

AK LEGISLATURE FINANCE COMMITTEES FILES 2007-2008 3147

Pension Obligation Bonds are a common tool used by governments.

Since 2001, over \$30 billion of POBs have been issued nationwide

- \$10 billion State of Illinois
- \$2.1 billion State of Oregon
- \$927 million Oregon School Boards Association
- \$800 million Detroit Retirement System Fund

- As a result of the growth in unfunded pension liabilities and ideal market conditions, POB issuances have become increasingly prevalent over the past 5 years.

- The relatively low interest rate environment, which widens the spreads between the POB interest costs paid by the issuer/employer and the assumed investment return rate of the pension systems makes the economics of the transaction more attractive.
- The potential cost savings from a POB, as many state and local employers struggle with budgetary imbalances and other savings alternatives become scarce, may prove extremely valuable.



■ States With POB Issuances From 2001-Present

State of Alaska

Note: Includes state, county, city and local POB issuances.

POB Issues by Year

Year	Amount (\$Mn)	Number of Issues
2007	\$726.20	4
2006	1,408.34	10
2005	3,971.32	37
2004	3,676.42	32
2003	17,685.31	71
2002	2,599.31	25
2001	536.64	9
	\$30,603.54	188

POB Issues by Size

Issue Size (\$Mn)	Amount (\$Mn)	Number of Issues
\$100 and under	\$3,450.17	137
\$100-250	4,401.23	29
\$250-500	4,928.48	13
Over \$500	17,380.82	9
	\$30,160.72	188



POBs issued with a low interest cost have proven successful.

	State of Oregon	State of Illinois	State of New Jersey
Issue Size:	\$2,083,960,000	10,000,000,000	2,803,042,499
Delivery Date:	10/31/2003	6/12/2003	6/30/1997
Security Type:	General Obligation	General Obligation	Appropriation
Insurer:	None	None	FSA/MBIA/Ambac
Initial Underlying Ratings	Aa3/AA- Moody's Corporate Aaa	Aa3/AA/AA Moody's Corporate Aaa	A1/A+
Interest Cost:	5.79%	5.05%	7.64%
Assumed Actuarial Rate of Return:	8.00%	8.50%	8.75%
Actual Rate of Return in 3-years Following POB:	9.89%	12.86%	(3.0)% ^(a)

POB transactions in process for 2008.



State of Illinois

- Expected size: \$16 billion
 - Follows \$10 billion transaction in June 2003
- Timing: Pending legislative approval



Commonwealth of Puerto Rico

- Expected size: \$6.5 to \$9.0 billion
 - Bonds backed by future employer contributions
- Timing: Postponed due to market volatility



State of Connecticut

- Expected size: up to \$2.0 billion
- Timing: Approved, governor signed



Chicago Transit Authority

- Expected size: \$1.9 billion
- Timing: Approved, underwriting team selected

Recognizing and managing risks are key to POB success.

Benefits

- Arbitrage
 - The broad range of investments utilized by pension funds generally result in an investment return that is substantially higher than today's rates.
 - Returns above assumed actuarial investment return will produce greater than expected savings from POBs.
 - Returns below assumed actuarial investment return but above POB yield will produce savings, but less than projected.
- Defined Benefits
 - Pledge to make lump sum UAAL payment creates the opportunity to negotiate change in plan benefits.
- Budget Relief
 - POBs may lower annual pension past service payments
- Labor Relations Benefit
 - POBs can be used to improve relations with unions by reducing unfunded pension liability.

Risks

- Arbitrage Risk
 - Reinvestment returns below the bond interest rate will result in negative earnings.
- Conversion of flexible obligation to immutable obligation
 - POB converts a "soft" liability into a "hard" liability
- Market risk
 - POBs result in a lump-sum payment into a pension fund, concentrating rather than spreading market timing risk.
- Refunding cost
 - POBs are generally issued as fixed rate taxable noncallable bonds because a redemption feature will further push up the interest rate costs. This structure makes POBs expensive to refund or defease.

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2/29/08

Pension Obligation Bonds

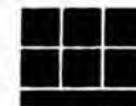
The Oregon Story

February 8, 2008





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Oregon vs: Alaska Pension System *

	Oregon	Alaska	
		PERS	TRS
Asset base	\$ 56.66 ⁽¹⁾ billion	\$9.4 billion	\$4.3 billion
Covered Employees	314,301	55,972	19,096
Average employer rate	14.40% ⁽²⁾	35.22% ⁽³⁾	44.17% ⁽³⁾
Funded ratio	110.50%	65.20%	59.50%
UAAL as of 2006 valuation	\$ 1.9 billion ⁽⁴⁾	\$5.5 billion	\$3.1 billion

* As of December 31, 2006 for Oregon and June 30, 2006 for Alaska.

(1) Includes \$7.2 billion in bond funded "side accounts."

(2) Tier 1 and Tier 2 only.


(3) Projected for Fiscal Year 2009 by Buck Consultants. Does not take SB125 into account.

(4) Not counting bond proceeds in side accounts valued at \$7.2 billion.



Oregon PERS

- Retirement benefits for most public employees in Oregon are administered through the "Oregon Public Employees' Retirement System," or "PERS."
- PERS maintains three separate retirement programs: Tier 1, Tier 2 (post 1996) and OPSRP (post 2003).
- In 1999, UAL of Oregon system was calculated at \$900 million. By 2002, UAL was projected to exceed \$17 billion.
- Main drivers of UAAL were poor investment performance, inadequate reserves, outdated mortality tables, and "money match" provisions that required employer match of individual account balances.
- Major legislative reforms in 2003 reduced estimated UAAL by approximately 50%. Among other modifications, a hybrid defined benefit/defined contribution pension program for new employees was created (OPSRP).



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Bonding a Popular Tool

Over 100 Oregon jurisdictions have chosen to finance PERS' liabilities with bonds.

- Original statutory authority provided to local governments and school districts in 2001, along with authority to enter into intercept agreements with the State to provide credit enhancement.
- State Constitutional amendment was approved by voters in 2003 which authored the State to issue GO bonds for its share of the liability. Voter approval margin was 55.25%.
- Interest rates for most borrowings were well under 6%.



Oregon Bonding Examples

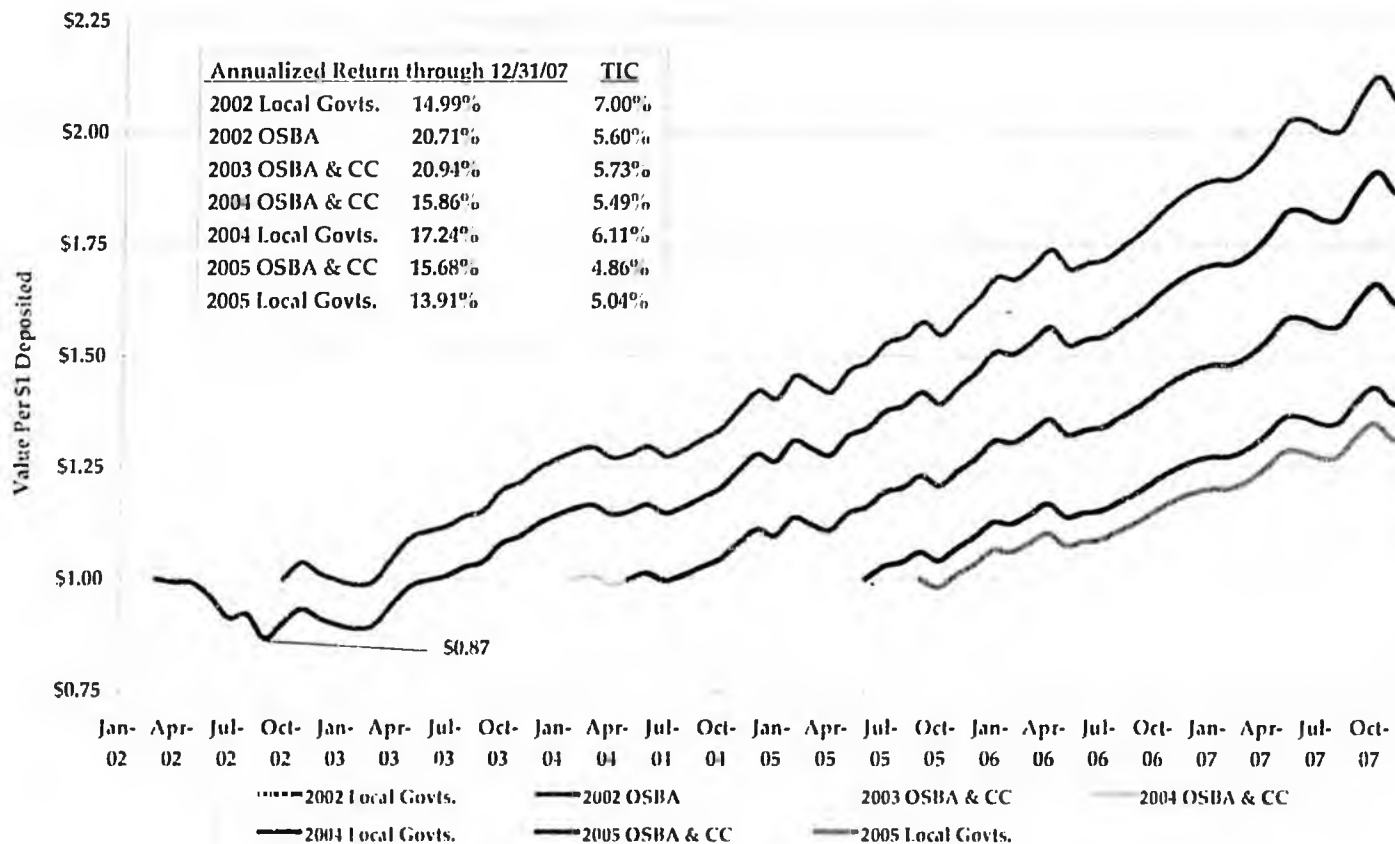
Date	Issuer	Par Amount	TIC	PV Savings
September 2005	Local Governments- 12 jurisdictions	\$ 186 m	5.04%	\$ 57 m
June 2005	OSBA - 16 school districts	\$ 492 m	4.77	\$ 171 m
June 2005	OCCA - 6 community colleges	\$ 57 m	4.86	\$ 19 m
May 2004	Local Government Pool – 10 cities, counties, special districts	\$ 126 m	6.11	\$ 23 m
February 2004	OSBA – 23 school districts	\$ 400 m	5.49	\$ 120 m
	OCCA – 6 community colleges	\$ 100 m	5.49	\$ 25 m
October 2003	State of Oregon	\$ 2,000 m	5.78	\$ 481 m
April 2003	OSBA – 44 school districts	\$ 927 m	5.73	\$ 230 m
	OCCA – 6 community colleges	\$ 153 m	5.72	\$ 37 m
October 2002	OSBA – 41 school districts	\$ 775 m	5.60	\$ 207 m
March 2002	Local Government Pool – 10 cities, counties, special districts	\$ 238 m	7.00	\$ 21 m
	Total	\$ 5,564 m		\$ 1,391 m ⁽¹⁾

(1) Assumes 8% return.



Oregon Pension Bonds Have Had Solid Investment Performance Records

Oregon Pension Bonds Earnings History
*Current Value of \$1 Deposited in Lump Sum Side Account**



Lessons Learned

1. Payment to PERS does NOT guarantee UAAL will be paid off in full.

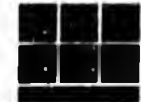
- Judicial, legislative, regulatory or investment activities can cause future changes to UAAL. Further increases would continue to be responsibility of jurisdiction.
- Important to continue consistent funding of pension program.

2. Structure of the financing matters

- Inappropriate to use unrealistic assumptions about rates of return.
- Amortization structure of bonds should match amortization of UAAL that PERS system uses.
- Not prudent to have back weighted structured where all savings are produced in early years.
- Not prudent to use savings for other budgeting needs.




