

City Council Study Session (Pension Obligation Financing)

April 23, 2021

Introductions and Opening Comments

David Sykes, City Manager



Presenters

City Administration

- David Sykes, City Manager
- Julia H. Cooper, Director of Finance
- Jim Shannon, Budget Director, City Manager's Office
- Nikolai J. Sklaroff, Deputy Director of Finance, Debt & Treasury Management Division
- Cheryl Parkman, Assistant to the City Manager, Office of Employee Relations

<u>Guest Speaker</u>

• Girard Miller, Pension & Public Funds Investment Expert, Author

Advisors to the City

- Brian Forbath, *Stradling Yocca Carlson & Rauth (Bond Counsel)*
- Michael Busch, Urban Futures, Inc. (Municipal Advisor)
- Julio Morales, Urban Futures, Inc. (Municipal Advisor)
- Wing-See Fox, Urban Futures, Inc. (Municipal Advisor)



Presentation Agenda

Introductions and Opening Comments

Review of Problem and Efforts to Date (Pages 7 – 25)

- The Challenge
- Past Efforts to Correct Problem
- Present Efforts to Find Solutions

Pension Obligation Financing Options (Pages 26 – 60)

- Financing structures analyzed
- Quick Review/Refresh: Pension Obligation Bonds (POBs)
- Guest Speaker: Girard Miller
- Reasons NOT to issue POBs
- Perspective on GFOA's Advisory to not issue POBs



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Presentation Agenda

Part The City's Municipal Advisor's Report – General POB Analysis (Pages 61 – 86)

- Pension Primer
- Funding Strategies
- Case Studies
- POBs 2.0



Municipal Advisor's Report – Analysis of Potential San José POBs (Pages 87 – 112)

- City Goals and Policy Considerations
- Sample Structures Based on City Policy Considerations
- Stress Testing / Risk Analysis of San José Scenarios
- Mitigating the Risk of POBs



Presentation Agenda

Judicial Validation of POBs (Pages 113 – 118)

Part VI

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Conclusion (Page 119 – 121)
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• Closing Thoughts and Next Steps

Public Comment

Council Q&A





Review of the Problem and Efforts to Date

Julia H. Cooper, *Director of Finance* Cheryl Parkman, *Assistant to the City Manager*



Quickly Mobilized to Follow Council Direction

- Per City Council's December 1st direction:
 - Finance Department selected Urban Futures, Inc. (UFI) via RFP to serve as Municipal Advisor for Study Phase
 - CAO selected Stradling Yocca Carlson & Rauth, as Bond Counsel
- If Council elects to pursue financing, Finance Department will select one or more Municipal Advisors to advise on financings from RFP process conducted earlier this year
- Worked collaboratively to analyze financing options
- Provided direction to UFI in completing their report and presentation to the City Council for this April Study Session
 - Finance, Budget Office, Office of Employee Relations and City Attorney's Office and UFI had weekly 2-hour meetings
- Staff's objective today is not to persuade Council to pursue or not pursue POBs, but to provide the Mayor and Council information on both the risks and rewards, the pros and cons for POB issuance, in response to the December 1st referral to staff



The Challenge

 Budget Office has repeatedly cautioned escalating retirement costs in the General Fund constraining the ability to fund other City priorities.



Source: City of San José Budget Office

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Despite City Actions, the Problem Persists

 Amortization of the Unfunded Accrued Liability ("UAL") means retirement payments will continue to grow for at least the next eight years.



Projected Annual City Contributions



Source: Office of Retirement Services Presentation to Council, March 16, 2021

Large Unfunded Accrued Liability

- Funded Status compares unfavorably to other plans, with Federated at 52.29%, P&F at 73.58% with overall status of 63.86%.
- By comparison CalPERS 70.8% funded at June 30, 2020.





Source: Office of Retirement Services Presentation to Council, March 16, 2021

Prior Search for Solutions

- October 2007, Mayor Reed formed the Budget Shortfall Advisory Group (BSAG)
- March 2008, the City Manager formed the General Fund Structural Deficit Task Force to support the work of BSAG
- March 2008, Stakeholder Group formed to identify strategies to eliminate the General Fund Structural Deficit
- November 2008, City Manager released report, "General Fund Structural Elimination Plan"¹



Prior Review of POBs

- General Fund Structural Elimination Plan made several recommendations to reduce the City's pension costs in the context of budget balancing proposals.
- Stakeholder Group expressed interest in exploration of:
 - Pension Obligation Bonds (POBs)
 - Annual prepayment of City's pension obligation
 - FY 2008-09 to FY 2020-21 (except for FY 19-20)
 - Used both cash and Tax and Revenue Anticipation Notes (TRANs)
 - Mayor's March 2010 Budget Message, as approved by Council, directed City Manager

"to analyze the benefits and drawbacks of issuing pension obligation bonds, and report to City Council during the budget process."



POBs Previously Rejected

May 2010, Informational Memo from the former Directors of Retirement Services and Finance to the City Council concluded POBs not viable at that time:

- POBs were not a viable tool to address the 2010-2011 shortfall
- Stock market conditions were not right, even if Council was willing to assume the risk of financial loss
- 6 to 12-month process for required court validation action
- Significant caution provided on market-volatility risks of POBs, even with optimistic assumptions, potential financial losses to the City over the long term which existed
- Further exploration needed to occur in the context of a comprehensive look at pension system cost mitigation, including who bears the cost of any potential losses



The Challenge – UAL Funding

UAL = **\$3.5 Billion** as of June 30, 2020

- Federated Plan = 52.29% funded
- Police & Fire Plan = 73.58% funded

Unfunded Actuarial Liability as of June 30, 2020								
	FEDERATED	Police & Fire	COMBINED					
Tier 1	\$ 4,287,182,000	\$ 5,187,934,000	\$ 9,475,116,000					
Tier 2	113,901,000	47,400,000	161,301,000					
Accrued Liability (AL)	\$ 4,401,083,000	\$ 5,235,334,000	\$ 9,636,417,000					
Actuarial Value Assets (AVA)	2,301,470,000	3,851,948,000	6,153,418,000					
UAL = AL-AVA	\$ 2,099,613,000	\$ 1,383,386,000	\$ 3,482,999,000					
	52.29%	73.58%	63.86%					

Comparison to Other Agencies & Benchmarks

- NCPERS 74.5% (2020 National Survey)
- CalPERS 70% (June 30, 2019 Valuation)
- LACERS 66.3% (June 30, 2020 Valuation)
- SFERS 90.6% (June 30, 2019 Valuation)



Source: Municipal Advisor's Report – Exhibit 1, Page 8

The Challenge – UAL Cost Sharing

Tier 1Tier 2• City pays: • 8/11ths of Normal Cost • 100% of UAL*• City and Employee split costs 50/50• 100% of UAL*• Tier 2 employees will contribute toward the unfunded liability in increments of 0.33% per year until the UAL is split 50/50		
 City pays: 8/11ths of Normal Cost 100% of UAL* Employee pays 3/11ths of Normal Cost City and Employee split costs 50/50 Tier 2 employees will contribute toward the unfunded liability in increments of 0.33% per year until the UAL is split 50/50 	Tier 1	Tier 2
	 City pays: 8/11ths of Normal Cost 100% of UAL* Employee pays 3/11ths of Normal Cost 	 City and Employee split costs 50/50 Tier 2 employees will contribute toward the unfunded liability in increments of 0.33% per year until the UAL is split 50/50

* Police and Fire Tier 1 employees contribute toward a small portion of the UAL



Amortization Bases – Federated Plan

- Federated Plan Tier 1: 25 Bases \$1,942,421,000
- Federated Plan Tier 2: 17 Bases \$10,850,000

