Interest on POB	$ 3,750	$ 3,750	$ 7,500
Reduction in Interest on UAL	(8,438)	(8,438)	(16,875)
Expected Cost Impact	$ (4,688)	$ (4,688)	$ (9,375)

Amounts in thousands

- Difference between POB interest rate and pension discount rate produces reduced contribution in the first year
- Exact first year contribution savings depend on:
  - Structure of bond payments
  - Amortization credits provided by retirement boards

Hypothetical San José POB



- Expected cost savings depend on pension plan's discount rate
- Actual cost savings/increases depend on the investment returns generated by the POB's proceeds
  - Usually invested in full pension portfolio
  - Could be invested in specific assets to manage risk levels
- POB savings/costs are correlated with current plan experience
  - Makes good scenarios even better
  - Makes bad scenarios even worse

Analysis Before Proceeding

- Consider POB terms
  - Amount of POB
  - Terms of payment
  - Estimated interest rate
- Consider investment portfolio for POB funds
  - Federated portfolio
  - Police & Fire portfolio
  - Special portfolio to manage level of risk
- Consider multiple return scenarios for the plan and POB portfolios
  - Model pension contributions plus bond payments for each scenario
  - Weigh costs of bad scenarios against the potential benefits of good scenarios

Conclusions

- Potential arbitrage benefits of POBs ended when they became taxable
- History is spotty
  – Timing of issuance has been critical
  – POBs have tended to be issued when:
    - Plan is large compared to sponsor
    - Sponsor has substantial debt already
    - Sponsor is short of cash
    - Interest rates are low
- POBs can be used responsibly
  – Requires understanding and managing the risks

Certification

- The purpose of this presentation is to provide an overview of pension obligation bonds to the City of San José Retirement Stakeholder Solutions Working Group.
- This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as a credentialed actuary, I meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation.
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