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Lessons Learned

3. The "housekeeping issues" are often critical
 - Adequate protection and proper accounting of lump sum deposits are critical.
 - Statutes and regulations needed to ensure that the employers making the deposit are the ones getting the credit, and that credit is for appropriate amount. This would be particularly true in the absence of SB 125.
 - Investment of funds need to be carefully considered given magnitude of deposits.
4. Variations in payroll growth not immediately reflected in debt payments
 - Under current structure, if payroll declines, payments to PERS decline.
 - Using bonds, if payroll declines, payments on the bonds do not change.



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Conclusions

- Pension Obligation Bonds have been used effectively by Oregon jurisdictions to defray pension costs.
- It is important to carefully structure the bond issue, prudently manage investment strategies and think ahead about administrative issues
- HB 13 has been drafted with these protections in mind.



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Questions?

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2/29

Good morning Mr. Chairman, honorable members. For the record my name is Brian Andrews. I'm a deputy commissioner in Revenue.

Last time I gave a description of Pension Obligation Bonds or POBs. I offered some reason as to why we should consider issuing them. What the risks are associated with a POB transaction. What the potential savings that may be achieved from a POB issuance. Why POBs are issued as taxable debt as opposed to tax-exempt debt.

I'll be brief this morning but I would like to highlight certain points on each one of these topics.

The actual mechanics of a POB transaction is relatively simple. What a POB transaction tries to accomplish is the replacement of an existing debt obligation with another for a debt which has a lower cost. The concept is the same as refinancing your home mortgage at a lower interest rate.

In my last testimony, I noted that the 2006 actuarial report points out that the State has an 8.6 billion dollar unfunded liability i.e. debt that it owes to the State pension plan participants. This debt carries a cost of 8.25%.

Two weeks ago we obtained pricing from three major investment banking institutions for a POB transaction. It was determined that a deal could be done for 5.25%. The difference between an 8.25% cost and 5.25% is 3%. That 3% savings over 25 years on a billion dollars represents 23 million a year or 323 million dollars over 25 years discounted at 5%.

Let me say that the debt markets currently are exhibiting a lot of instability. Whether a deal could be done today at 5.25% is questionable, but I'm confident that a transaction could be accomplished between 5.25% and 5.75%. We are in the lowest interest rate environment that we have seen in the past forty years. In fact the ten year treasury at 3.7ish area has only been lower 3.9% of the time in the past twenty years. The secret, if there is one, to a POB transaction is to do it at the lowest cost possible.

If we take the proceeds of a POB transaction and invest them with an earnings rate greater than our cost we are better off for doing the transaction. If we earn something less than our cost we made a bad deal. Over the past 16 years only 2 years, 2000 and 2001 in which we experienced the worst equity market correction since the depression, the issuance of a POB transaction would have proved to be a poor decision with the pension plans actual earnings results. Remember this is a 25 year transaction so you really don't know whether you made a good deal or a bad deal until the POBs are paid off.

Two other risks we talked about was political risk and market risk. Political risk is the risk of over funding the pension plans and then increasing the benefits of the plan that may be difficult to fund in the future. Remember that future pension liabilities as well as past unfunded liabilities that aren't at the lower cost of a POB transaction still carry the

3.25% cost. Market risk is the risk that deals with the timing of proceeds into the market and how they should be invested.

POBs are not General Obligation of the State, but rather are what is known as annual appropriation bonds meaning that each year the Legislature have to budget for their debt service. Although the issuance of a POB transaction is considered a neutral event for the State's AA credit rating, the rating of the POB bonds, because they are appropriation bonds, would carry a rating a AA- or one notch below the State's credit rating.

Go to Savings Matrixes

Page 27, Explain

Continue with Tax issues section and conclusion.



Pension Obligation Bonds

February 8, 2008

Alaska Department of Revenue



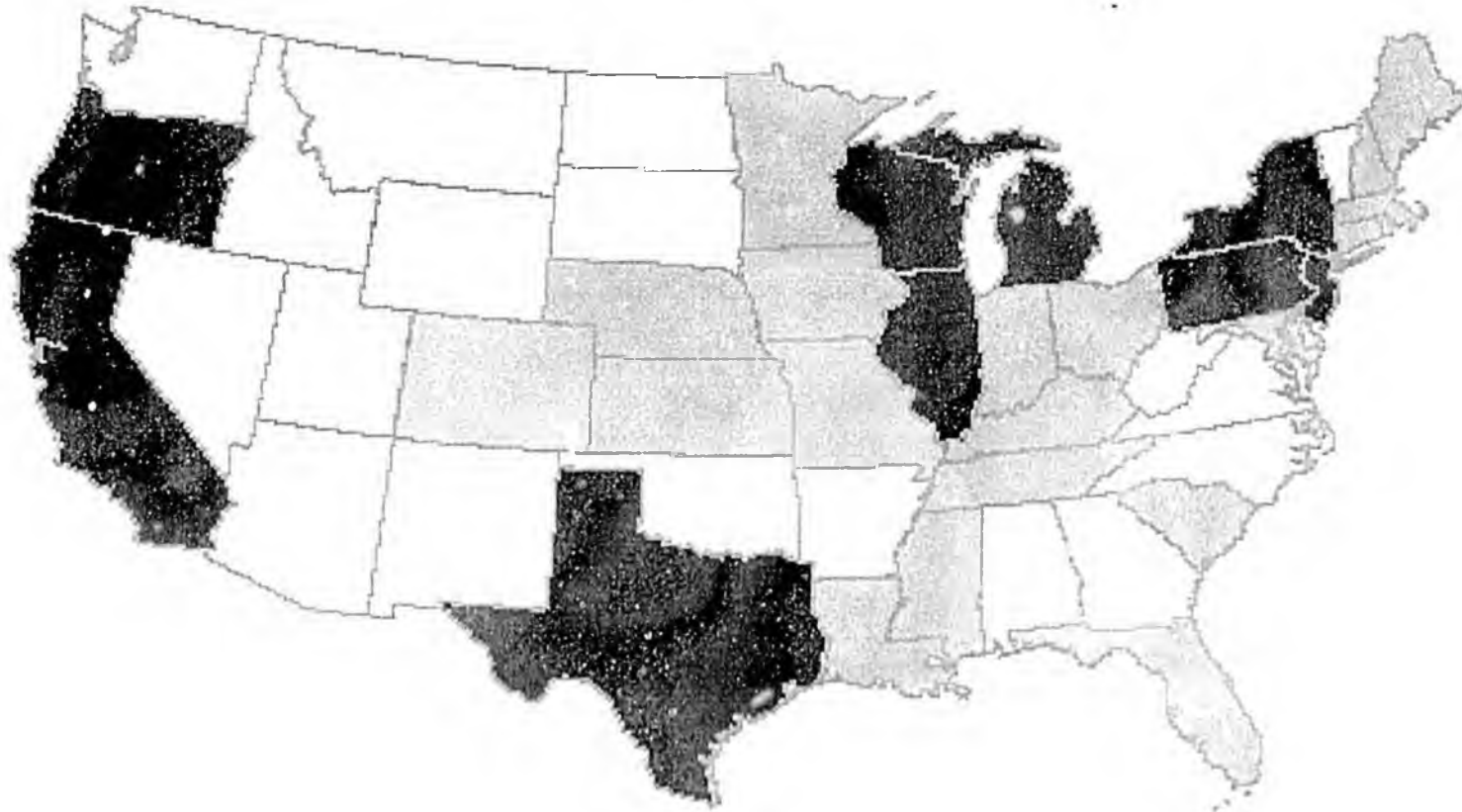
Overview of Pension Obligation Bonds (POBs)

Pension Obligation Bonds (POBs)

- Pension Obligation Bonds are bonds issued by a state or local government to pay its obligation to the pension system in which its employees are members.
- POBs have been an increasingly popular and successful way for state and local governments to accomplish financial objectives.
- Since 1995, six states and over 234 local governments have issued POBs totaling in excess of \$40 billion.

POBs Have Been Issued Throughout the US

- Over \$5 billion
- Between \$1 and \$5 billion total issued
- Less than \$1 billion issued



Why Should We Consider Issuing POBs?

- Interest rate savings – the interest rate of POBs issued in the near future will be lower than 8.25% charged by the pension system.
- Arbitrage – the actual investment return of pension asset exceeds the POB cost.
- POBs are not generally viewed as adding to the debt burden of the state or local government issuer because they replace existing pension obligations.
- POBs can improve funding ratios at a relatively low cost of funds and with a repayment schedule that fits the state's or local governments' goals and constraints.

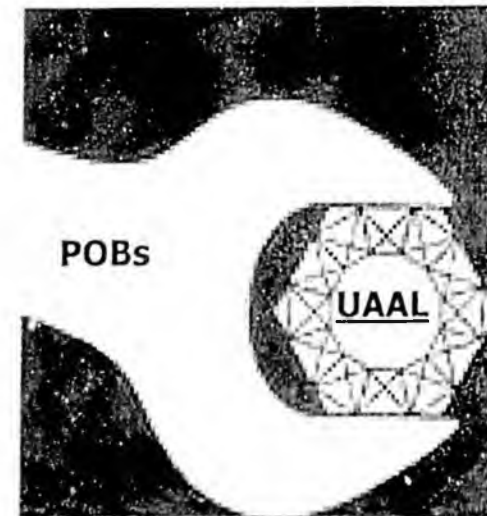
POBs Are:

Not ...



Golden Bullet

But ...



Financial Tool

Alaska Pension Bill/Unfunded Actuarial Accrued Liability (UAAL) in 2006

Total \$8.6 Billion:

\$5.5 Billion PERS

\$3.1 Billion TRS



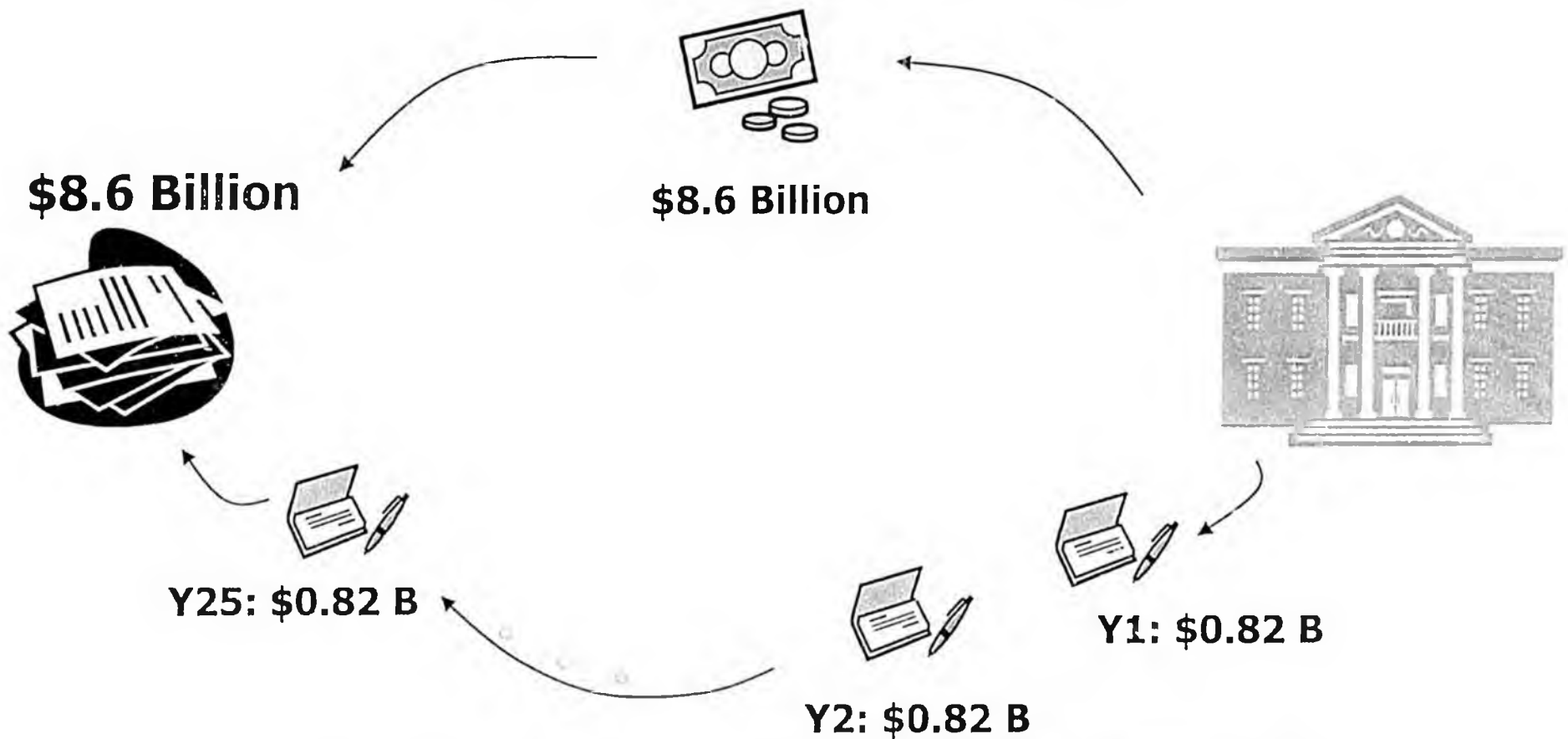
AK Pension System



**State & Local
Governments**

Paying the Bill/UAAL

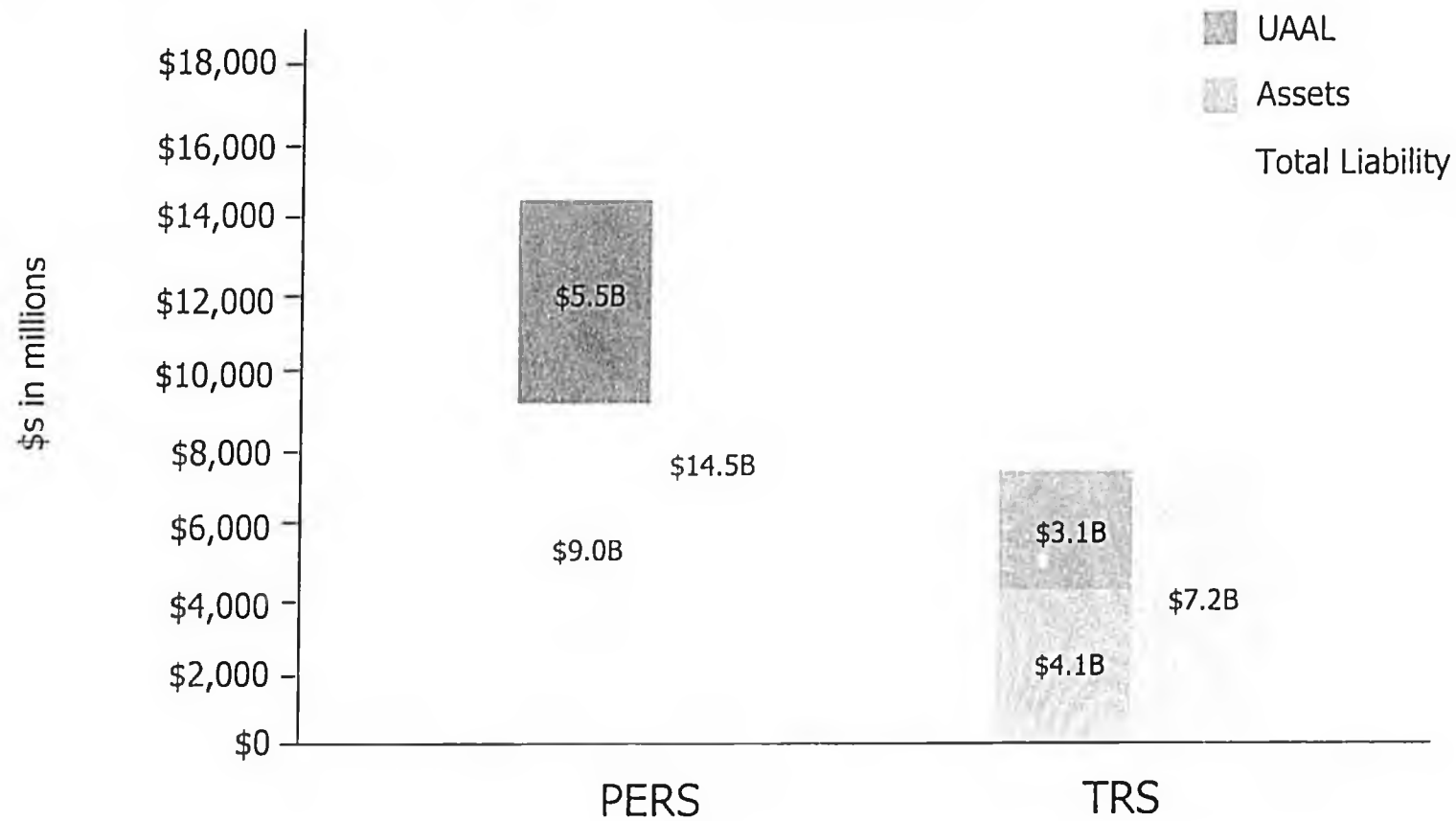
Option A: Pay the total with Cash



Option B: A "loan" of 25 years at 8.25% cost

Funding Status Overview

Summary of Funding Status for PERS and TRS as of June 30, 2006





Interest Rate Savings

Interest Rate Savings

Comparing the amortization of \$1 billion debt at 8.25% cost to \$1 billion debt at 5.25% over 25 years:

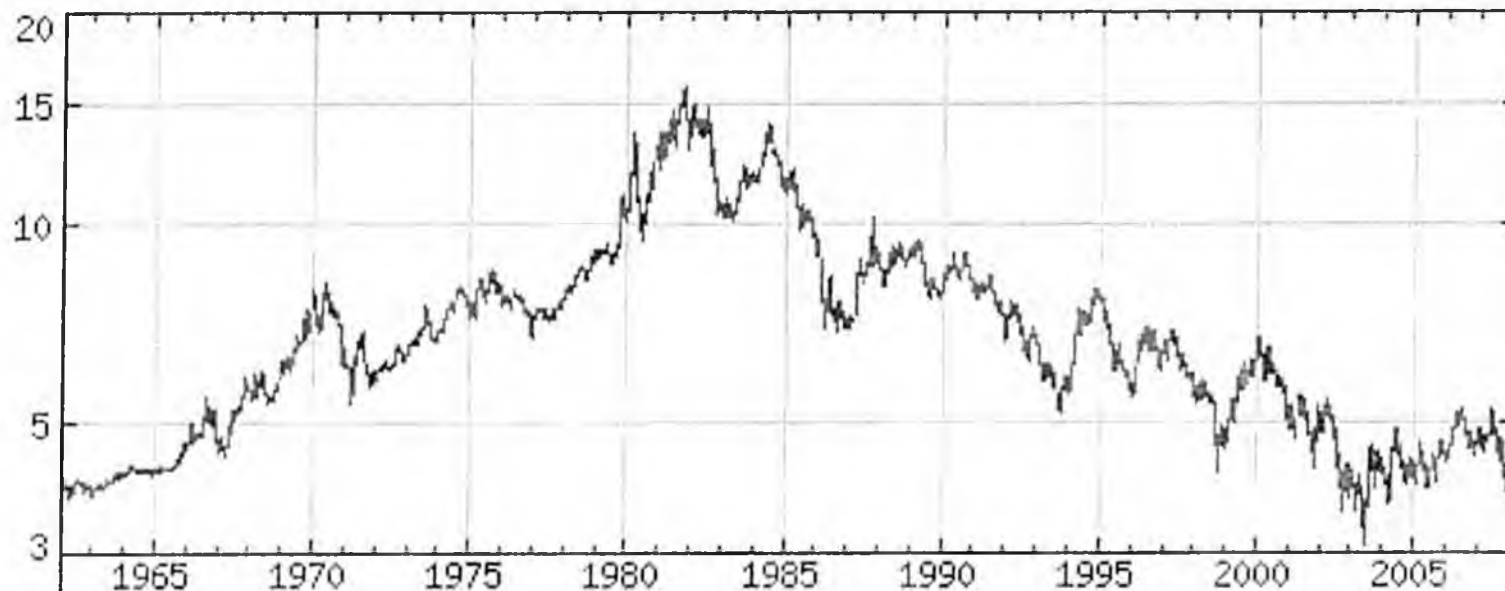
- Saving on interest cost is 3.0%;
- Saving on annual debt payment is \$23 million;
- NPV of savings on annual debt payment over 25 years is \$323 million discounted at 5%.

	Amount (\$Billion)	Interest Cost	Annual P&I Payment (\$Million)
\$	1	8.25%	\$ 96
\$	1	5.25%	\$ 73
Savings		3.00%	\$ 23
NPV of Cumulative Savings @ 5%			\$ 323

Interest Rate History

- 10-Year Treasury yield is 3.65% as of February 1, 2008. This rate is extraordinarily attractive when viewed in a historical context.

10-Year Treasury Yields

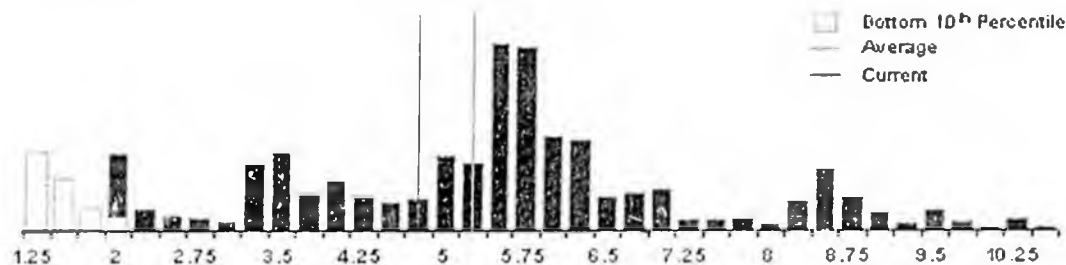


Treasury Rates Still Historically Attractive

3-month LIBOR Rate

Min:	1.00%
Average:	5.05%
Max:	10.63%
Current:	4.62%

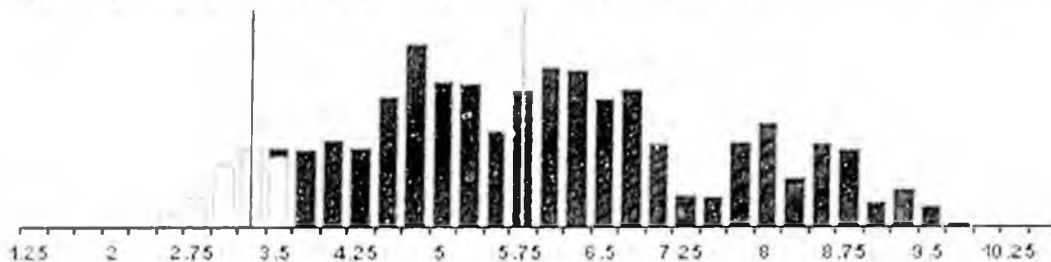
Lower than current level
36% of the time