	FEDERATED											
	Tier 1											
-	Reason	Balance	Term		Payment		Reason		Balance	Term	1	Payment
1	Golden Handshake	\$ 20,977,000	19	\$	1,609,000	1	2013 (Gain) or Loss	\$	39,000	7	\$	8,000
2	2009 UAL	752,667,000	19		57,747,000	2	2013 Assumption Changes		-	7		-
3	2010 (Gain) or Loss	40,945,000	10		5,128,000	3	2014 (Gain) or Loss		(492,000)	7		(84,000)
4	2010 Assumption Change	(51,562,000) 15		(4,689,000)	4	2014 Assumption Changes		90,000	7		15,000
5	2011 (Gain) or Loss	(2,507,000) 11		(290,000)	5	2015 (Gain) or Loss		710,000	7		120,000
6	2011 Assumption Changes	167,596,000	16		14,530,000	6	2015 Assumption Changes		344,000	7		58,000
7	2012 (Gain) or Loss	101,611,000	12		10,978,000	7	2016 (Gain) or Loss		(464,000)	7		(79,000)
8	SRBR Elimination	(37,341,000) 12		(4,034,000)	8	2016 Assumption Changes		378,000	7		64,000
9	2013 (Gain) or Loss	65,626,000	13		6,657,000	9	2017 (Gain) or Loss		(609,000)	7		(103,000)
10	2013 Assumption Changes	59,828,000	18		4,766,000	10	Measure F		4,647,000	7		789,000
11	2014 (Gain) or Loss	(23,391,000) 14		(2,241,000)	11	2017 Assumption Changes		1,368,000	7		232,000
12	2014 Assumption Changes	99,403,000	19		7,626,000	12	2018 (Gain) or Loss		(2,047,000)	8		(309,000)
13	2015 (Gain) or Loss	45,851,000	15		4,170,000	13	2018 Assumption Changes		1,254,000	8		190,000
14	2015 Assumption Changes	201,965,000	20		14,962,000	14	2019 (Gain) or Loss		914,000	9		125,000
15	2016 (Gain) or Loss	107,447,000	16		9,316,000	15	2019 Assumption Changes		(1,168,000)	9		(160,000)
16	2016 Assumption Changes	59,414,000	21		4,260,000	16	2020 (G)/L		3,370,000	10		422,000
17	2017 (Gain) or Loss	57,643,000	17		4,782,000	17	2020 Assumption Change		2,516,000	10		315,000
18	Measure F	6,883,000	17		571,000			\$	10,850,000		\$	1,603,000
19	2017 Assumption Changes	(17,386,000) 22		(1,209,000)							
20	2018 (Gain) or Loss	47,739,000	18		3,803,000		7/1/2020 Payment - Tier 1	\$	143,689,000			
21	2018 Assumption Change	53,227,000	23		3,598,000		7/1/2020 Payment - Tier 2	Ş	846,000			
22	2019 (Gain) or Loss	55,649,000	19		4,269,000			\$	144,535,000			
23	2019 Assumption Change	(1,699,000) 24		(112,000)							
24	2020 (Gain) or Loss	97,371,000	20		7,213,000		Federated Plans	\$ 2	2,097,806,000			
25	2020 Assumption Change	34,465,000	25		2,212,000							
	FY 21-22	\$ 1,942,421,000		\$	155,622,000							



Source: Federated Actuarial Report Page 34 & Municipal Advisor's Report - Exhibit 2, Page 10

Amortization Bases – Police & Fire Plan

- Fire Plan: 32 Bases \$577,248,369
- Police Plan: 32 Bases \$671,120,631

	POLICE & FIRE								
		BALAI	NCE		PAYMENT				
	Reason	FIRE	POLICE	Term	FIRE	POLICE			
1	2005 Experience Loss	2,978,191	3,501,809	2	1,621,000	\$ 1,906,000			
2	2005 Benefit Improvement	-	5,308,000	2	-	2,889,000			
3	2007 Benefit Improvement	12,490,000	-	3	4,626,000	-			
4	2007 Experience Gain	(27,374,865)	(32,176,135)	6	(5,388,000)	(6,333,000)			
5	2007 Assumption Change	6,496,076	7,634,924	7	1,118,000	1,314,000			
6	2009 Loss	62,628,386	73,612,614	6	12,327,000	14,489,000			
7	2009 Assumption Change	39,234,977	46,114,023	9	5,464,000	6,422,000			
8	2010 Experience Loss	45,048,902	52,949,098	6	8,867,000	10,422,000			
9	2010 Assumption Change	31,270,295	36,746,705	10	3,997,000	4,697,000			
10	2011 Experience Gain	(76,209,892)	(89,577,108)	6	(15,000,000)	(17,631,000)			
11	2011 Assumption Change	21,734,177	25,540,823	11	2,575,000	3,026,000			
12	2012 Experience Loss	45,061,034	52,963,966	8	6,922,000	8,136,000			
13	2012 SRBR Elimination	(10,989,468)	(12,916,532)	8	(1,688,000)	(1,984,000)			
14	2012 Assumption Change	43,551,546	51,183,454	12	4,822,000	5,667,000			
15	2013 Experience Loss	29,396,262	34,551,738	9	4,094,000	4,812,000			
16	2013 Assumption Change	11,748,653	13,812,347	13	1,224,000	1,439,000			
17	2014 Experience Gain	(24,519,211)	(28,823,789)	11	(2,905,000)	(3,415,000)			
18	2014 Assumption Change	23,777,878	27,947,122	14	2,344,000	2,755,000			
19	2015 Experience Gain	(4,059,328)	(4,776,672)	11	(481,000)	(566,000)			
20	2015 Assumption Change	39,165,548	46,034,452	15	3,672,000	4,316,000			
21	2016 Experience Gain	05,017,028	77,129,972	11	7,774,000	9,138,000			
22	2016 Assumption Change	32,098,497	37,725,503	16	2,875,000	3,379,000			
23	2016 Measure F (Rehires)	379,490	2,421,510	12	42,000	268,000			
24	2017 Experience Loss	45,438,043	53,412,957	12	5,031,000	5,914,000			
25	2017 Assumption Change	(58,784,537)	(69,090,463)	17	(5,048,000)	(5,933,000)			
26	2018 Measure F (Classic/Fed	9,000	81,000	13	1,000	9,000			
27	2018 Experience Loss	18,198,198	21,384,802	13	1,896,000	2,228,000			
28	2018 Assumption Change	34,320,647	40,337,353	18	2,835,000	3,332,000			
29	2019 Experience Loss	64,368,870	75,648,130	14	6,346,000	7,458,000			
30	2019 Assumption Change	36,938,374	43,412,626	19	2,944,000	3,460,000			
31	2020 Experience	33,551,357	39,427,643	15	3,146,000	3,697,000			
32	2020 Assumption Change	33,684,239	39,598,761	20	2,597,000	3,053,000			
	FY 21-22	\$ 577,248,3 <u>69</u>	\$ 671,120,6 <u>31</u>		\$ 68,650,0 <u>00</u>	\$ 78,364,000			
	136,661,000	7/1/20 Payment							
	\$ 1,385,030,000								



Source: Police & Fire Actuarial Report Page 33 & Municipal Advisor's Report - Exhibit 3, Page 11

Scheduled UAL Payments



Increase in UAL

- UAL payments increase from **\$304 million** in FY 2021-22 to a peak of **\$343 million** in FY 2028-29
- Cumulative increase in UAL payment = \$148 million





Past Efforts to Correct Problem

2012 – City of San José voters passed Measure B

- September 2012 Federated Tier 2 implemented
- August 2013 Police Tier 2 implemented
- January 2015 Fire Tier 2 implemented
- 2015 Settlement Frameworks reached with the bargaining units and approved by Council
- 2016 City of San José voters passed Measure F
 - Modification of Tier 2 benefits
- 2017 VEBA Opt-In Election for Tier 1 Employees

2018 – VEBA Implementation



Present Efforts to Find Solutions

March 2019 – The Mayor's March Budget Message called for a Stakeholder group to convene to discuss the impact of retirement contributions on the General Fund

November 2019 – Meetings began with the Retirement Stakeholder Solutions Working Group (RSSWG). Topics discussed include:

- Investment asset allocation
- Amortization schedules
- Lump sum buyout
- Pension obligation bonds
- Dedicated revenue streams

April 2021 – Final report on options



Final RSSWG Report – Summary

Option	Feasibility	Cost	Risk	Difficulty	Impact on UAL	
Investment Fees	Achievable	Neutral	Low	Low to Medium	Not significant	
Investment Asset Allocation	Achievable	Neutral	Medium to High	Low to Medium	Undetermined	
Amortization Schedules	Achievable	Determined over time	Low to Medium	Low	May be significant	
Lump Sum Buyout	Unlikely	Undetermined	No risk	High	Undetermined	
Pension Obligation Bonds (POBs)	Achievable	Determined over time	High	Moderate	Significant	
New Tax	Unlikely	Moderate	Low	High	Moderate to Significant	
Dedicate Existing Revenue Stream	Unlikely	Low	Low	High	Significant	



Pension Pressures Mount Across Nation

- On October 26, 2020, S&P Global Ratings, published a report entitled *"Mounting Pressures Threaten Stability of 20 Largest U.S. Cities" Pension Funding"* including San José
- Key Takeaways:
 - S&P expects economic pressures to negatively affect funded ratios
 - Fixed costs remain elevated for largest cities and likely to grow as revenue growth stalls.
 - Social risks related to changing demographics and service needs could further pressure budgets.





