2020 PENSION OBLIGATION BONDS

Refined Analysis, Considerations and Recommended Strategy

Finance Department

City Council
May 5, 2020

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DISCUSSION TOPICS

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I. Revisiting the CalPERS Pension Challenge

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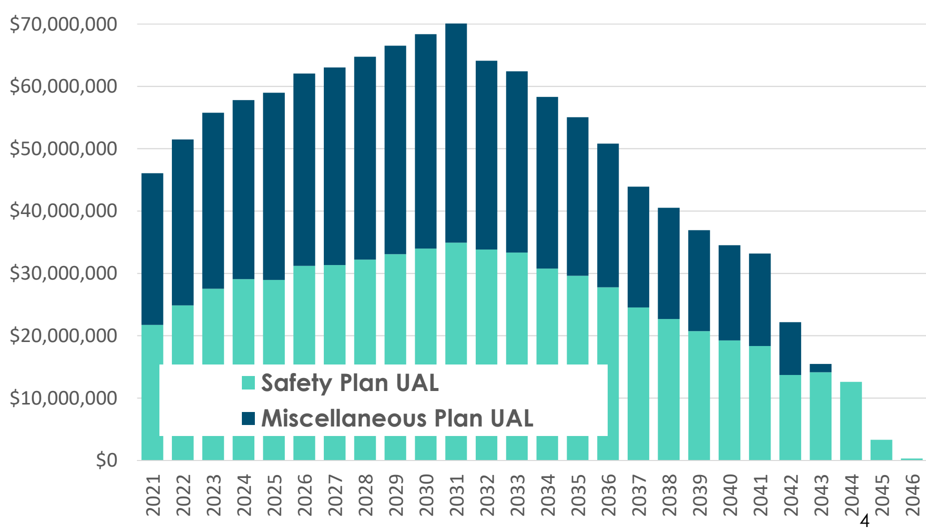
CURRENT REPAYMENT SHAPE OF CITY'S $642M UAL

1. City is projecting GF **deficits*** in excess of **$10M annually** over each of the **next two fiscal years;** projected to increase thereafter
2. Largely driven by repayment shape of City's $642M (June 30, 2020) UAL →
   - UAL is amortized at 7%
3. Current funding ratios of City's plans are between 71% (Safety) & 78% (Miscellaneous)
   - Does not include CalPERS returns for FY 2019/20



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* Deficits projected DO NOT include potential impacts from COVID-19 or any potential revenue from CARES legislation

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II. Update on the POB Process

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UPDATE ON POB PROCESS

Since the January Finance Committee and February City Council meetings, much has transpired:

1. Two underwriting firms have been engaged through a competitive RFP
   - Bank of America and Raymond James
2. Market volatility has significantly increased, attributed to the Coronavirus and oil price war
   - January interest rate estimates for POB: 3.75% to 4.00%
   - February interest rate estimates for POB: 2.50% to 3.00% - Bond rates hit historic lows
   - Now: Unknown, given market volatility; 3.53% assumed for all analysis
3. Stock market indices have dropped into correction territory from February highs
4. City and financing team have evaluated 25+ structuring options
5. Refined options (3) have been stress-tested to quantify key POB risks & impacts to savings under various adverse conditions

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POB OPTIONS EVALUATED

1. **Size:** City evaluated sizes ranging from $100M to $642M
2. **Length/Term:** City evaluated keeping POB at same maturity as current UAL (2045) and also extending debt out to 25 to 30 years
3. **Shapes:** Level Debt Service vs. Proportional Savings

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KEY OBJECTIVES DRIVING REFINED OPTIONS

1. **Minimum of $7M** in General Fund (GF) annual savings targeted for FY 2021 and FY 2022
   A. **At least $9-$10M** in annual GF savings from FY 2023 - FY 2032
      i. Helps to address a sizable portion (but not all) of projected deficits
2. Target <u>both</u> Safety and Miscellaneous Plans
   A. **Equitably spread** savings to both plans
   B. **Keep funding ratios under 95%,** reducing the risk of overfunding
3. Proportional Savings
   A. Original strategy (Jan./Feb.) focused on level debt service option with maturity extension
   B. Currently recommended proportional option **doesn't extend maturity** and **creates savings in every year**