5 Year Treasury Rate

Min:	2.03%
Average:	5.69%
Max:	9.73%
Current:	3.27%

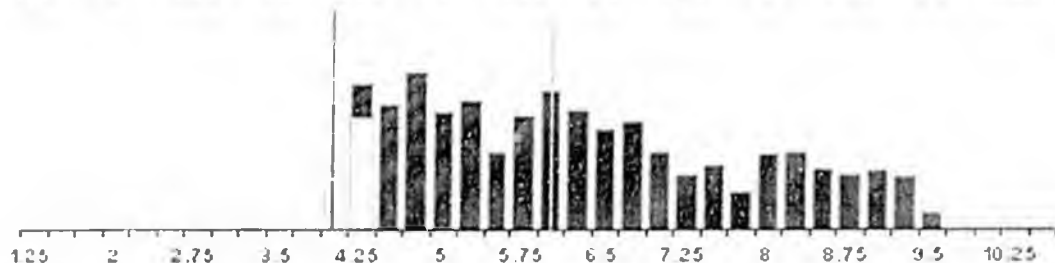
Lower than current level
8% of the time



10 Year Treasury Rate

Min:	3.11%
Average:	6.06%
Max:	9.54%
Current:	3.91%

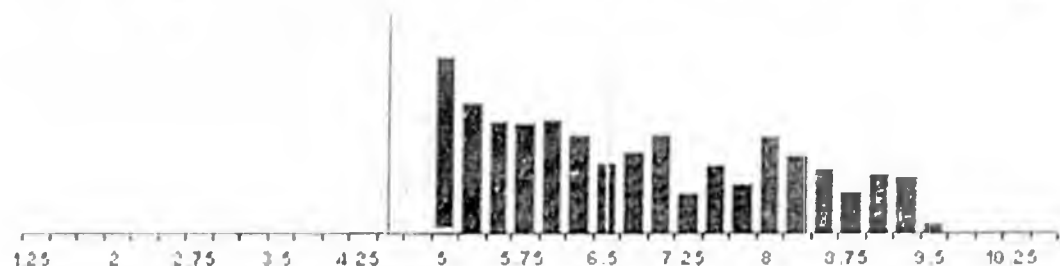
Lower than current level
3% of the time



30 Year Treasury Rate

Min:	4.17%
Average:	6.40%
Max:	9.45%
Current:	4.39%

Lower than current level
1% of the time

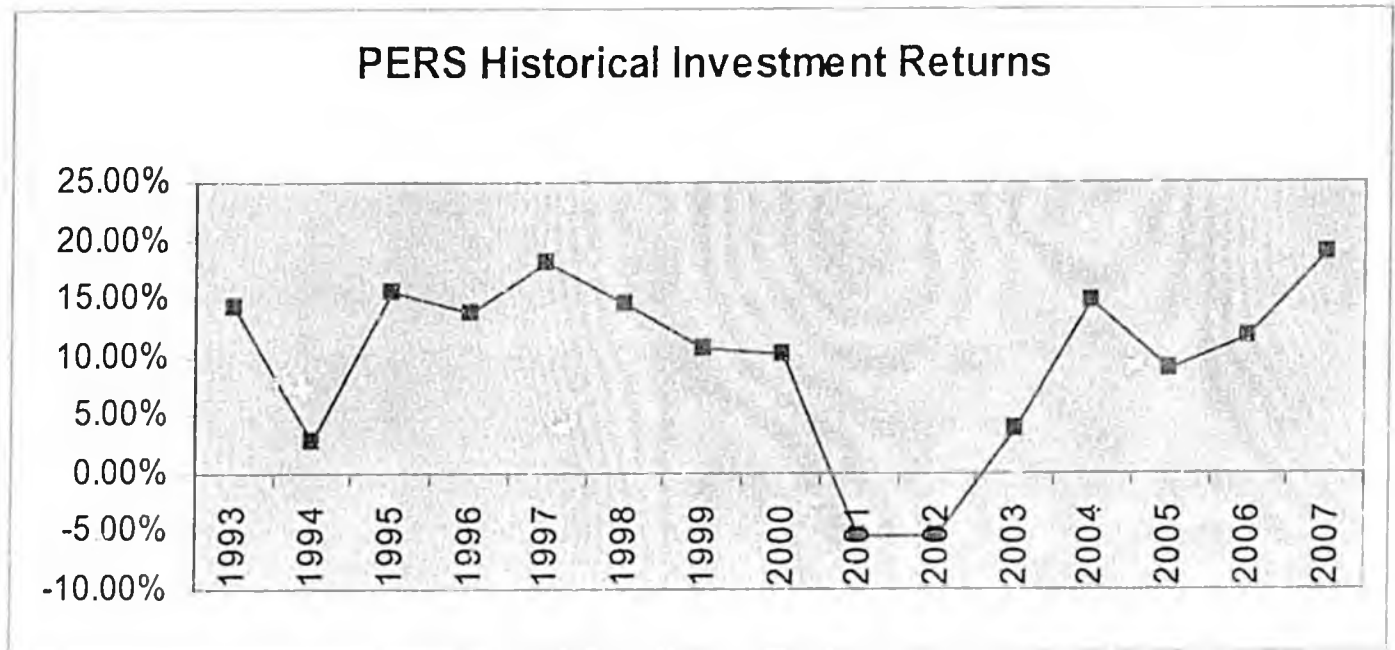




Arbitrage

Historical Investment Returns of State Pension Plans (PERS)

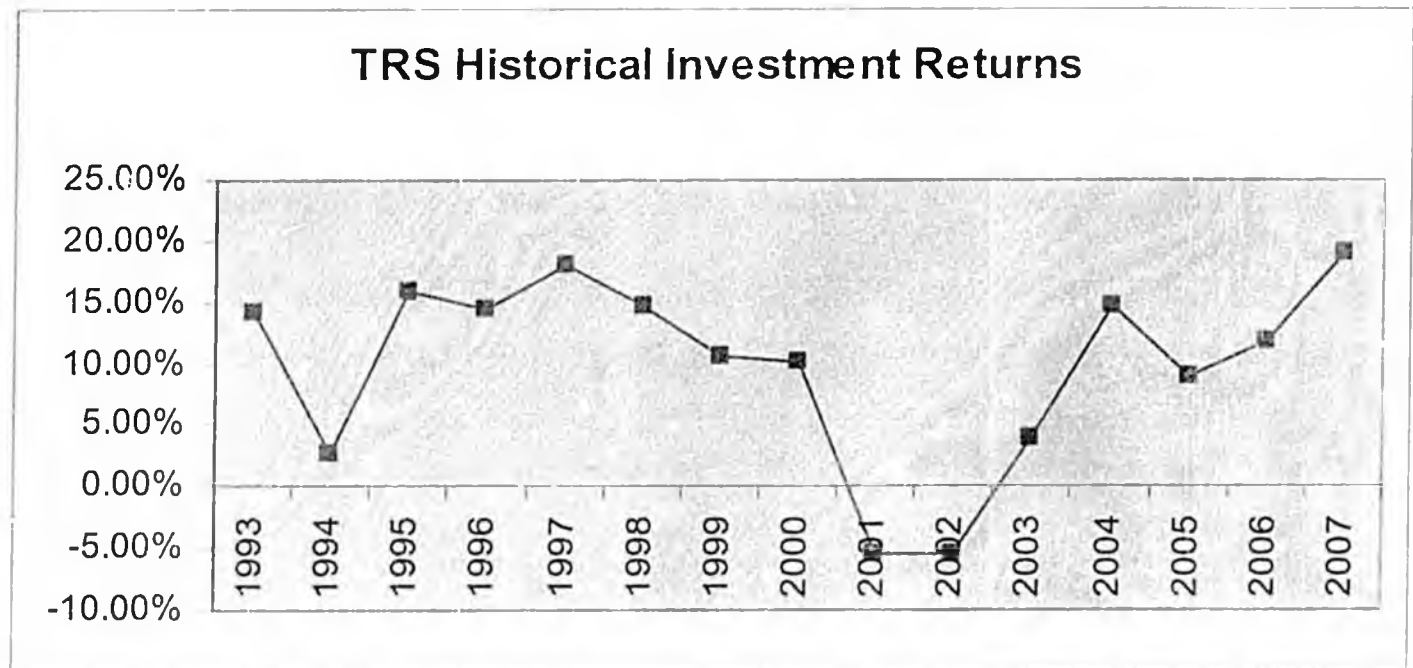
FY	PERS ROR
2007	18.88%
2006	11.69%
2005	8.86%
2004	14.73%
2003	3.82%
2002	-5.40%
2001	-5.30%
2000	10.12%
1999	10.65%
1998	14.62%
1997	18.07%
1996	13.70%
1995	15.56%
1994	2.66%
1993	14.25%
1992	11.80%



- The average return from 1992 to 2007 is 9.67%.
- Standard Deviation is 7.40%.

Historical Investment Returns of State Pension Plans (TRS)

FY	TRS ROR
2007	13.89%
2006	11.72%
2005	8.90%
2004	14.75%
2003	3.81%
2002	-5.41%
2001	-5.36%
2000	10.19%
1999	10.73%
1998	14.73%
1997	18.00%
1996	14.35%
1995	15.89%
1994	2.61%
1993	14.16%
1992	11.58%



- The average return from 1992 to 2007 is 9.72%.
- Standard Deviation is 7.45%.

Long Term Target Asset Allocation

Asset Class	Allocation	Range
Domestic Large Capitalization	30%	± 3%
Domestic Small Capitalization	6%	± 3%
International Equity	14%	± 3%
Emerging Markets Equity	2%	± 2%
Private Equity	7%	± 5%
Domestic Fixed-Income	20%	± 3%
High Yield	2%	± 2%
International Fixed-Income	2%	± 2%
Real Estate	10%	± 4%
Absolute Return	4%	± 4%
Other	3%	± 3%
Cash	0%	± 3%

Median Return **8.05%**
Standard Deviation **12.27%**



Credit Neutrality

Credit Rating Consideration

- Credit Neutral – debt obligation is already recognized and POBs are not considered new debt.
- “Moody’s believes the issuance of POBs is one effective way of addressing an unfunded liability.”
- “Standard & Poor’s has viewed POBs as a strategy for savings on carrying charges as long as the transaction are structured conservatively and the assumptions were reasonable and attainable.”

Prudently Structured, POBs are Ratings Neutral

Failure to fully fund the actuarially required contribution signals fiscal stress to the market ("willingness to pay").

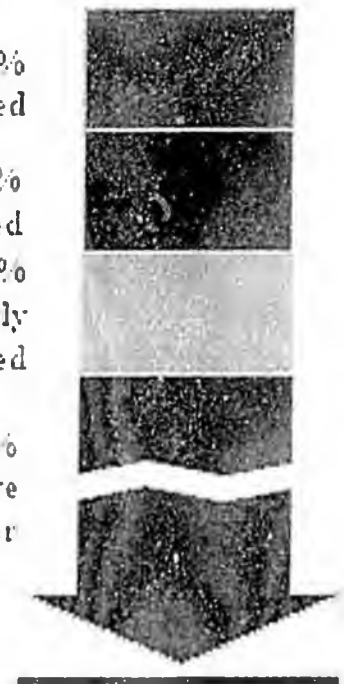
- Consistent underfunding is considered a credit negative.
- Funding ratios below 80% are a potential negative
 - Actuarially Required Contribution needed to "catch up" may "crowd out" other priorities, reducing the state's financial flexibility.
- Rating agencies generally view POBs as an acceptable tool for reducing the cost of an already existing liability.
- Significant term extensions and/or payment holidays are *not* viewed positively.

Above 90%
Well Funded

80% - 90%
Under-Funded

70%-50%
Significantly
Under-funded

Under 70%
Negative
Credit Factor



Risks

Risks Overview

- Investment Risk – POB financing is successful as long as the return of investment of proceeds exceed POB cost.
- Political Risk – Overfunded pension system can lead to political pressure to increase pension benefits, which can cause further increased pension liability in the future.
- Market Risk – Prudent investment of POB proceeds in early years is important.

Investment Risk Analysis

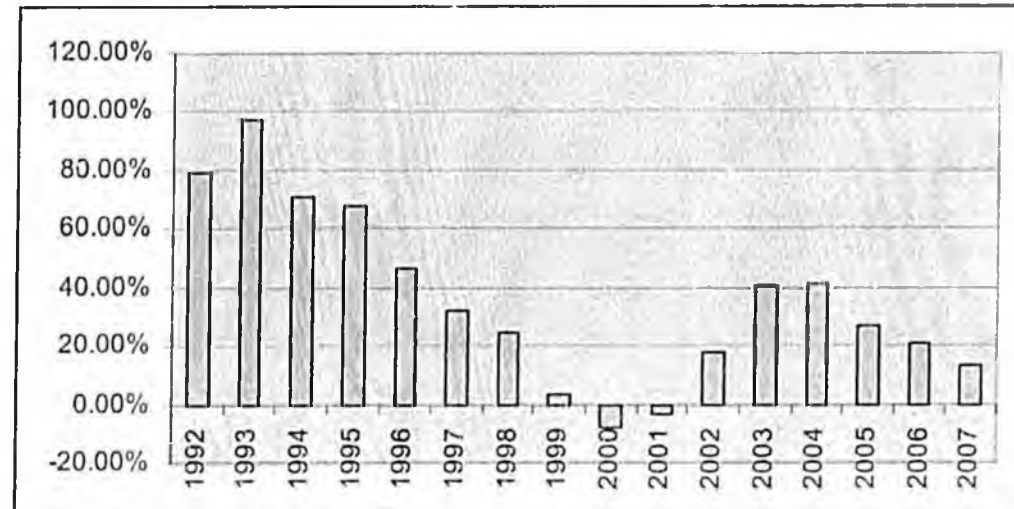
As long as those bond-funded assets earn more than 5.25%, we are better off for having borrowed.