Only Chicago's Problem is Worse

San José is outranked only by Chicago (population 2.7 million and rated BBB+/Negative by S&P) among the Top 20 cities with the highest % of primary fixed costs (Debt Service, Pension & OPEB) - S&P Global Ratings

Primary Fixed Costs -- Pensions, Debt Service, And OPEB

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Major U.S. Cities' Discount Rates



- Houston issued POBs in 2017
- Philadelphia issued Taxable Revenue Bonds in 2012 to refund their 1999 Pension Funding Bonds





Pension Obligation Financing Options

Nikolai J. Sklaroff, Deputy Finance Director Julia H. Cooper, Director of Finance Girard Miller, Pension & Public Funds Investment Expert, Author



Financing Options Analyzed

1. <u>"Tax-Exempt Exchange"</u>

- Redeploy cash being devoted to large City capital projects, instead fund those with tax exempt bonds, effectively funding pension obligations with tax exempt debt
- Review of the City capital program failed to identify projects of sufficient scale to impact UAL costs
- Others had complications (such as other payers in the case of the regional wastewater facility, and federal limitations such as the airport)
- "Tax-Exempt Exchange" idea has merit to consider for all future capital projects
- Approach of funding projects ineligible for tax exempt financing with cash, and minimizing more expensive taxable borrowing, can produce economic savings



Financing Options Analyzed

2. Lease Revenue Bonds to fund pension obligations

- A few Southern California cities have issued Lease Revenue Bonds, secured by lease payments for city streets
- Structure avoids the judicial validation (described later) but is fraught with other issues
- Given the large size the City's unfunded liability (\$3.5 billion), it would be challenging, if not impossible, to find sufficient unencumbered City assets to secure such a lease
- There is no consensus among California bond attorneys about the practice of using public streets to secure leases
- Enforcing lease default remedies on streets raises significant public policy and legal concerns



"The Last Tool in the Toolbox"

3. Pension Obligation Bonds

- City commenced process of addressing unfunded pension liabilities 2007
- Evaluation of all available options to create a meaningful reduction in the City's \$3.5 billion unfunded accrued liability and improve the funding levels of the City's two retirement plans, especially the Federated Plan
- POBs the "last tool in the toolbox"
- Presentation is focused on providing an analysis of the POBs: pros and cons, the risks and rewards, to educate the Council and facilitate further direction from the Council following the direction from the Mayor and Council on December 1st to explore POBs



Pension Obligation Bonds (POBs)

- What are POBs?
- How can POBs Save Money?
- What are the Benefits Associated with POBs?
- What are the Risks Associated with POBs?
- Who else has issued POBs and how have they performed?
- What Strategies can be used to Mitigate Risks?



What are POBs – The Mechanics

Current Pension Obligations



- In FY 2021-22 the City will pay \$471.1 million for Pension and OPEB payments
- Includes \$206.0 million to the Federated Plan for Pension normal costs and amortized UAL
- Includes \$216.9 million to the Police & Fire Plan for Pension normal costs and amortized UAL
- Based on the March 16th presentation to Council by the Office of Retirement Services
 - Total Contributions due to increase to \$549 million by 2029 and then declining until 2042
 - Figures based on current actuarial assumptions which may, and likely will, change in the future.



What are POBs – The Mechanics

Pension Obligation Bond Mechanics



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POB payments based on market rates at pricing (currently 2.75% – 3.50%)

UAL Payments that are amortized at the current **6.625%** Discount Rate

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The Economics of POBs

- The Unfunded Accrued Liability for the two retirement systems is determined based on the <u>discount rate</u>.
- Discount Rate:
 - Expected rate of return 6.625% for the Retirement Plans
 - Also used to value the cost of future pension obligations in today's dollars and to amortize UAL payments.
- UAL comprised of 106 amortization bases, with individual payment schedules calculated using 6.625% discount rate (effectively loan payments at 6.625%).
- Bond market offers the ability to serialize bonds and pay rates based on the term of each maturity of bonds
- Recent long-term bonds issued for POBs have interest rates ranging from 2.75% to 3.5%



Yield on POBs vs UAL

POB Yield Curve vs Discount Rate



• POBs are Taxable Municipal Bonds which means they are priced off the U.S. Treasury rates

Source: Huntington Beach POB Official Statement, U.S. Department of the Treasury

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Potential Benefits of POBs

- Potential Impacts for City
 - Depending on how much of the unfunded Pension Obligation is refinanced with bonds, reduces the annual \$471.1 million for Pension and OPEB payments
 - Prevent the contributions from rising as projected through 2029 and eroding funding for other City services and programs
 - Use savings to accelerate the amortization of unfunded liability
 - Use savings to ease current budget pressures
- Potential Impacts for Retirement System
 - Provide large infusion of cash to make new investments either all at once or over time by issuing multiple series of bonds
 - Increase the funding ratio of the Federated and Police & Fire Plans
 - Reduce reliance on City Contributions


Reasons Not to Issue POBs

- Critical to understand the nature of both the risks and rewards, the pros and cons, of POB issuance
- Risks are already present for the City regardless of POB decision:
 - Risks inherent in providing future retirement benefits for which the City relies on future revenues and investment returns
 - Risks of "doing nothing" to solve the City's growing pension costs
 - Risks of issuing POBs to fund UAL



Weighing Opportunities vs. Risks

If the Council proceeds, it should be aware:

- Government Finance Officers Association (GFOA) recommends <u>against</u> issuing POBs
- POB proceeds will be invested by Retirement Funds:
 - POBs invest additional monies with Retirement Plans POBs "leverage" position / impact of returns
 - City Council does not control investments
 - Savings not determined until final maturity of POBs
 - UAL adjusts annually New bases added for:
 - Investment performance,
 - Change actuarial assumptions (lowering discount rate)
 - Actual participant outcomes (early retirement/death, disability, salaries, etc.)



Power of Investing: Rising Equity Values

- Equity investments, 401(k) funds, have largely experienced significant appreciation
- From April 10, 1981 to April 1, 2021, the S&P 500 Index has grown 2,888.5%





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What Indices Do and Don't Show

Investment performance over 20 – 30 years

S&P 500 in 1991	S&P 500 in 2021
Exxon	Apple
Philip Morris	Microsoft
Wal-Mart	Amazon
General Electric	Facebook
Merck	Alphabet Inc. A
Coca-Cola	Alphabet Inc. C
AT&T	Tesla, Inc.
IBM	Berkshire Hathaway
Shell	JPMorgan Chase
Bristol-Myers Squibb	Johnson & Johnson



Historical Earnings & Discount Rate

 The chart below shows the Federated System's historical earnings and Discount Rate



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Historical Earnings & Discount Rate

 The chart below shows the Police & Fire System's historical earnings and Discount Rate





Source: Meketa Quarterly Investment Reports, Appendix B

Low Borrowing Cost vs Discount Rate

- Estimated POB borrowing cost 3.13% as of March 26th
 - Lower than 6.625% discount, but most important to assess how it compares to the actual plan returns, not the assumed returns:

	Federa	ted Plan	Police & Fire Plan			
Period Ending:	(6/30/20)	(12/31/20)	(6/30/20)	(12/31/20)		
One Year	3.60%	16.00%	3.10%	13.70%		
Three Years	4.60%	8.30%	4.70%	7.90%		
Five Years	4.10%	8.40%	4.60%	8.40%		
10 Years	5.50%	5.80%	6.20%	6.30%		
Since Inception	6.50%	7.00%	8.20%	8.50%		

City of San José Retirement Plans



Potential Risks Associated with POBs

- Investment risk is the principal risk
 - if the retirement plans earn less over the life of the bonds than the interest paid on the POBs, then the POB program becomes a net cost to the City
 - If plans earn less than the Discount Rate, the UAL continues to grow
- Market timing greatly impacts the long-term economics
 - POBs also result in lump sum investment by pension system of amounts that otherwise would have been paid to and invested by the pension system over time.
 - Investment losses early in the life of a POB program would contribute to a new unfunded liability and could require many years of future gains in order to reach "break-even"
- Loss of Flexibility. While actuarial assumptions can be changed over time, borrowing rates are set for the life of the bonds unless refinanced (if interest rates decline)
- Pension Liability is Never Truly Extinguished



Drilling Down on Risks: Investment Performance

- Recognizing that *'savings can only be measured after the bonds are repaid*', Council asked staff for more information on prior transactions and what determined success, failure
- One firm presented City staff an analysis of 57 POB issues since 1994
- Calculated hypothetical investment returns based on "60-35-5" allocation in stocks, bonds and cash equivalents
- Measured against S&P 500, Barclays Aggregate Bonds Index and 3-month T-Bill
- Calculated from first quarter of issuance to final maturity (or September 2020 if not matured)



Source: Presentation by RBC Capital Markets to City Finance Staff, December 20, 2020

Timing and Investment Return are Key

3/31/2021 Valuation of Hypothetical Investment Return Relative to Borrowing Cost of Pension Bond Issuances