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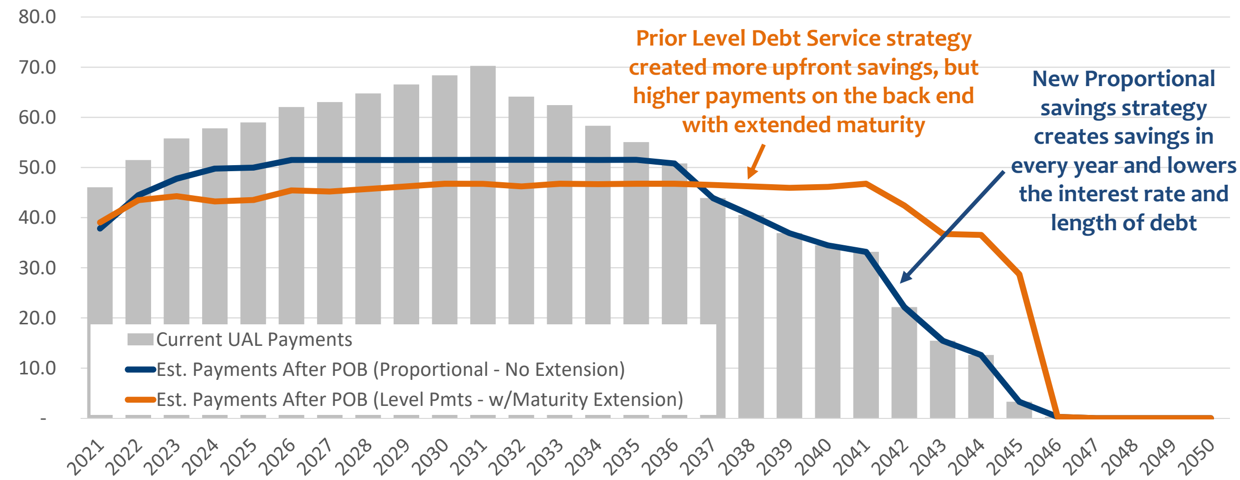
WHY THE TRANSITION FROM LEVEL DEBT SERVICE TO PROPORTIONAL SAVINGS?



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III. Refined Structuring Options for Review

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REFINED STRUCTURING OPTIONS
3 SCENARIOS – ALL PROPORTIONAL SAVINGS

1. **55% of Total UAL (≈$350M)**
   – Increases funding ratio (assets/liability) to 89%
2. **67% of Total UAL (≈$430M)**
   – Increases funding ratio (assets/liability) to 92%
3. **79% of Total UAL (≈$500M)**
   – Increases funding ratio (assets/liability) to 95%

** Funding ratios based on most recent actuarial valuation and do not reflect potential FY 2019/20 CalPERS returns (see Section VI – Impacts of Recent Market Developments for more detail)*