- With the current low interest rate environment, POB issuance with cost around 5.25% is achievable.
- Historical investment returns of PERS and TRS indicate that we can outperform 5.25% most of the time.
- Simulations of future investment returns show that there are high possibility that we are going to outperform 5.25%.

Investment Risk (PERS)

FY	PERS ROR	Estimated Cost of Borrowing	Accm. Returns as of EOY FY07	Annualized Returns as of EOY FY07
2007	18.88%	5.75%	13.13%	13.13%
2006	11.69%	5.55%	20.63%	9.83%
2005	8.86%	5.04%	26.82%	8.24%
2004	14.73%	5.02%	40.92%	8.95%
2003	3.82%	4.76%	40.65%	7.06%
2002	-5.40%	5.36%	18.16%	2.82%
2001	-5.30%	5.77%	-3.29%	-0.48%
2000	10.12%	6.78%	-8.21%	-1.07%
1999	10.65%	6.40%	3.38%	0.37%
1998	14.62%	6.01%	24.72%	2.23%
1997	18.07%	7.10%	31.90%	2.55%
1996	13.70%	7.19%	46.90%	3.26%
1995	15.56%	7.32%	68.16%	4.08%
1994	2.66%	7.84%	70.80%	3.90%
1993	14.25%	6.62%	96.98%	4.62%
1992	11.80%	7.76%	79.24%	3.71%

Estimated Cumulative Net Return to 2007 (PERS)

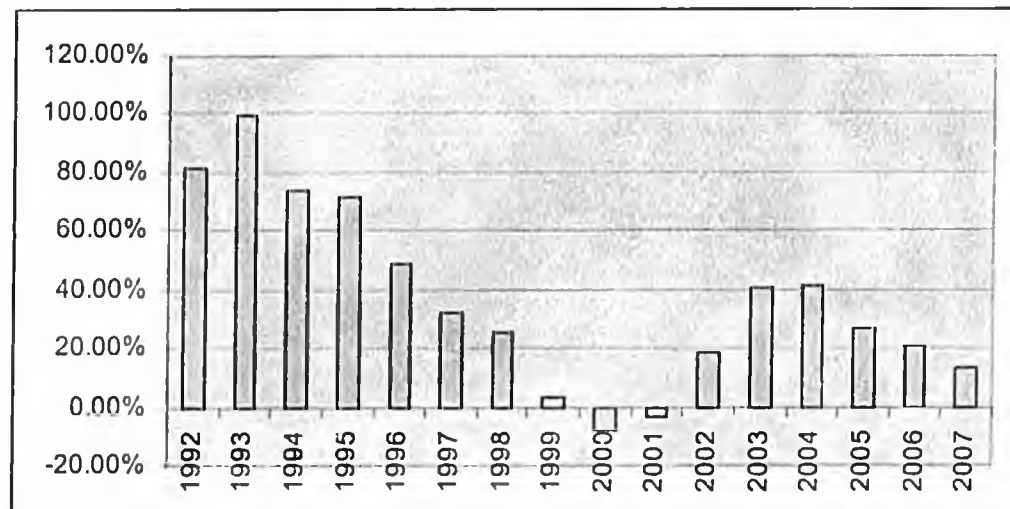


- Based on PERS actual investment history, we can see what the cumulative net return to 2007 might have been if POBs had been issued in any given year.
- For 14 out of 16 years the issuance of POBs would have resulted in a gain to the pension system.

Investment Risk (TRS)

FY	TRS ROR	Estimated Cost of Borrowing	Accm. Returns as of EOY FY07	Annualized Returns as of EOY FY07
2007	18.89%	5.75%	13.14%	13.14%
2006	11.72%	5.55%	20.68%	9.85%
2005	8.90%	5.04%	26.92%	8.27%
2004	14.75%	5.02%	41.06%	8.98%
2003	3.81%	4.76%	40.78%	7.08%
2002	-5.41%	5.36%	18.25%	2.83%
2001	-5.36%	5.77%	-3.32%	-0.48%
2000	10.19%	6.78%	-8.13%	-1.05%
1999	10.73%	6.40%	3.60%	0.39%
1998	14.73%	6.01%	25.17%	2.27%
1997	18.00%	7.10%	32.25%	2.57%
1996	14.35%	7.19%	48.94%	3.38%
1995	15.89%	7.32%	71.33%	4.23%
1994	2.61%	7.84%	73.70%	4.02%
1993	14.16%	6.62%	99.82%	4.72%
1992	11.58%	7.76%	81.23%	3.79%

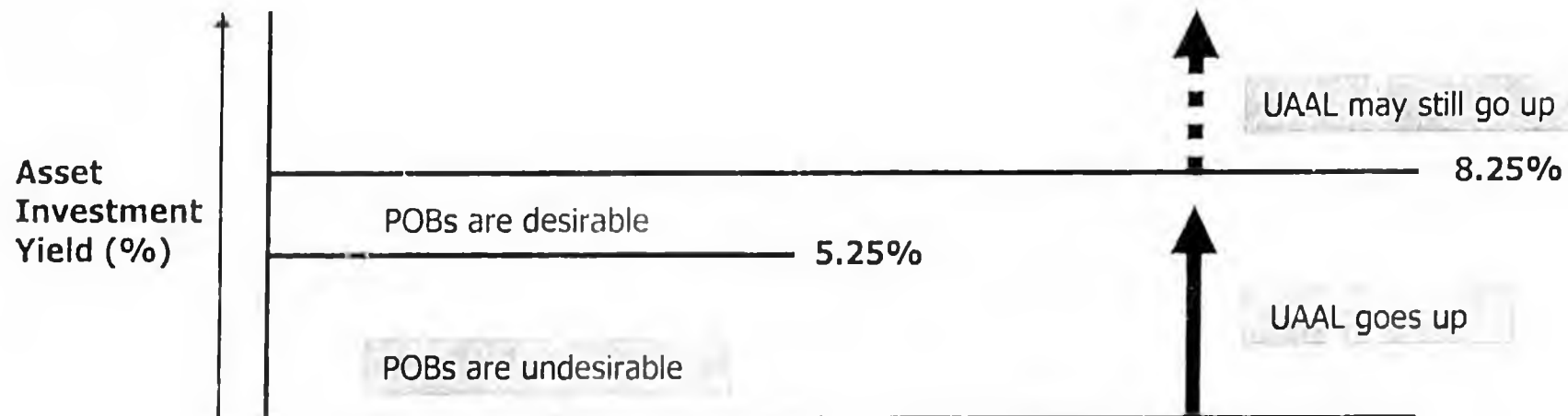
Estimated Cumulative Net Return to 2007 (TRS)



- Based on TRS actual investment history, we can see what the cumulative net return to 2007 might have been if POBs had been issued in any given year.
- For 14 out of 16 years the issuance of POBs would have resulted in a gain to the pension system.

UAAL vs. POB Financial Success

- POB financing:
 - As long as those bond-funded assets earn $> 5.25\%$, we are better off for having borrowed.
 - POB financing is undesirable if assets earn $< 5.25\%$.
- All other things equal, when PERS and TRS assets earn $< 8.25\%$, the UAAL goes up.
- Further, even if those assets earn $> 8.25\%$, the UAAL can increase due to actuarial and / or accounting changes.



Investment Return Forecast

Monte Carlo simulation with 10,000 iterations for each scenario; Assuming a 25-year investment period.

Conservative – 70/30

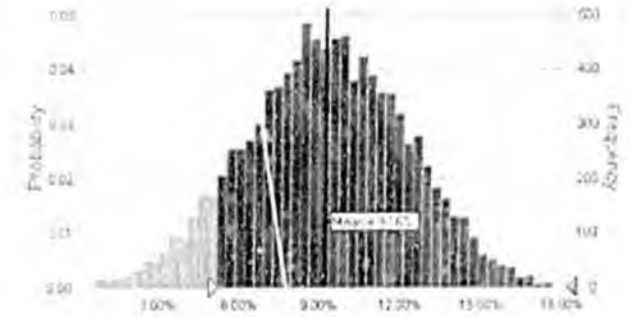
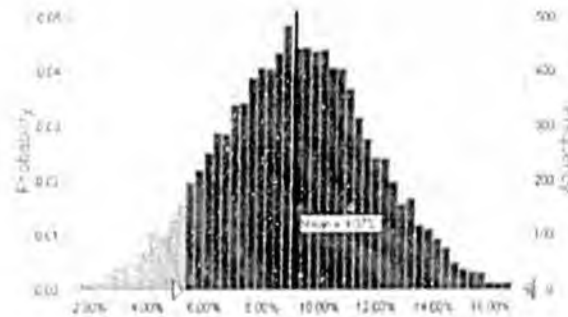
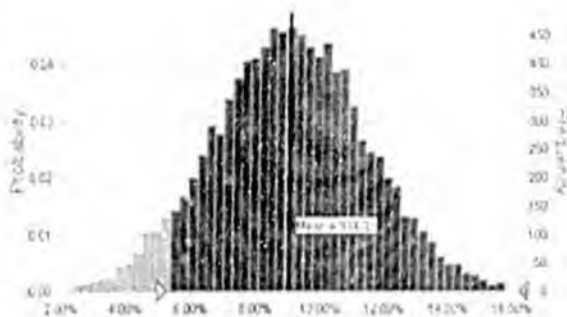
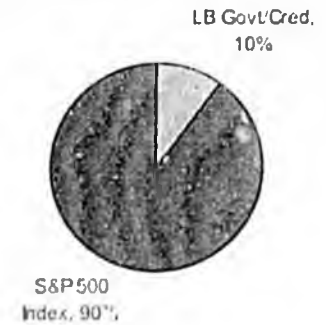
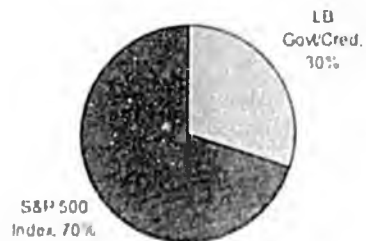
Annualized Average Return	9.00%
Stand Deviation of Returns	2.37%
Probability of outperforming 5.25%	94.2%

Moderate – 80/20

Annualized Average Return	9.07%
Stand Deviation of Returns	2.71%
Probability of outperforming 5.25%	92.2%

Aggressive – 90/10

Annualized Average Return	9.16%
Stand Deviation of Returns	3.03%
Probability of outperforming 5.25%	89.87%



Political Risk – Key Driver of UAAL

Between 1992 and 2003, increasing liabilities – not poor investment performance – caused the most damage to the PERS/TRS system.

- Presented by State Actuary to ARM Board in 2005

Changes in Assets Include:

- Investment performance (i.e. investment risk)

Changes in Liabilities Include:

- Health benefits cost experience
- Health assumption changes
- Plan changes
- Demographic experience
- Non-health changes

Drivers of PERS/TRS Funding Ratio Changes (1992-2003)

	PERS Change in Funded Status	TRS Change in Funded Status
Change Due to Assets	-3.8%	-2.7%
Change Due to Liabilities	-18.5%	-26.6%
Total Change in Funded Status	-22.3%	-29.3%

Political Risk

High amount of POBs proceeds may cause the pension system to be over-funded, which could lead to political pressure calling for benefit increases that incur new liabilities in the future.