	Amount					Elasped	Years	Final			
Sale Date	(\$ mils)	State	Issuer	Issue Description	Series	Time	to Mat.	Maturity	CAGR	All-in-TIC	Differential
02/03/94	430	CA	San Diego Co-California	Pension Obligation Rev Bonds	1994 Series A	13.54	13.54	08/15/07	9.63%	6.42%	3.21%
02/15/94	337	CA	Contra Costa Co-California	Pension Obligation Bonds	1994 Series A	17.30	17.30	06/01/11	8.02%	6.90%	1.12%
03/17/94	246	CA	Fresno City-California	Pension Obligation Bonds	Series 1994	20.22	20.22	06/01/14	8.35%	7.65%	0.70%
09/23/94	320	CA	Orange Co-California	Taxable Pension Oblig Bonds	Series 1994 B	13.95	13.95	09/01/08	8.58%	8.32%	0.26%
10/13/94	1,965	CA	Los Angeles Co-California	Pension Obligation Bonds	Series 1994 A	11.72	11.72	06/30/06	9.57%	8.77%	0.80%
04/12/95	310	CA	Alameda Co-California	Pension Obligation Bonds	Series A	9.65	9.65	12/01/04	8.95%	7.97%	0.99%
06/22/95	538	CA	Sacramento Co-California	Taxable Pension Funding Bonds	Series 1995B&C	25.79	27.04	07/01/22	8.33%	7.72%	0.62%
11/22/95	421	CA	San Bernardino Co Fin Auth	Pension Obligation Rev Bonds	Series 1995	25.37	25.71	08/01/21	8.06%	7.41%	0.65%
11/01/96	773	NY	NYS Dorm Authority	Pension Obligation Bonds	Series 1996	6.42	6.42	04/01/03	5.68%	6.93%	-1.26%
12/12/96	307	CA	Alameda Co-California	Taxable Pension Obligation Bonds	Series B	21.98	21.98	12/01/18	7.33%	7.52%	-0.19%
02/14/97	436	CA	Oakland City-California (1)	Taxable Pension Oblig Bonds	Series 1997	13.84	13.84	12/15/10	5.94%	6.50%	-0.56%
06/26/97	2,803	NJ	New Jersey Economic Dev Auth	State Pension Funding Bonds	Series 1997A-H	23.78	31.66	02/15/29	7.38%	7.68%	-0.30%
07/09/97	384	CO	Denver City and Co SD #1	Taxable Pension Certs of Partic	Series 1997	21.45	21.45	12/15/18	6.67%	6.40%	0.27%
12/08/98	221	MA	Worcester City-Massachusetts	General Obligation Bonds	Loan of 1998	22.33	29.08	01/01/28	6.61%	6.32%	0.29%
01/21/99	1,292	PA	Philadelphia Auth for Indus Dev	Pension Funding Bonds	Series 1999 A-C	22.21	29.75	10/15/28	6.55%	6.70%	-0.15%
10/27/99	301	OR	Portland City-Oregon	Ltd Tax Pension Oblig Rev Bonds	1999 Series D&E	19.61	19.61	06/01/19	5.51%	6.10%	-0.60%
08/22/00	350	СТ	Bridgeport City-Connecticut (1)	Pension Obligation Bonds	Series 2000 B	20.62	29.42	01/15/30	6.49%	7.60%	-1.11%
03/28/02	229	OR	Oregon Local Governments	Limited Tax Pension Obligation Bonds	Series 2002	19.02	27.82	01/15/30	6.49%	6.82%	-0.33%
09/17/02	737	CA	San Diego Co-California	Taxable Pension Obligation Bonds	Series 2002C	18.55	29.93	08/15/32	8.48%	4.65%	3.83%
10/10/02	775	OR	Oregon School Boards Association	Limited Tax Pension Obligations	Series 2002A&B	18.48	25.74	06/30/28	8.32%	5.60%	2.72%
04/04/03	927	OR	Oregon School Boards Association	Ltd Tax Pension Oblig Bonds	Series 2003	18.00	25.26	06/30/28	8.07%	5.72%	2.35%
04/23/03	323	CA	Contra Costa Co-California	Taxable Pension Obligation Bonds	Series 2003A	17.95	19.12	06/01/22	8.07%	5.44%	2.63%
05/13/03	231	CA	County of Sonoma	Taxable Pension Obligation Bonds	Series 2003AB	17.90	19.57	12/01/22	8.07%	4.84%	3.22%
05/15/03	238	CA	Kern Co-California	Taxable Pension Oblig Ref Bonds	Series 2003A	17.89	23.27	08/15/26	8.07%	4.96%	3.11%
06/05/03	10,000	IL	Illinois	General Obligation Bonds	Series of 6/03	17.83	30.01	06/01/33	8.07%	4.97%	3.10%
10/28/03	2,084	OR	Oregon	GO Pension Bonds	Series 2003	17.44	23.61	06/01/27	7.76%	5.56%	2.20%
12/10/03	1,792	WI	State of Wisconsin	General Fund Annual Approp. Bonds	2003 Series AB	17.32	20.11	01/15/24	7.76%	5.80%	1.95%
02/06/04	468	OR	Oregon School Boards Association	LTd Tax Pension Obligations	Series 2004	17.16	24.41	06/30/28	7.75%	5.21%	2.54%
02/26/04	500	KS	Kansas Development Fin Auth	Revenue Bonds	Series 2004C	17.10	30.20	05/01/34	7.75%	5.27%	2.49%
03/10/04	328	CA	Fresno Co-California	Taxable Pension Obligation Bonds	2004 Series A	17.07	28.45	08/15/32	7.75%	5.43%	2.33%
06/09/04	464	CA	San Bernardino Co-California	Pension Obligation Bonds	Series 2004A	14.15	14.15	08/01/18	6.95%	5.62%	1.34%

• Bonds in late 1996 to early 2002 would have lost money to date



Source: Presentation by RBC Capital Markets to City Finance Staff, December 20, 2020

Timing and Investment Return are Key

3/31/2021 Valuation of Hypothetical Investment Return Relative to Borrowing Cost of Pension Bond Issuances

wedians	4∠1 2otumo 400	04 to 3	2/24/2024			15.80	23.21		8.07%	5.12%	2.62%
00/23/18	201	CA		Pension Obligation Bolids	Selles 2018	2.11 4E.9C	10.95	00/01/37	12.00%	4.19%	8.41%
12/22/17	1,005		Tulara County	Pension Obligation Bonds	Series 2017	3.21 2.77	29.21	06/01/27	10.98%	3.49%	7.49%
10/12/13	1,005	TV		Revenue DUIUS Ponsion Obligation Ronds		0.04 2.07	29.70	02/01/40	11.24%	4.68%	0.50%
09/12/15	204	IVII	Kansas Dovelopment Fin Auth	Reurees Realth Care Donus	Series 2015	0.00	20.00	04/15/45	9.54%	3.88%	5.66%
00/27/13	209	VA	Macomb Co Michigan	Betirana Haalth Cara Banda	Series 2013B	1.10	23.62	11/01/25	10.21%		6.40%
11/20/12	200		Datumore CO-Maryland	Ceneral Obligation Bonds	ZUIZ Selles	0.34	29.09	00/01/42	10.51%	3	7.05%
09/20/12	338		Port Lauderdale City-Florida	Special Obligation Bonds	Series 2012	0.53	19.29	01/01/32	10.16%		5.95%
07/30/12	213		City of Oakiano	Provide Chigation Colligation Bonds	Series 2012	0.0/	10.39	12/15/25	10.16%	4.46%	5.70%
02/23/11	210		City of Ookland	Toroble Dension Obligation Panda	Series 2012	10.11	12.20	12/15/25	9.75%	4.83%	4.92%
08/24/10	289	CA	Sonoma Co-California	Pension Obligation Bonds	Series 2010 A	10.61	19.28	12/01/29	10.23%	5.93%	4.30%
08/18/10	468	KY OA	Kentucky Asset/Liability Comm	General Fund Funding Notes	2010 First Series	9.63	9.63	04/01/20	8.00%	3.35%	4.64%
09/01/09	313	CI	Waterbury City-Connecticut	General Obligation Pension Bonds	Series 2009	11.59	29.27	12/01/38	10.13%	7.07%	3.06%
03/19/09	400		Milwaukee Co-Wisconsin	GO Pension Promissory Notes	Series 2009 A&B	12.04	19.72	12/01/28	11.46%	6.28%	5.18%
12/04/08	403		Houston City-Texas	Pension & Refunding Oblig Bonds	Series 2008 A & B	12.33	23.25	03/01/32	10.61%	6.48%	4.13%
07/30/08	1,937			Sales& I ransfer Tax Receipts Bonds	Series 2008 A & B	12.68	32.36	12/01/40	9.46%	6.84%	2.62%
06/26/08	1,359	PR	Puerto Rico Employees Retire Sys	Senior Pension Funding Bonds	Series B and C	12.77	50.05	07/01/58	8.84%	6.60%	2.24%
04/23/08	750	CO	Denver City and Co SD #1	Certificates of Participation	Series 2008 A	12.95	29.67	12/15/37	8.84%	4.92%	3.92%
04/16/08	2,277	CT	Connecticut	General Obligation Bonds	2008 Series A & B	12.96	23.93	03/15/32	8.84%	5.97%	2.87%
01/29/08	1,589	PR	Puerto Rico Employees Retire Sys	Senior Pension Funding Bonds	Series A	13.18	50.45	07/01/58	8.50%	6 6	2.09%
06/25/07	389	CA	Santa Clara Co-California	Pension Funding Bonds	Series 2007	13.78	29.12	08/01/36	7.73%		1.64%
06/08/05	458	OR	Oregon Community College Dt	Limited Tax Pension Oblig	Series 2005A	15.82	23.00	06/01/28	7.97%	4 %	3.12%
05/25/05	1,440	MI	Detroit Retirement Sys Fund Tr	Taxable Certs of Participation	Series 2005A & B	15.86	20.07	06/15/25	7.97%	5.23%	2.73%
02/10/05	400	CA	Riverside Co-California	Pension Obligation Bonds	Series 2005A	16.15	30.03	02/15/35	7.96%	4.99%	2.97%
01/19/05	399	ТΧ	Dallas City-Texas	GO Pension Bonds	Series 2005 ABC	16.21	30.09	02/15/35	7.96%	5.26%	2.70%
06/24/04	426	CA	County of Sacramento	Taxable Pension Funding Bonds	Series 2004C-1,2,3	16.78	18.15	08/15/22	7.86%	4.62%	3.24%
06/22/04	454	CA	San Diego Co-California	Pension Obligation Bonds	Series 2004A & C	16.78	18.16	08/15/22	7.86%	5.69%	2.17%
06/09/04	464	CA	San Bernardino Co-California	Pension Obligation Bonds	Series 2004A	14.15	14.15	08/01/18	6.95%	5.62%	1.34%
0/01/2021	Valuation		sponionear investment return	Relative to Borrowing 003t of Fel	Bond Bond Bound						

• Bond rates have been low since 2012



Source: Presentation by RBC Capital Markets to City Finance Staff, December 20, 2020

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A More Nuanced Rating Agency Position

- Fitch Ratings recently affirmed at the national *Bond Buyer National Outlook* webinar that POBs are "at best" neutral, but can be negative.
- While the substitution of one liability for another is neutral as both debt and pensions can be a drag on budgets, how an issuer accomplishes UAL financing can affect credit
- Negative:
 - Funding Normal Annual Costs
 - Using savings wholly to balance current operating budget
- More Favorable:
 - Having a long-term strategy for pension sustainability
 - POBs are simply part of a comprehensive approach to addressing UAL
- The City's pension funding is already a consideration in the City's current ratings



Common Concerns, Different Approaches

	Moody's	STANDARD & POOR'S RATINGS SERVICES	Fitch Ratings
Overview	 "The Issuance of pension obligation bonds (POBs) is neutral at best and usually negative for a government's credit quality" 	 "POBs can be an affordable tool to lower unfunded pension liabilities. But along with the issuance of POBs comes risk." 	• "Fitch Ratings views the impact of pension obligation bonds (POBs) on an issuer's credit quality to range from neutral to negative in most situations."
Observations / Comments	 Market Timing Risk "The same low interest rates that benefit governments as POB borrowers work against them and their pension systems as investors." "POBs increase government exposure to pension asset risk." "Using POBs as deficit financing vehicles exacerbates credit risks." 	 When the POB is amortized under a level dollar approach, it applies to all current and future bases being paid down and has a broader impact on the budget as well as plan funding Are the POBs being issued for budget relief? Will any front-loading of savings lead to higher, unsustainable contribution rates in later years? What are the funding goals and how will the POB affect these objectives? 	 Substituting versus Adding a Liability Budget Burden is Key Timing and Investment Risks Sustainability Most Important Consideration
California POB Notching	One to two notches below implied GO rating – more frequently two notches	 None for "traditional" POBs; rated in line with ICR Lease POBs one to two notches below 	 Generally one notch differential between implied GO and POB ratings



Sources: Moody's, "Low interest rates do not insulate governments from pension bond risks", April 24, 2020 Fitch Ratings, "Pension Obligation Bonds – Weighing Benefits and Costs", March 31, 2015 S&P, "Pension Obligation Bonds' Credit Impact On U.S. State And Local Government Issuers", December 6, 2017 S&P, "Pension Brief: POBs See Increasing Activity In Low-Interest-Rate Environment", October 14, 2020

GFOA POB Advisory

- Government Finance Officers Association (GFOA) has an advisory on its website
 - The current advisory statement was approved in January 2015 and reaffirmed in February 2021 (since Council's December meeting)
 - It is advising State and Local governments to not issue POBs
 - The advisory identifies policies and procedures to minimize exposure to potential loss from financial management activities
 - <u>https://www.gfoa.org/materials/pension-obligation-bonds</u>





GFOA POB Advisory

Recommends state and local governments <u>do not</u> issue POBs for following reasons:

- Invested POB proceeds may fail to earn more than interest rate owed over bond term thereby increasing overall liabilities
- Complex POB instruments carry considerable risk especially if derivative products are utilized
- Issuing taxable debt increases jurisdiction's bonded debt burden potentially using debt capacity that could be used for other purposes
- Taxable bonds are typically sold without call options or with "makewhole" calls
- If POBs are structured with deferred principal amortization or repayment longer than actuarial amortization period overall borrowing costs will increase
- Rating agencies may not view as credit positive, especially if not part of more comprehensive plan to address pension funding shortfalls



Perspective on GFOA's Advisory

Julia H. Cooper, Director of Finance



POB Changes Since GFOA Advisory

Concerns	Mitigating Circumstances
Invested POB proceeds might earn less than borrowing costs	True. Instead of earning 6.625%, the City might earn less than bond rate. But rates have fallen dramatically since the GFOA took this position and bonds are now only about 3.0% - 3.5%
"POBs are complex instruments that carry considerable risk And may include swaps or derivatives"	No longer. Unlike earlier POBs which used such products, the City is only evaluating fixed rate bonds and the City does not use swaps or derivatives.
"Issuing taxable debt to fund the pension liability increases the jurisdiction's debt burden and potentially uses up debt capacity"	POB replaces a pension liability with bonded debt. It is expected to reduce fixed payments and free up financial resources and could repay those obligations faster. Credit analysts and GASB 68 already factor pension liabilities into debt capacity analysis.



POB Changes Since GFOA Advisory

Concerns	Mitigating Circumstances
POBs are "typically issued without	Not true. While true when the advisory was
call options" making it more	published, taxable bonds did not provide an
difficult to refund bonds if interest	option to call bonds at par, now common
rates fall or a different debt	feature. The City's recent taxable bonds had
structure is desired	10-year par calls.
"POBs are frequently structured in a manner that defers the principal payments"	Not necessarily true. The City does not expect to consider extending the term of repayment; the City is contemplating ways of accelerating the funding of the unfunded pension liability with savings.
"Rating agencies may not view the	"Not credit positive" is not "negative". Recent
proposed issuance of POBs as	rating reports indicate a credit neutral position
credit positive"	under certain circumstances.



Distinguished Guest

Girard Miller, Public Funds and Pension System Investment Expert and Highly-Regarded Author





Miller's POB paradigm

- Stocks outperform bonds, almost always, over 30 years
 - Exception: Great Depression, which stocks plunged 90% from 1929 bubble heights
 - Cyclical risk is highest when valuations are extreme (1929, 1973, 1987, 2000, 2008)
- Monte Carlo is a place for gamblers, not investors
 - FAs and bond peddlers use it because it always works
 - A 30-year Monte Carlo does not depict shorter-period risks of your 12-year average amortization (Tier 1). Could be kicking the can beyond pensioners' lives.
- Agency risk = risks taken by decision-makers without skin in the game
 - Opium = OPM = Other People's Money
 - Risk is kicked to successors, both elected and appointed. CFO professionals run the greatest career risks.



The Business Cycle and the POB Window



SAN JOSE

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Miller's POB paradigm

The relevant risk today is primarily cyclical risk

- Valuations are stretched but not absurd (Gamestop etc., excepted)
- Traditional public market returns will struggle to match actuarial expectations in this decade, unless we replay the Roaring 20s (and we know how that ended)
- Owning stocks from these levels for 30 years remains a fair bet, but the next recession will put eggs on the faces of everybody who funds now via POBs unless economic expansion continues for 3-5 years, without becoming a bubble.
- That could happen...But it might not, and historically it rarely has

The Miller POB window closed last May, but a thoughtful systematic approach to risk management could work



Source: Girard Miller, Author

If I Were You

- Your UAL is a whopper
- Authorizing \$1 billion POB vs the huge UAAL is arguably prudent, if done cautiously and systematically
- Downside cyclical risk is somewhat or at least partially balanced by upside risk of extended services-economy expansion (based on sample size of 3 ⁽ⁱ⁾)
- Don't bet the ranch on the color black today
- Instead, sell in tranches under a standing authorization, and be opportunistic and smart.
- Maybe 25-30% now, keep the remainder for opportunistic market corrections (>15-20% to buy dips) and the next recessionary bear market (when nobody wants to authorize and sell POB bonds to buy stocks).