Risk Control:

- POBs are not issued for the full UAAL; a funded ratio of 70-80% is an industry standard.
- Manage pension benefits and UAAL with discipline.

Market Risk

POBs proceeds cause a large amount of capital infusion into the pension system at once. Prudent investment of the proceeds in early years is critical.

Risk Control:

- Thorough market assessment before POB issuance;
- Considering whether to have a special investment allocation strategy for the proceeds, or stick with the traditional allocations.



Types of Public Debt

Security

- **General obligation bonds**

Bonds that satisfy any constitutional debt limitation and are backed by the full faith and credit and taxing power of the issuing state and local government.

- **Obligations imposed by law**

Obligations imposed by the state or local government by the constitution or by statute or by court judgment as distinguished from a voluntary exercise of the borrowing power by the state or local government.

- **Annual appropriation bonds**

Bonds that are not considered debt subject to a constitutional debt limitation because the state and local government issuer has no legal obligation to pay them and payment is therefore subject to annual appropriation of funds for that purpose at the discretion of the legislature or governing body of the state or local government issuer.

- **HB13 Restriction**

Please note that HB13 Sec. 37.15.900(b) indicates that "The bonds do not constitute a general obligation of the state."



Potential Savings

POBs and Cash Infusion

Pay partial UAAL off with cash and borrow partial at 5.25% by issuance of Pension Obligation Bonds (POBs).

Implications

- Immediate reduction of the UAAL;
- Increase in the Funded Ratio;
- Reduction of employer past service contribution rate.

Case Study (PERS)

Employer Contribution Rates
POBs (in billions)

Cash (in billions)	\$ -	\$ 1.0	\$ 2.0	\$ 3.0	\$ 4.0	\$ 5.0	\$ 5.5
	0%	18%	36%	55%	73%	91%	100%
\$ -	35.22%	34.07%	32.91%	31.76%	30.61%	29.46%	28.88%
\$ 1.0	29.51%	28.36%	27.20%	26.05%	24.90%	23.74%	
\$ 2.0	23.80%	22.64%	21.49%	20.34%	19.19%		
\$ 3.0	18.08%	16.93%	15.78%	14.63%			
\$ 4.0	12.37%	11.22%	10.07%				
\$ 5.0	6.66%	5.51%					
\$ 5.0	6.66%	5.51%					
\$ 5.5	3.80%						

Savings on Annual Contribution Amount (in millions)
POBs (in billions)

Cash (in billions)	\$ -	\$ 1.0	\$ 2.0	\$ 3.0	\$ 4.0	\$ 5.0	\$ 5.5
	0%	18%	36%	55%	73%	91%	100%
\$ -	\$0.00	\$19.31	\$38.62	\$57.93	\$77.24	\$96.55	\$106.20
\$ 1.0	\$95.69	\$115.00	\$134.31	\$153.61	\$172.92	\$192.23	
\$ 2.0	\$191.37	\$210.68	\$229.99	\$249.30	\$268.61		
\$ 3.0	\$287.06	\$306.37	\$325.68	\$344.99			
\$ 4.0	\$382.75	\$402.06	\$421.37				
\$ 5.0	\$478.44	\$497.75					
\$ 5.5	\$526.28						

Savings on Employer Contribution Rates
POBs (in billions)

Cash (in billions)	\$ -	\$ 1.0	\$ 2.0	\$ 3.0	\$ 4.0	\$ 5.0	\$ 5.5
	0%	18%	36%	55%	73%	91%	100%
\$ -	0.00%	1.15%	2.31%	3.46%	4.61%	5.76%	6.34%
\$ 1.0	5.71%	6.86%	8.02%	9.17%	10.32%	11.48%	
\$ 2.0	11.42%	12.58%	13.73%	14.88%	16.03%		
\$ 3.0	17.14%	18.29%	19.44%	20.59%			
\$ 4.0	22.85%	24.00%	25.15%				
\$ 5.0	28.56%	29.71%					
\$ 5.5	31.42%						

NPV of Savings on 25-year Contribution Amount (in millions)
POBs (in billions)

Cash (in billions)	\$ -	\$ 1.0	\$ 2.0	\$ 3.0	\$ 4.0	\$ 5.0	\$ 5.5
	0%	18%	36%	55%	73%	91%	100%
\$ -	\$0.00	\$272.14	\$544.28	\$816.43	\$1,088.57	\$1,360.71	\$1,496.73
\$ 1.0	\$1,348.61	\$1,620.75	\$1,692.90	\$2,165.04	\$2,437.18	\$2,709.32	
\$ 2.0	\$2,697.22	\$2,969.37	\$3,241.51	\$3,513.65	\$3,785.79		
\$ 3.0	\$4,045.84	\$4,317.98	\$4,590.12	\$4,862.26			
\$ 4.0	\$5,394.45	\$5,666.59	\$5,938.73				
\$ 5.0	\$6,743.06	\$7,015.20					
\$ 5.5	\$7,417.37						

1. \$2.0 billion POBs issued in 2008
2. Assumed \$5.5 billion PERS UAAL in 2007
3. Annual employer contribution amount for Tiers I, II, and III would be \$590 million without POBs starting in 2007
4. Funding ratio will be improved from 65.12% to 77.81% (based on preliminary \$10.27 billion PERS asset as of Dec 31, 2006)

Case Study (TRS)

Employer Contribution Rates
POBs (in billions)

Cash (in billions)	POBs (in billions)							
	\$.	\$ 1.0	\$ 1.5	\$ 2.0	\$ 2.5	\$ 3.0	\$ 3.1	
	0%	32%	48%	65%	81%	97%	100%	
\$ -	44.17%	40.36%	38.45%	36.55%	34.64%	32.74%	32.36%	
\$ 0.5	36.23%	32.42%	30.51%	28.60%	26.70%	24.79%		
\$ 1.0	28.28%	24.47%	22.57%	20.66%	18.75%			
\$ 1.5	20.34%	16.53%	14.62%	12.72%				
\$ 2.0	12.39%	8.58%	6.68%					
\$ 2.5	4.45%	0.64%						

Savings on Annual Contribution Amount (in millions)
POBs (in billions)

Cash (in billions)	POBs (in billions)							
	\$.	\$ 1.0	\$ 1.5	\$ 2.0	\$ 2.5	\$ 3.0	\$ 3.1	
	0%	32%	48%	65%	81%	97%	100%	
\$ -	\$0.00	\$22.95	\$34.42	\$45.89	\$57.37	\$68.84	\$71.13	
\$ 0.5	\$47.84	\$70.79	\$92.26	\$93.74	\$105.21	\$116.63		
\$ 1.0	\$95.69	\$118.63	\$130.11	\$141.58	\$153.05			
\$ 1.5	\$143.53	\$166.43	\$177.95	\$189.42				
\$ 2.0	\$191.37	\$214.32	\$225.79					
\$ 2.5	\$239.22	\$262.16						

Savings on Employer Contribution Rates
POBs (in billions)

Cash (in billions)	POBs (in billions)							
	\$.	\$ 1.0	\$ 1.5	\$ 2.0	\$ 2.5	\$ 3.0	\$ 3.1	
	0%	32%	48%	65%	81%	97%	100%	
\$ -	0.00%	3.81%	5.72%	7.62%	9.53%	11.43%	11.81%	
\$ 0.5	7.94%	11.75%	13.66%	15.57%	17.47%	19.38%		
\$ 1.0	15.89%	19.70%	21.60%	23.51%	25.42%			
\$ 1.5	23.83%	27.64%	29.55%	31.45%				
\$ 2.0	31.78%	35.59%	37.49%					
\$ 2.5	39.72%	43.53%						

NPV of Savings on 25-year Contribution Amount (in millions)
POBs (in billions)

Cash (in billions)	POBs (in billions)							
	\$.	\$ 1.0	\$ 1.5	\$ 2.0	\$ 2.5	\$ 3.0	\$ 3.1	
	0%	32%	48%	65%	81%	97%	100%	
\$ -	\$0.00	\$323.41	\$465.11	\$646.62	\$803.52	\$970.23	\$1,002.57	
\$ 0.5	\$674.31	\$997.72	\$1,159.42	\$1,321.12	\$1,432.83	\$1,644.53		
\$ 1.0	\$1,348.61	\$1,672.02	\$1,833.73	\$1,955.43	\$2,157.13			
\$ 1.5	\$2,022.92	\$2,346.33	\$2,508.03	\$2,669.74				
\$ 2.0	\$2,697.22	\$3,020.63	\$3,182.34					
\$ 2.5	\$3,371.53	\$3,694.94						

1. \$0.5 billion cash infusion and no POBs issued in 2008
2. Assumed \$3.1 billion TRS UAAL in 2007
3. Annual employer contribution amount for Tiers I, II, and III would be \$266 million without cash infusion and POBs starting in 2007
4. Funding ratio will be improved from 59.9% to 66.36% (based on preliminary \$4.63 billion TRS asset as of Dec 31, 2006)



Tax Issues

Taxable Bonds vs. Tax Exempt Bonds

- Taxable Bonds
 - Can be issued for any purpose
 - Complete flexibility with use of proceeds
 - Interest rate about 1% higher than tax exempt in current market
- Tax Exempt Bonds
 - Can only be issued for public capital projects
 - Earnings on proceeds are restricted to yield paid on bonds
 - 1% lower interest rate than taxable bonds in current market

The Difficulty with Tax Exempt

- Very difficult to identify appropriate GF funded capital projects to issue bonds for.
- Certificates of Participation issuance is the most viable option.
 - However the existing, yet unexpended GF funded capital projects are small, for private purposes, short lived acquisitions, operational grants, or federal match.
 - Fiscal Year 2008 capital budget is only \$100 million, all of which could not be funded with tax exempt bonds.
- Any use of tax exempt bonds to fund capital projects would have to be coincidental, rather than integrated, to any use of on hand cash to fund PERS/TRS contributions.



Take-aways

Take-aways

1. If we can earn more than the cost of POB, we are better off for issuing it.
2. We are in a very favorable interest rate environment – take advantage of it!
3. Risks associated with POB issuance are quantifiable and statistically justified by the rewards.
4. Doing nothing is not a viable option.

Q & A



This information is provided as a follow-up on a request made at the POBs presentation on February 8, 2008 to provide cash flow analysis that supports the charts that were included on pages 18 and 19 of the presentation. The following cash flow analyses show the differential between the interest cost on a borrowing of \$1 billion and the interest earnings that the pension funds could obtain based upon historical performance.

This analysis does not address the impact on the actuarially required contributions to the pension fund and/or the appropriations for repayment of principal and interest on the debt.

It should be noted that the success of an issuance of POBs can only be determined at the maturity of the POBs – i.e., over the term of the POBs, did the investment return realized on investment of the bond proceeds exceed the cost of the POBs? During the period that the POBs are outstanding, there may be significant gains or realized losses on the program. Assuming an investment strategy consistent with past practice of the pension funds, statistically the probability of realizing a gain from the program exceeds 90%.

Cash flow #1

This example shows the cumulative return if the POBS had been issued in 1992, at the estimated cost of borrowing in 1992, and the bond proceeds had been invested in the pension funds, and realized the investment returns that the pension funds had experienced over the period from 1992 - 2007.

Note that the estimated cost of borrowing in 1992 was 7.76%. This rate exceeds the rate at which POBs could be issued under current conditions under the proposed legislation. The legislation limits the all-in interest cost of the POBs to not more than 1.5% below the actuarially assumed investment rate. Under current conditions, the actuarially assumed investment rate is 8.25%; thus, the all-in interest cost could not exceed 6.75%.

Assumptions:

An issuance of \$1 billion POBs in 1992 at an all-in interest cost of 7.76%; the annual fiscal year investment returns are actual Public Employee Retirement System (PERS) returns.