If I Were You

- You could potentially sell yet another \$1 billion after next recession hits bottom, when the City has some experience and muscle memory under its belt
- Don't sell taxable POB bonds to buy taxable bonds (very limited arbitrage and rates will keep increasing if you are right about stocks)
- Separate trust? Or subaccount within pension funds if trustees get the point and cooperate, with support from consultant
- Private equity avoids some cyclicality, but cannot produce expected IRRs if economy tanks. \$100M (10%) for local startups in revenue is worth a discussion





The City's Municipal Advisor's Report – General POB Analysis

Michael Busch, Municipal Advisor Wing-See Fox, Municipal Advisor Julio Morales, Municipal Advisor Urban Futures, Inc. (UFI)



Pension Primer



Unfunded Accrued Liability (UAL)





Pension Primer

Unfunded Accrued Liability (UAL)

Comprised of Amortization Bases

- 25 Federated Plan -\$1,942,421,000
- 32 Fire \$577,248,369
- 32 Police \$671,120,631

Loan Payments @ 6.625%

Dynamic - New Bases Added Each year

- Investment Performance
- Assumption Changes: Discount Rate
- Experience: Actual vs. Projected

	FEDERATED	EDERATED Term FIRE		POLICE	Term
1	\$ 20,977,000	19	2,978,191	3,501,809	2
2	752,667,000	19	-	5,308,000	2
3	40,945,000	10	12,490,000	-	3
4	(51,562,000)	15	(27,374,865)	(32,176,135)	6
5	(2,507,000)	11	6,496,076	7,634,924	7
6	6 167,596,000 16		62,628,386	73,612,614	6
7	7 101,611,000 12		39,234,977	46,114,023	9
8	(37,341,000)	12	45,048,902	52,949,098	6
9	65,626,000	13	31,270,295	36,746,705	10
10	59,828,000	18	(76,209,892)	(89,577,108)	6
11	(23,391,000)	14	21,734,177	25,540,823	11
12	99,403,000	19	45,061,034	52,963,966	8
13	45,851,000	15	(10,989,468)	(12,916,532)	8
14	201,965,000	20	43,551,546	51,183,454	12
15	107,447,000	16	29,396,262	34,551,738	9
16	59,414,000	21	11,748,653	13,812,347	13
17	57,643,000	17	(24,519,211)	(28,823,789)	11
18	6,883,000	17	23,777,878	27,947,122	14
19	(17,386,000)	22	(4,059,328)	(4,776,672)	11
20	47,739,000	10	39,105,548	40,034,452	12
21	53,227,000	23	65,617,028	//,129,9/2	11
22	55,649,000	19	32,098,497	37,725,503	16
23	(1,699,000)	24	379,490	2,421,510	12
24	97,371,000	20	45,438,043	53,412,957	12
25	34,465,000	25	(58,784,537)	(69,090,463)	17
26	\$ 1,942,421,000		9,000	81,000	13
27			18,198,198	21,384,802	13
28			34,320,647	40,337,353	18
29	7/1/20 Payment		64,368,870	75,648,130	14
30	\$ 281,196,000		36,938,374	43,412,626	19
31			33,551,357	39,427,643	15
32			33,684,239	39,598,761	20
ι	JAL Balances for EV2	21-22	\$577.248.369	\$ 671,120,631	



Layer Cake – Federated Plan





Base Selection – Cash Flow vs Savings

Selection of Base when making an additional payment

Shorter Base = Greater Budget / Cash Flow Impact

Longer Base = Greater Total Savings

SAN JOSE



	CITY OF SAN JOSE- BASE SELECTION SELECTION										
	Plan	#	Year	Term	Ou	istanding UAL Balance	Total UAL Payments	Avg. Annual Payment	Interest Costs	Ratio	
SHORT	FED	3	2010	10	\$	40,945,000	58,114,418	5,811,442	\$ 17,169,418	142%	
LONG	FED	21	2018	23	\$	53,227,000	113,343,905	4,927,996	\$ 60,116,905	213%	

Source: Municipal Advisor's Report – Exhibit 6 & 7, Pages 14 – 16

UAL Payment Schedule



Breakdown of UAL by Plan

Federated Plan

- \$1,942,421,000
 - Tier 2 \$10,850,000
- 52% Funded
- 10.5 Year Avg. Life
- 2.75% Escalation
- 45% General Fund

Police & Fire Plan

- \$1,248,369,000
- 73% Funded
- 11.0 Year Avg. Life
- 2.50% Escalation
- 100% General Fund







Funding Strategies



Funding Strategies





UAL Fund Allocation



Source: Municipal Advisor's Report, Exhibit 10 & 11, Page 18

SAN JOSE

Leveraged Refunding




Tax-Exempt Exchange

- 1. Identify Pay-Go capital projects
- 2. Finance projects with tax-exempt bonds
- 3. Use cash earmarked for the capital projects to payoff UAL
- 4. Budgeted UAL payments to pay the debt service.





Implementation by Cost of Capital



Source: Municipal Advisor's Report, Exhibit 12, Page 19

SAN JOSE

Case Studies



CSCDA – 2004 POBs (CABs)

Capital Appreciation Bonds (CABs)

- Zero coupon bonds that defer payments until maturity
- Issuers pay premium for CABs: 6.37% vs. 6.0%



Source: Municipal Advisor's Report, Exhibit 17, Page 27

SAN OSE

CSCDA 2004 POBs Expected Outcome

Assumed CalPERS 7.75% / Avg. Annual Return: 5.81% Ending Portfolio Benefit = \$14.2 Million



Source: Municipal Advisor's Report, Exhibit 19, Page 28

SAN IOSE

CSCDA 2004 YTD Results

CalPERS YTD Return = 5.81. Lower than expected returns (Great Recession) eliminated all POB savings



Source: Municipal Advisor's Report, Exhibit 21, Page 29

SAN OSE

2004 Burbank POBs Expected Outcome

Assumed CalPERS 7.75% / Avg. Annual Return: 5.81% Ending Portfolio Benefit = \$1.8 Million





Source: Municipal Advisor's Report, Exhibit 23, Page 30

2004 POBs: Level of Savings

Borrowing Based on Current Market Rates = 2.93% Expected Portfolio Benefit = \$19.6 Million





2004 POBs: Timing of Returns is Critical

Great Recession - Avg. Annual Return: 5.61% Expected Portfolio Benefit = **(\$17.0) Million**





Source: Municipal Advisor's Report, Exhibit 25, Page 32

City of Oakland 2012 POBs

Return: 8.09% / 4.32% TIC% /NPV Savings = \$35 Million vs. Ending Portfolio Benefit = \$147 Million





Source: Municipal Advisor's Report, Exhibit 26, Page 32

POBs 2.0



POBs 2.0

Since 2017, there has been an evolution in the market which has resulted in POBs 2.0

- GASB 68
 - New accounting guidelines require pension liabilities to be stated on the balance sheet
 - Became effective for fiscal years beginning after June 15, 2014
- In-Depth Analysis and Comprehensive Plan
 - Higher level of attention and analysis on pension liabilities
 - Evaluate multiple strategies
 - Perform scenario and risk analysis (Monte Carlo Simulation)
 - Conducting City Council and stakeholder workshops to develop and adopt a Pension Obligation Funding Plan
- Addressing GFOA Advisory



GFOA Advisory vs. POBs 2.0

POBs

2.0

In-depth Study
Pension Reform

Market Evolved

1. Complex instruments: swaps, CABs, derivatives, GICs

2. Increase debt burden / reduce flexibility: "soft to hard liability"

3. Not refundable "make-whole" call

4. Extend repayment or finance Normal Costs

5. Stand alone POBs not viewed as credit positive

6. Reinvestment of POB Proceeds: Market & Timing Risk 1. Plain Vanilla Fixed Rate Bonds

2. GASB 68 Liability - Balance Sheet

3. 10-year Call

4. Finance UAL Only (same term)

5. Credit Neutral / Plan & Study +

6. Dollar Cost Averaging / Multiple Strategies / Hedge



Credit Considerations

• S&P

- Issuance of POBs overall credit neutral if no indication of worsening overall credit profile (extension of amortization, funding normal costs, upfront savings to plug budget deficits, no meaningful plan to address rising pension costs)
- Plans under 80% funded warrant greater scrutiny
- Pension costs are already included in carry charges for Debt and Contingent Liabilities
- POBs are rated at general creditworthiness (AA+)--no notching for POB
- Rates most POBs 2.0 in California

Moody's

- Pension costs given 10% weight on rating scorecard
- Incorporates Adjusted Net Pension Liability calculation
- POBs rated two notches lower (Aa3) than general obligation bond rating (Aa1)
 - Overall credit neutral to negative
 - Market timing risk emphasized
- Not rated many POBs 2.0 in California
- Fitch
 - Evaluates not only current pension liability but also expected trajectory (sustainability)
 - Standardizes calculation of net pension liability and combines with debt burden in relation to personal income (combined debt and pension burden above 40% considered high)
 - POBs rated one notch lower (AA) than issuer default rating (AA+)
 - Overall credit neutral to negative
 - Not rated many POBs 2.0 in California





Municipal Advisor's Report – Analysis of Potential San José POBs

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City Goals and Policy Considerations



City Goals

- Reduce current annual burden of UAL on all City Funds, particularly the General Fund, for Pension & OPEB, easing budget pressures
 - Approximately 45% of Federated Payroll and Retirement Plan Costs are paid by the General Fund (with the balance coming from Enterprise Funds), but nearly 100% of Police & Fire Payroll and Retirement Plan costs are paid by the General Fund thus POBs impact each plan differently.
- Prevent the contributions from rising as projected through 2029
- Use savings to accelerate the amortization of unfunded liability
- Ensure the long-term sustainability of the City's retirement systems.
 - While the City does not control the retirement system investments, legally obligated to pay liabilities on both systems and therefore has an interest in maintaining the sustainability of each retirement plan



City Policy Considerations

- Create formal City Pension Obligation Funding Policy before issuing POBs, and even if no POBs are issued:
 - Consideration of policies on how to use budgetary savings from prepayment of UAL
 - GASB 68 makes the pension liability an important City liability - evaluate pension liability as the City evaluates all its fixed future liabilities and capital plans
- Meet with Office of Retirement Services and Retirement System Boards to understand how the funds would be invested, because even as the City is "on the hook" for bond debt service, it remains "on the hook" for all liabilities whether prefunds or not.



Financial Modeling Parameters

- Staff direction on modeling parameters:
 - Eliminate the future projected increases in UAL amortization costs
 - Generate at least \$30 million of annual budgetary savings
 - Select which UAL to refund, recognizing that savings on Police & Fire UAL contribute more to General Fund savings vs. Federated UAL savings and based the economics of how UAL costs were amortized. (The City's Municipal Advisor will explain these concepts further in the next part of the presentation).
 - Improve Funding ratio of Federated Plan which is low, and design Federated Plan for sustainable funding ratios



Sample Structures Based on City Policy Considerations



POBs vs LRBs

PENSION OBLIGATION BONDS

- Validation Required
- + 3 Months to Access Market (Opportunity Cost)
- Proceeds Given Directly to Retirement Plans
- S&P Credit Rating: Same as GO/Issuer Credit Rating
- Encumbering City Assets Not Required

LEASE REVENUE BONDS

- No Validation Required
- Quicker Access to Market (More Budgetary Savings)
- Can Deposit Proceeds to 115 Trust
- S&P Credit Rating: One notch lower than POB
- Encumbering City Assets (i.e., streets) Required

Lease Revenue Bonds not being considered for further analysis due to lack of available City assets (there are policy, legal and headline risks associated with encumbering streets)



Total POB Savings – 2 Components

- Budgetary Savings Actual cash Flow savings from FY 20-21 UAL level \$305 Million
- 2. UAL Avoidance Costs Saving based on avoidance of projected future UAL costs is \$206 Million





Source: Municipal Advisor's Report, Exhibit 29, Page 36

\$780 Million POB



- Funding Levels increases from 52% to 69%
- 45% General Fund Savings ≈ \$4.2 Million per annum

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Source: Municipal Advisor's Report, Exhibit 31, Page 38

100% POBs



Advantages

- Maximize Savings
- Lock-In Low Rates
- Increase Leverage

Disadvantages

- Market/Timing Risk
- 100% Taxable
- Increase Leverage



Source: Municipal Advisor's Report, Exhibit 32, Page 38

Midpoint: \$1.4 Billion (Longest bases)



Bases 18-years +

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- \$1.2 Billion Federated Plan
- \$235 Million Safety Plan
- Current rates + 50 bps
- Aggregate General Fund Savings ≈ \$306 Million
 - See slide 100 for the General Fund savings analysis

Source: Municipal Advisor's Report, Exhibit 34, Page 40

Impact of Interest Rate Increases

20-Year POB \$1.4	5 Billion Longest Bases	20-	Year POB \$1.45	Billion + 50 bps	20-Year POB \$1.45 Billion + 100 bps			
\$ 1,444,765,000	Par Value	\$	1,444,765,000	Par Value	\$ 1,444,765,000	Par Value		
1,440,150,342	POB UAL		1,440,150,342	POB UAL	1,440,150,342	POB UAL		
20	Term		20	Term	20	Term		
208,577,705	UAL Avoidance Costs		205,905,166	UAL Avoidance Costs	205,905,166	UAL Avoidance Costs		
360,911,446	Budgetary Savings		268,446,298	Budgetary Savings	74,105,494	Budgetary Savings		
29,255,934	Annual Savings		22,143,645	Annual Savings	9,964,932	Annual Savings		
569,489,151	Total UAL Savings		474,351,464	Total UAL Savings	280,010,660	Total UAL Savings		
454,120,380	NPV Savings		378,756,153	NPV Savings	228,024,153	NPV Savings		
32%	% NPV		26%	% NPV	16%	% NPV		
3.23%	тіс		3.72%	ТІС	4.71%	TIC		

+ 50 bps

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+ 100 bps

+ 150 bps

- +150 bps increase cuts potential POB savings by 40%
- POBs become less compelling
- Interest rate outlook generally stable
- March Fed Meeting no rate hike until 2022/2023
- Baseline POB projection includes 50 bps cushion

Source: Municipal Advisor's Report, Exhibit 35, Page 40

Barbell Structure: Short & Long Bases

5 Billion Longest Bases
Par Value
POB UAL
Term
UAL Avoidance Costs
Budgetary Savings
Annual Savings
Total UAL Savings
NPV Savings
% NPV
TIC

Federated Plan
\$928 Million
19–Year Bases
Total Savings
Police & Fire Plan

\$521 Million 9-Year & Under Budgetary Impact

19.	Vear POB \$1.49	5 Billion Barbell
	-Teal 1 OD 91.40	S Billon Barbell
\$	1,485,570,000	Par Value
	1,480,855,096	POB UAL
	19	Term
	205,905,166	UAL Avoidance Costs
	292,902,339	Budgetary Savings
	25,508,961	Annual Savings
	498,807,505	Total UAL Savings
	412,085,626	NPV Savings
	28%	% NPV
	3.01%	тіс





Paradox – General Fund Savings

	S	Savings \$1.4 I	Billion POBs			Longest Bases			Bai	rbell
	Lo	Longest Bases Barbell				General Fund Savings	NPV @ 3.00%		General Fund Savings	NPV @ 3.00%
2022	\$	29,256,271	25,506,697	1	2022	\$ 15,896,410	15,433,408		\$ 18,279,655	17,747,238
2023		36,889,436	33,142,371	2	2023	20,029,969	18,880,167		23,729,637	22,367,459
2024		38,003,107	34,256,817	3	2024	20,620,364	18,870,554		24,504,620	22,425,198
2025		40,931,465	37,184,338	4	2025	22,193,930	19,719,019		26,573,829	23,610,503
2026		48,889,583	45,144,523	5	2026	26,490,718	22,851,126		32,232,351	27,803,909
2027		57,055,187	53,308,878	6	2027	30,893,975	25,873,217		38,025,853	31,846,053
2028		63,422,550	59,677,662	7	2028	34,318,189	27,903,828		42,528,831	34,579,831
2029		67,889,164	64,139,585	8	2029	36,709,959	28,979,181		45,665,657	36,048,892
2030		63,090,200	59,339,725	9	2030	34,091,718	26,128,463		40,162,660	30,781,334
2031		46,312,068	42,564,191	10 2031		25,008,375	18,608,580		26,068,467	19,397,387
2032		35,981,413	32,238,950	11	2032	19,416,663	14,027,011		18,609,085	13,443,599
2033		25,013,020	21,265,031	45% 12	2033	13,488,647	9,460,665		9,569,264	6,711,689
2034		(5,236,280)	(8,985,320)	13	2034	(2,821,836)	(1,921,533)		(4,043,394)	(2,753,355)
2035		(5,803,397)	3,909	14	2035	(3,125,349)	(2,066,224)		1,759	1,163
2036		(13,794,893)	3,809	15	2036	(7,424,082)	(4,765,236)		1,714	1,100
2037		6,601,053	5,067	16	2037	3,550,149	2,212,336		2,280	1,421
2038		15,676,878	2,083	17	2038	8,425,635	5,097,648		937	567
2039		3,081	4,433	18	2039	1,655	1,655 972		1,995	1,172
2040		4,158	4,755	19	2040	2,147	2,147 1,224		2,140	1,220
2041		4,566	-	20	2041	2,949	1,633		-	-
2042		3,612,900	-	21	2042	1,625,805)5 873,950		-	-
2043		3,712,254	-	22	2043	1,670,515	871,829		-	-
2044		3,814,341	-	23	2044	1,716,454	869,713			
2045		3,919,236	-	24	2045	1,763,656	867,602		-	
2046		4,241,789		25	2046	1,908,805	911,656		-	
	\$	569,489,151	\$ 498,807,505			\$ 306,455,419	\$ 249,690,789		\$ 341,917,340	\$ 284,016,382