POB borrowing cost (all in)	7.76%
POB issuance amount	\$1,000,000,000
POB term	25 years

FY	PERS ROR	BoFY Balance	Returns in \$	POB Annual Interest Costs	EoFY Balance	Surplus or (shortfall)
1992	11.80%	\$ 1,000,000,000	\$ 118,000,000	\$ (77,600,000)	\$ 1,040,400,000	\$ 40,400,000
1993	14.25%	\$ 1,040,400,000	\$ 148,257,000	\$ (77,600,000)	\$ 1,111,057,000	\$ 111,057,000
1994	2.66%	\$ 1,111,057,000	\$ 29,554,116	\$ (77,600,000)	\$ 1,063,011,116	\$ 63,011,116
1995	15.56%	\$ 1,063,011,116	\$ 165,404,530	\$ (77,600,000)	\$ 1,150,815,646	\$ 150,815,646
1996	13.70%	\$ 1,150,815,646	\$ 157,661,743	\$ (77,600,000)	\$ 1,230,877,389	\$ 230,877,389
1997	19.07%	\$ 1,230,877,389	\$ 222,419,544	\$ (77,600,000)	\$ 1,375,696,934	\$ 375,696,934
1998	14.62%	\$ 1,375,696,934	\$ 201,126,892	\$ (77,600,000)	\$ 1,499,223,825	\$ 499,223,825
1999	10.65%	\$ 1,499,223,825	\$ 159,667,337	\$ (77,600,000)	\$ 1,581,291,163	\$ 581,291,163
2000	10.12%	\$ 1,581,291,163	\$ 160,026,866	\$ (77,600,000)	\$ 1,663,717,828	\$ 663,717,828
2001	-5.30%	\$ 1,663,717,828	\$ (88,177,045)	\$ (77,600,000)	\$ 1,497,940,783	\$ 497,940,783
2002	-5.40%	\$ 1,497,940,783	\$ (80,888,802)	\$ (77,600,000)	\$ 1,339,451,981	\$ 339,451,981
2003	3.82%	\$ 1,339,451,981	\$ 51,167,068	\$ (77,600,000)	\$ 1,313,019,047	\$ 313,019,047
2004	14.73%	\$ 1,313,019,047	\$ 193,407,708	\$ (77,600,000)	\$ 1,428,826,752	\$ 428,826,752
2005	8.86%	\$ 1,428,826,752	\$ 126,594,050	\$ (77,600,000)	\$ 1,477,820,803	\$ 477,820,803
2006	11.69%	\$ 1,477,820,803	\$ 172,757,252	\$ (77,600,000)	\$ 1,572,978,055	\$ 572,978,055
2007	18.88%	\$ 1,572,978,055	\$ 296,978,257	\$ (77,600,000)	\$ 1,792,356,311	\$ 792,356,311

Results as of the end of FY2007:

Annual POB interest payment with cost @ 7.76%	\$ (77,600,000)
Total POB interest payment for 16 years	\$ (1,468,252,912)
Overall surplus/(shortfall) because of arbitrage at the end the 16 years	\$ 792,356,311
Accumulated returns at the end of the 16 years	79.24%

It should also be noted that the period from 1992 – 2007 is less than the assumed 25-year term of the POBs. But, if the investment return on the pension funds were assumed to earn an investment return of the actuarially assumed investment rate of 8.25% for the period from 2003 – 2016, the cash flow benefit would be increased.

Cash flow based on actual PERS returns from FY1992-2007

FY	PERS ROR	BoFY Balance	Returns In \$	POB Annual Interest Costs	EoFY Balance	Surplus or (shortfall)
1992	11.80%	\$ 1,000,000,000	\$ 118,000,000	\$ (77,600,000)	\$ 1,040,400,000	\$ 40,400,000
1993	14.25%	\$ 1,040,400,000	\$ 148,257,000	\$ (77,600,000)	\$ 1,111,057,000	\$ 111,057,000
1994	2.66%	\$ 1,111,057,000	\$ 29,554,116	\$ (77,600,000)	\$ 1,063,011,116	\$ 63,011,116
1995	15.56%	\$ 1,063,011,116	\$ 165,404,530	\$ (77,600,000)	\$ 1,150,815,646	\$ 150,815,646
1996	13.70%	\$ 1,150,815,646	\$ 157,661,743	\$ (77,600,000)	\$ 1,230,877,389	\$ 230,877,389
1997	18.07%	\$ 1,230,877,389	\$ 222,419,544	\$ (77,600,000)	\$ 1,375,696,934	\$ 375,696,934
1998	14.82%	\$ 1,375,696,934	\$ 201,126,892	\$ (77,600,000)	\$ 1,499,223,825	\$ 499,223,825
1999	10.65%	\$ 1,499,223,825	\$ 159,667,337	\$ (77,600,000)	\$ 1,581,291,163	\$ 581,291,163
2000	10.12%	\$ 1,581,291,163	\$ 160,026,666	\$ (77,600,000)	\$ 1,663,717,828	\$ 663,717,828
2001	-5.30%	\$ 1,663,717,828	\$ (88,177,045)	\$ (77,600,000)	\$ 1,497,940,783	\$ 497,940,783
2002	-5.40%	\$ 1,497,940,783	\$ (80,888,802)	\$ (77,600,000)	\$ 1,339,451,981	\$ 339,451,981
2003	3.82%	\$ 1,339,451,981	\$ 51,167,066	\$ (77,600,000)	\$ 1,313,019,047	\$ 313,019,047
2004	14.73%	\$ 1,313,019,047	\$ 193,407,708	\$ (77,600,000)	\$ 1,428,826,752	\$ 428,826,752
2005	8.86%	\$ 1,428,826,752	\$ 126,594,050	\$ (77,600,000)	\$ 1,477,820,803	\$ 477,820,803
2006	11.69%	\$ 1,477,820,903	\$ 172,757,252	\$ (77,600,000)	\$ 1,572,978,055	\$ 572,978,055
2007	18.88%	\$ 1,572,978,055	\$ 298,978,257	\$ (77,600,000)	\$ 1,792,356,311	\$ 792,356,311
2008	8.25%	\$ 1,792,356,311	\$ 147,869,398	\$ (77,600,000)	\$ 1,862,625,707	\$ 862,625,707
2009	8.25%	\$ 1,862,625,707	\$ 153,666,621	\$ (77,600,000)	\$ 1,938,692,328	\$ 938,692,328
2010	8.25%	\$ 1,938,692,323	\$ 159,942,117	\$ (77,600,000)	\$ 2,021,034,445	\$ 1,021,034,445
2011	8.25%	\$ 2,021,034,445	\$ 166,735,342	\$ (77,600,000)	\$ 2,110,169,786	\$ 1,110,169,786
2012	8.25%	\$ 2,110,169,786	\$ 174,089,007	\$ (77,600,000)	\$ 2,206,658,794	\$ 1,206,658,794
2013	8.25%	\$ 2,206,658,794	\$ 182,049,350	\$ (77,600,000)	\$ 2,311,108,144	\$ 1,311,108,144
2014	8.25%	\$ 2,311,108,144	\$ 190,666,422	\$ (77,600,000)	\$ 2,424,174,566	\$ 1,424,174,566
2015	8.25%	\$ 2,424,174,566	\$ 199,994,402	\$ (77,600,000)	\$ 2,546,568,968	\$ 1,546,568,968
2016	8.25%	\$ 2,546,568,968	\$ 210,091,940	\$ (77,600,000)	\$ 2,679,060,908	\$ 1,679,060,908

Results as of the end of FY2016:

Overall surplus/(shortfall) because of arbitrage at the end
the 25 years

\$ 1,679,060,908

Accumulated returns at the end of the 25 years

167.91%

Cash flow #2

This example shows the cumulative return if the POBS had been issued in 2001, at the time of the downturn in the equity markets, at the estimated cost of borrowing in 2001 (i.e., 5.77%), and the bond proceeds had been invested in the pension funds, and realized the investment returns that the pension funds had experienced over the period from 2001 - 2007.

Note that the period from 2001 – 2007 is significantly less than the assumed 25-year term of the POBs. With such a short period of performance to review, it is not possible to determine how the program would perform over the term of the POBs. Clearly, the seven period from 2001 – 2007 was not enough in order to earn back the losses that were experienced in the early years of the program. However, if the investment returns on the pension funds were assumed to earn an investment return of the actuarially assumed investment rate of 8.25% for the period from 2008 – 2025, the cash flow deficit would be erased and the program would experience a cash flow benefit.

Assumptions:

An issuance of \$1 billion POBs in 2001 at an all-in interest cost of 5.77%; the annual fiscal year investment returns are actual PERS returns.

POB borrowing cost (all in)	5.77%
POB issuance amount	\$1,000,000,000
POB term	25 years

FY	PERS ROR	BoFY Balance	Returns in \$	POB Annual Interest Costs	EoFY Balance	Surplus or (shortfall)
2001	-5.30%	\$ 1,000,000,000	\$ (53,000,000)	\$ (57,700,000)	\$ 889,300,000	\$ (110,700,000)
2002	-5.40%	\$ 889,300,000	\$ (48,022,200)	\$ (57,700,000)	\$ 783,577,800	\$ (216,422,200)
2003	3.22%	\$ 783,577,800	\$ 29,932,872	\$ (57,700,000)	\$ 755,810,472	\$ (244,189,528)
2004	14.73%	\$ 755,810,472	\$ 111,330,883	\$ (57,700,000)	\$ 809,441,354	\$ (190,558,646)
2005	8.86%	\$ 809,441,354	\$ 71,716,504	\$ (57,700,000)	\$ 823,457,858	\$ (176,542,142)
2006	11.69%	\$ 823,457,858	\$ 96,262,224	\$ (57,700,000)	\$ 862,020,082	\$ (137,979,918)
2007	18.88%	\$ 862,020,082	\$ 162,749,392	\$ (57,700,000)	\$ 967,069,474	\$ (32,930,526)

Results as of the end of FY2007:

Annual POB interest payment with cost @ 5.77%	\$ (57,700,000)
Total POB interest payment for 7 years	\$ (403,900,000)
Overall surplus/(shortfall) because of arbitrage at the end the 7 years	\$ (32,930,526)
Accumulated returns at the end of the 7 years	-3.29%

Cash flow #3

This example shows the cumulative return if the POBS had been issued in 1992 and the bond proceeds had been invested in the pension funds, and realized the investment returns that the pension funds had experienced over the period from 1992 - 2007. For purposes of this example, we have used an estimate of the interest cost at which POBs could be issued under current market conditions. Thus, this example uses current interest rates, but historical performance of the pension fund.

It should also be noted that the period from 1992 - 2007 is less than the assumed 25-year term of the POBs. But, if the investment return on the pension funds were assumed to earn an investment return of the actuarially assumed investment rate of 8.25% for the period from 2008 - 2016, the cash flow benefit would be increased.

Assumptions:

An issuance of \$1 billion POBs in 1992 at an all-in interest cost of 5.25%, which is likely to be available under the current market condition; the annual fiscal year investment returns are actual PERS returns.