Source: Municipal Advisor's Report, Exhibit 37, Page 41

Recycling Savings





Source: Municipal Advisor's Report, Pages 41 – 42

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Stress Testing / Risk Analysis of San José Scenarios



Returns in Early Years Critical

• Leverage factor more important in initial years

		Year 1				Year 2				Year 3		Net Gain
	Balance	% Rate	R	eturn	Balance	% Rate	F	eturn	Balance	Rate	Return	\$26.69
РОВ	\$100.00	10%	\$	10.00	\$110.00	10%	\$	11.00	\$121.00	10%	\$12.10	\$133.10
UAL	\$ 10.00	10%	\$	1.00	\$21.00	10%	\$	2.10	\$33.10	10%	\$3.31	\$36.41
Leverage Factor 10X						5.2X			3.7X			

		Year 1			Year 2			Net Loss		
	Balance	% Rate	Return	Balance	% Rate	Return	Balance	Rate	Return	\$21.49
РОВ	\$100.00	-10%	\$ (10.00)	\$ 90.00	-10%	\$ (9.00)	\$81.00	-10%	(\$8.10)	\$72.90
UAL	\$ 10.00	-10%	\$ (1.00)	\$ 19.00	-10%	\$ (1.90)	\$ 27.10	-10%	(\$2.71)	\$24.39
Leverage Factor 10X						5.2X			3.7X	



Axiom: Investment Returns exceed POBs

Axiom: Rate of Return Exceeds Rate on POBs Oversimplifies - Market Timing is Critical



Compare ending portfolio balance two similar returns:

- 6.46% Loss Initial Years = \$20 Million
- 6.44% Gain Initial Years = \$108 Million

Source: Municipal Advisor's Report, Exhibit 41 – 42, Page 45

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Stress Testing - Monte Carlo Simulation



Key Issue w/ Basic Risk Analysis:

Avg. Return **≠** Compound (yearover-year return)

Timing of returns is critical to ending portfolio value

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

- Compares ending portfolio balance: POBs vs UAL payments
- Generate random % rate returns run 10,000 scenarios
 - CalPERS Return over term of POBs
 - Expect Return = 6.625% (Std. Dev. = 11.25%)

Source: Municipal Advisor's Report, Exhibit 40, Page 44

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Monte Carlo Simulation

Ending Portfolio Balance: POBs vs. UAL Payments



Model generates random interest rates each year used to determine ending portfolio values



Probability of Success
Scenarios with Positive NPV

KEY DRIVERS

Level of Savings

Volatility



Level of Savings



+ 175 bps / 50% Reduction in savings



11-Year \$524 Million POB

- \$80 Million Savings
- 16% NPV
- \$71 Million Ending balance
- 71% Probability of Success

As interest rates increase, (differential decreases, which impacts savings & probability of

11-Year \$524 Million POB

- \$40 Million Savings
- 8% NPV
- \$26 Million Ending balance
- 56% Probability of Success



Volatility: 11.25% vs. 8.25%



Greater volatility increases the dispersion of results: Expected portfolio value is the same, but the number of negative outcomes increases, reducing the probability of success



Source: Municipal Advisor's Report, Exhibit 45, Page 48
Mitigating the Risk of POBs



Market / Timing Risk



Timing of market corrections can be difficult to gauge Fed often cuts rates to stimulate the economy and markets respond On absolute level – borrowing rates remain attractive, but...



Source: Municipal Advisor's Report, Exhibit 47, Page 50

Market / Timing Risk

Market Timing Risk inherent to all investment decisions

- All payments made into retirement plans, regardless of funding source
- City takes into account market timing risk in every investment decision it makes on a daily basis.
- 1. Dollar Cost Averaging
 - Multiple Tranches of POBs can be offset by increasing borrowing rates
 - Multiple Strategies
- 2. Hedge
 - Put or Floor S&P 500 "at-the-money" 1-year contract = 6.0% (Bloomberg) – 100% increase from 6 months prior
 - Structured Note with imbedded downside protection
 - High Dividend Yield, Low Volatility Index (Warren Buffet Strategy)



UFI Final Comments & Considerations

- POBs provide compelling opportunity for savings
- Develop Long-Term Comprehensive Plan + Formal Policy
 - Total Savings or Budgetary Impact or General Fund
 - Use of 1-time Monies & Surplus
 - Multiple Solutions: tax-exempt exchange & leveraged refunding
 - Recycling Savings
- Monte Carlo Simulation does not guarantee results
- Monte Carlo Tool Understand risks and driving factors
 - Level of Savings
 - Volatility
 - Discount Rate increases UAL but does not have impact on MVA
- Address Federated Plan first
- Dollar Cost Averaging / Multiple Tranches
 - City in unique position establish dialogue with investment boards: market timing risk, hedge/downside protection.





Judicial Validation of POBs

Brian Forbath, Stradling Yocca Carlson & Rauth Bond Counsel



Issuance of POBs

- POBs are issued to refund portions of the City's existing UAL
- City's obligation to fund the UAL is an obligation imposed by the City's Charter
- POBs are issued pursuant to the provisions of the Refunding Bond Law
 - Articles 10 and 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code, commencing with Section 53570
- Due to California's Constitutional Debt Limit, Bond Counsel requires a judicial validation action in order to render its approving opinion as to the validity of the POBs



Debt Limit & Judicial Validation

- Section 18(a) of Article XVI of the California Constitution (Constitutional Debt Limit) says in pertinent part:
 - "No county, city, town, township, board of education, or school district, shall incur any indebtedness or liability in any manner or for any purpose exceeding in any year the income and revenue provided for such year, without the assent of two-thirds of the voters of the public entity voting at an election to be held for that purpose..."
- Judicially created exceptions to the Constitutional Debt Limit include:
 - "Special Fund Doctrine" (i.e., the City's recent Airport bonds);
 - "Lease Exception" (i.e., the City's recent 2020A Civic Center and 2020B Ice Centre Lease Revenue Bonds); and
 - "Obligations imposed by Law"



Judicial Validation

Due to lack of case law relating to POBs, Bond Counsel requires judicial validation to obtain superior court judgment that:

- UAL is an obligation imposed by law under the City Charter
- UAL can be refunded by POBs pursuant to the Refunding Bond Law
- POBs when issued will be valid, legal and binding obligations of the City and not subject to the Constitutional Debt Limit



Judicial Validation Proceedings

- Code of Civil Procedure Section 860, et. seq. allows public agencies to seek judicial validation of bonds and financial contracts
- Validation Proceedings are "in rem" actions where the Court gains jurisdiction by requiring and ordering the publication of a summons to notify interested parties of the pendency of the City's complaint to seek judicial validation.



Steps in Judicial Validation Process

- Adoption of Resolution approving the issuance of the POBs and the filing of the judicial validation action
- Filing the Validation Complaint
- Seeking permission from the Court to publish the summons
- Publish the summons (once a week for three consecutive weeks, totaling 21 days)
- Response period to file an answer (10 days following completion of publication)
- Clerk of the Court's Entry of Default Judgment if no answer to Complaint is filed
- File "points and authorities" seeking entry of judgment
- Hearing on judgment and Judge's execution of judgment
- Begin 30-day appeal period
- After 30-day appeal period, return to Council for adoption of a resolution approving Preliminary Official Statement and confirm size and structure of POBs
- Issue POBs

Superior Courts have been impacted significantly by COVID-19. Judicial Validation could take 4-7 months depending on Court impacts





Conclusion

Julia H. Cooper, Director of Finance



Next Steps

- Potential Positive Impacts for City
 - Depending on how much of the Pension Obligation is refinanced with bonds, reduce the \$471.1 million annual payment for Pension and OPEB payments by reducing the amount to repay UAL
 - This involves replacing a portion of pension payments with debt service payments
 - Prevent the contributions from rising through 2029 as currently projected, and eroding capacity for other City programs and services
 - Use some savings to
 - Accelerate the amortization of unfunded liability
 - Ease current budget pressures
- Potential Positive Impacts for Retirement Plans
 - Provide large infusion of cash to make new investments either all at once or over time by issuing multiple series of bonds (i.e. not all at once) if City elects to fund UAL over time with several bond issues
 - Increase the funding level of the Federated and Police and Fire plans
 - Reduce reliance on City Contributions.



Next Steps

- No decisions requested today: City Council will have multiple future decision opportunities
 - Return to Council for formal direction on May 11th
 - Return to Council to authorize validation and approval of bond documents, June 29th, if so directed on May 11th
 - Return to Council to approve bond issue and the accompanying offering document (Official Statement), following favorable validation judgement
- Potential Direction on May 11th
 - Proceed with preparation of bond documents and court validation
 - Develop Council Pension Obligation Funding Policy
 - Joint meeting with City Council and Retirement Boards and develop understanding on how any POB bond proceeds are to be invested
 - Select remaining financing team members
 - Use timing of validation to refine strategy, bond sizing, tranches and timing, based on prevailing bond and investment market conditions



Public Comment



Council Q&A



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