POB borrowing cost (all in)	5.25%
POB issuance amount	\$1,000,000,000
POB term	25 years

FY	PERS ROR	BoFY Balance	Returns In \$	POB Annual Interest Costs	EoFY Balance	Surplus or (shortfall)
1992	11.80%	\$ 1,000,000,000	\$ 118,000,000	\$ (52,500,000)	\$ 1,065,500,000	\$ 65,500,000
1993	14.25%	\$ 1,065,500,000	\$ 151,833,750	\$ (52,500,000)	\$ 1,164,833,750	\$ 164,833,750
1994	2.66%	\$ 1,164,833,750	\$ 30,984,578	\$ (52,500,000)	\$ 1,143,318,328	\$ 143,318,328
1995	15.56%	\$ 1,143,318,328	\$ 177,900,332	\$ (52,500,000)	\$ 1,268,718,660	\$ 268,718,660
1996	13.70%	\$ 1,268,718,660	\$ 173,814,456	\$ (52,500,000)	\$ 1,390,033,116	\$ 390,033,116
1997	18.07%	\$ 1,390,033,116	\$ 251,178,984	\$ (52,500,000)	\$ 1,588,712,100	\$ 588,712,100
1998	14.62%	\$ 1,588,712,100	\$ 232,269,709	\$ (52,500,000)	\$ 1,768,481,809	\$ 768,481,809
1999	10.65%	\$ 1,768,481,809	\$ 188,343,313	\$ (52,500,000)	\$ 1,904,325,122	\$ 904,325,122
2000	10.12%	\$ 1,904,325,122	\$ 192,717,702	\$ (52,500,000)	\$ 2,044,542,824	\$ 1,044,542,824
2001	-5.30%	\$ 2,044,542,824	\$ (108,360,770)	\$ (52,500,000)	\$ 1,883,682,054	\$ 883,682,054
2002	-5.40%	\$ 1,883,682,054	\$ (101,718,831)	\$ (52,500,000)	\$ 1,729,463,223	\$ 729,463,223
2003	3.82%	\$ 1,729,463,223	\$ 66,065,496	\$ (52,500,000)	\$ 1,743,028,718	\$ 743,028,718
2004	14.73%	\$ 1,743,028,718	\$ 258,748,130	\$ (52,500,000)	\$ 1,947,276,849	\$ 947,276,849
2005	8.86%	\$ 1,947,276,849	\$ 172,528,729	\$ (52,500,000)	\$ 2,067,305,577	\$ 1,067,305,577
2006	11.68%	\$ 2,067,305,577	\$ 241,668,022	\$ (52,500,000)	\$ 2,256,473,599	\$ 1,256,473,599
2007	18.88%	\$ 2,256,473,599	\$ 426,022,216	\$ (52,500,000)	\$ 2,629,995,815	\$ 1,629,995,815

Results as of the end of FY2007:

Annual POB interest payment with cost @ 5.25%	\$ (52,500,000)
Total POB interest payment for 16 years	\$ (840,000,000)
Overall surplus/(shortfall) because of arbitrage at the end the 16 years	\$ 1,629,995,815
Accumulated returns at the end of the 16 years	163.00%

Cash flow #4

This example shows the cumulative return if the POBS had been issued in year 1. The interest cost is an estimate of the interest cost at which the POBs could be issued under current market conditions. The investment returns use the actual historical investment returns of the pension fund, but the annual returns are rearranged such that the four years having the worst returns occur in Years 1 - 4. This scenario illustrates the impact of issuing the POBs in a down stock market, and the need for additional years of good returns to bring the program out of the deficit position.

It should also be noted that the period from Years 1 - 16 is less than the assumed 25-year term of the POBs. But, if the investment return on the pension funds were assumed to earn an investment return of the actuarially assumed investment rate of 8.25% for the period from Years 17 - 25, the cash flow benefit would be increased.

Assumptions:

An issuance of \$1 billion POBs in Year 1 at an all-in interest cost of 5.25%, which is likely to be available under current market conditions; the annual fiscal year investment returns are rearranged PERS returns in order to simulate a shock scenario with the first four years having the worst investment returns.

POB borrowing cost (all in)	5.25%
POB issuance amount	\$1,000,000,000
POB term	25 years

A shock scenario: Cash flow based on low ROR in the beginning

FY	PERS ROR	BoFY Balance	Returns In \$	POB Annual Interest Costs	EoFY Balance	Surplus or (shortfall)
1	-5.40%	\$ 1,000,000,000	\$ (54,000,000)	\$ (52,500,000)	\$ 893,500,000	\$ (106,500,000)
2	-5.30%	\$ 893,500,000	\$ (47,355,500)	\$ (52,500,000)	\$ 793,644,500	\$ (206,355,500)
3	2.86%	\$ 793,644,500	\$ 21,110,944	\$ (52,500,000)	\$ 762,255,444	\$ (237,744,556)
4	3.82%	\$ 762,255,444	\$ 29,118,158	\$ (52,500,000)	\$ 738,873,602	\$ (261,126,398)
5	14.62%	\$ 738,873,602	\$ 108,023,321	\$ (52,500,000)	\$ 794,396,922	\$ (205,603,078)
6	11.69%	\$ 794,396,922	\$ 92,865,000	\$ (52,500,000)	\$ 834,761,922	\$ (165,238,078)
7	13.70%	\$ 834,761,922	\$ 114,362,383	\$ (52,500,000)	\$ 896,624,306	\$ (103,375,694)
8	11.80%	\$ 896,624,306	\$ 105,801,668	\$ (52,500,000)	\$ 949,925,974	\$ (50,074,026)
9	10.65%	\$ 949,925,974	\$ 101,167,110	\$ (52,500,000)	\$ 998,593,090	\$ (1,406,910)
10	18.88%	\$ 998,593,090	\$ 188,534,375	\$ (52,500,000)	\$ 1,134,627,465	\$ 134,627,465
11	14.73%	\$ 1,134,627,465	\$ 167,130,626	\$ (52,500,000)	\$ 1,249,258,091	\$ 249,258,091
12	14.25%	\$ 1,249,258,091	\$ 178,019,278	\$ (52,500,000)	\$ 1,374,777,369	\$ 374,777,369
13	15.56%	\$ 1,374,777,369	\$ 213,915,359	\$ (52,500,000)	\$ 1,536,192,728	\$ 536,192,728
14	8.86%	\$ 1,536,192,728	\$ 136,106,676	\$ (52,500,000)	\$ 1,619,799,403	\$ 619,799,403
15	18.07%	\$ 1,619,799,403	\$ 292,697,752	\$ (52,500,000)	\$ 1,859,997,156	\$ 859,997,156
16	10.12%	\$ 1,859,997,156	\$ 189,231,712	\$ (52,500,000)	\$ 1,995,728,868	\$ 995,728,868

Results as of the end of Year 16:

Annual POB interest payment with cost @ 5.25%	\$ (52,500,000)
Total POB interest payment for 16 years	\$ (840,000,000)
Overall surplus/(shortfall) because of arbitrage at the end the 16 years	\$ 995,728,868
Accumulated returns at the end of the 16 years	99.57%

This scenario shows that if the POBs were issued in a down market, additional few years of good returns will be required to bring the program to a position that investment returns cover the POB costs. Such market risk is the main reason why I recommended in my presentation a thorough market assessment before POB issuance and considering a special investment allocation strategy for the proceeds, if necessary.

Representative Mike Hawker

Alaska State Legislature



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Short Title: Retirement System Liability/Bonds

HB 13 provides governmental employers the opportunity to utilize a financial mechanism generally referred to as a "Pension Obligation Bond" (POB) to help reduce the ultimate cost of satisfying the unfunded accrued actuarial liabilities of their retirement systems. A POB is essentially a legal arbitrage transaction where money is borrowed at a lower rate of interest than the money earns when invested by the retirement system.

HB 13 clarifies the ability of municipal entities to include POBs in their strategy to reduce the cost of meeting unfunded pension liabilities and expands the authority of the Alaska Municipal Bond Bank Authority, the Alaska Housing Finance Corporation, and the state bond committee to support governmental employers seeking assistance engaging in such transactions. HB 13 also creates the Alaska Pension Obligation Bond Corporation. The authority granted in this legislation will allow for the greatest flexibility in creating transactions to fit the needs of public employers.

This bill does not authorize any debt instruments to be issued. Separate specific action would be required to initiate any transaction under the authority provided by HB 13.

Representative Mike Hawker

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CHANGES TO HOUSE BILL 13

House Special Committee on Ways & Means

The major changes between HB 13 and CS HB 13 (W&M) are the requirement for an employer's contribution rate to be recalculated within 180 days of a lump sum payment authorized under this bill, the authorization for the Alaska Housing Finance Corporation and the state bond committee to participate in the sale of Pension Obligation Bonds, and the creation of the Alaska Pension Obligation Bond Corporation.

- Added new sections to require the plan administrator to recalculate the employer's contribution rate within 180 days of a lump sum payment to reduce their unfunded accrued actuarial liability.
- Authorized the Alaska Housing Finance Corporation to create a subsidiary corporation to assist in the financing of Pension Obligation Bonds.
- Authorized the state bond committee to assist in the financing of Pension Obligation Bonds and set guidelines and requirements for bond issuance, sale, structure, repayment and the investment and accounting of bond and investment proceeds.
- Created the Alaska Pension Obligation Bond Corporation to assist in the financing of Pension Obligation Bonds, defined its organization and structure, and set guidelines and requirements for bond issuance, sale, structure, repayment and the investment and accounting of bond and investment proceeds.
- Necessary title and conforming amendments to accommodate new language.

House Finance Committee

- Reduced the time for a plan administrator to recalculate the employer's contribution rate from 180 days to 30 days of receipt of a lump sum payment.
- Reworded sections to accommodate a payment made by another entity on the behalf of a governmental employer.
- Added a requirement that the actuarially assumed rate of return on PBOs issued by the Alaska Housing Finance Corporation exceed 1.5 percent annually. This mirrors existing requirements in the bill for bonds issued by the State Bond Committee and Alaska Pension Obligation Bond Corporation.
- Exempted the Alaska Pension Obligation Bond Corporation from the Procurement Code.

CS House Bill 13 (FIN)

Sectional Analysis

Prepared by Representative Mike Hawker's Office

- Section 1:** Allows a lump sum payment to be made to prepay all or a part of a Teacher's Retirement System (TRS) employer's unfunded accrued actuarial pension liability (UAAL); allows the commissioner to accept a lump sum payment that is less than the full amount; allows administrative fees to be charged; outlines how the lump sum payment and earnings or losses will be credited; and holds an employer who prepays its liability harmless if there are future state discretionary payments that benefit multiple employers. Requires the administrator of the TRS plan to recalculate the employer contribution rate within 30 days of the lump sum payment.
- Sections 2 - 5:** These sections allow the Alaska Housing Finance Corporation (AHFC) to create a subsidiary to aid an employer in the financing of a prepayment of all or a portion of that employer's UAAL.
- Section 6:** Outlines how municipalities can join together to issue debt obligations and allows funds diversion agreements between the municipalities and state agencies.
- Section 7:** Exempts the Alaska Pension Obligation Bond Corporation from the Procurement Code.
- Section 8:** Adds Article 8 to the State Bonding Act, which authorizes the state bond committee to issue Pension Obligation Bonds (POBs) and provides guidelines and requirements for bond issuance, sale, structure, repayment and the investment and accounting of bond and investment proceeds.
- Section 9:** Creates the Alaska Pension Obligation Bond Corporation, which is authorized to issue POBs. Provides guidelines and requirements for bond issuance, sale, structure, repayment and the investment and accounting of bond and investment proceeds.
- Sections 10 - 11:** Adds facilitating language to two sections of the accounting statute for the Public Employees Retirement System (PERS) to accommodate lump sum payments.
- Section 12:** Allows a lump sum payment to be made to prepay all or a part of a PERS employer's unfunded accrued actuarial pension liability (UAAL); allows the commissioner to accept a lump sum payment that is less than the full amount; allows administrative fees to be charged; outlines how the lump sum payment and earnings or losses will be credited; and holds an employer who prepays its liability harmless if there are future state discretionary payments that benefit multiple employers. Requires the administrator of the PERS plan to recalculate the employer contribution rate within 30 days of the lump sum prepayment.
- Section 13:** Adds to the statutory policies established for the Municipal Bond Bank Authority. Provides a directive to assist governmental employers to meet their unfunded retirement system obligations by issuing POBs on their behalf. Specifies that the bond bank should provide the lowest rates possible without subsidizing the employers beyond their means.

- Sections 14 - 15:** These sections allow the Municipal Bond Bank to create a subsidiary to aid an employer in the financing of a prepayment of all or a portion of that employer's UAAL.
- Section 16:** Exempts "Pension Obligation Bonds" from the current limit for revenue bonds that the Municipal Bond Bank may issue each year.
- Section 17:** Authorizes the Municipal Bond Bank to issue "Pension Obligation Bonds."
- Section 18:** Exempts "Pension Obligation Bonds" from the current limit for total revenue bonds and notes that the Municipal Bond Bank may have outstanding at any time.
- Section 19:** Adds a definition for "governmental employer" to the definitions section for the Municipal Bond Bank.
- Section 20:** Immediate effective date.

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