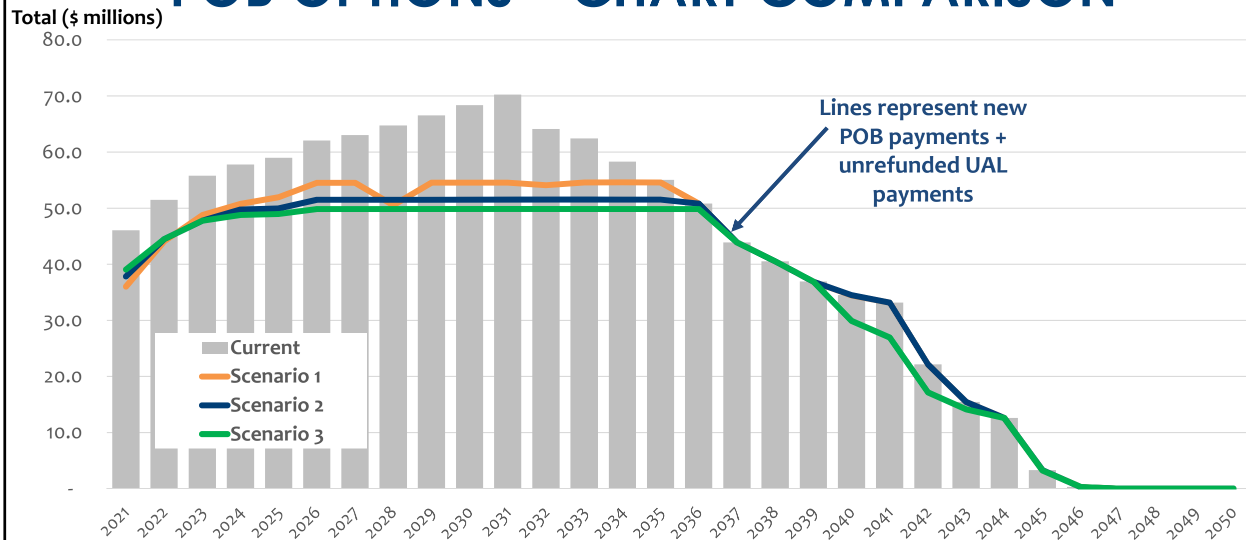
POB OPTIONS – SUMMARY OF SAVINGS*

Summary of Financing	Scenario 1	Scenario 2	Scenario 3
% of Safety UAL Funded	60%	70%	80%
% of Miscellaneous UAL Funded	50%	64%	77%
Total UAL Funded ($ millions)	$353.90	$430.70	$503.40
Target Funding Ratio (Both Plans)	89%	92%	95%
All-in Interest Rate with Costs	3.53%	3.53%	3.53%
Average Life of Bonds (Years)	12.1	11.6	11.3
Projected Benefit Summary			
Projected Cumulative Benefit ($ millions)	$132.20	$159.88	$195.45
Projected Present Value Benefit ($ millions)	$101.47	$120.56	$141.38
Projected Present Value Benefit (% of UAL Funded)	28.67%	27.99%	28.03%
Projected Annual General Fund Savings (2021-2032, $ millions)	$7.0 - $10.0	$7.0 - $10.9	$7.0 - $13.0

Note: All present value calculations discounted at All-in Interest Rate with Costs for each scenario

*** Preliminary estimates; subject to change depending on market conditions and other factors**

POB OPTIONS – CHART COMPARISON



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POB OPTIONS – ANNUAL SAVINGS COMPARISON

	Total ($ millions)						
	Current UAL	Scenario 1 (89% Target Funding)		Scenario 2 (92% Target Funding)		Scenario 3 (95% Target Funding)	
Fiscal Year	Payments	Payments	Savings	Payments	Savings	Payments	Savings
2021	46.1	36.0	**10.0**	37.8	**8.2**	39.1	**7.0**
2022	51.5	44.1	**7.4**	44.5	**7.0**	44.5	**7.0**
2023	55.8	48.8	**7.0**	47.8	**8.0**	47.8	**8.0**
2024	57.8	50.8	**7.0**	49.8	**8.0**	48.8	**9.0**
2025	59.0	52.0	**7.0**	50.0	**9.0**	49.0	**10.0**
2026	62.0	54.5	**7.5**	51.5	**10.5**	49.9	**12.2**
2027	63.0	54.5	**8.5**	51.5	**11.5**	49.9	**13.2**
2028	64.8	50.5	**14.2**	51.5	**13.2**	49.9	**14.9**
2029	66.5	54.5	**12.0**	51.5	**15.0**	49.9	**16.7**
2030	68.4	54.6	**13.8**	51.5	**16.9**	49.9	**18.5**
2031	70.2	54.5	**15.7**	51.5	**18.7**	49.9	**20.4**
2032	64.1	54.1	**10.0**	51.5	**12.6**	49.8	**14.3**
2033	62.4	54.6	**7.8**	51.5	**10.9**	49.9	**12.5**
2034	58.3	54.6	**3.7**	51.5	**6.8**	49.9	**8.4**
2035	55.0	54.6	**0.5**	51.5	**3.5**	49.9	**5.2**
2036	50.8	50.8	**0.0**	50.8	**0.0**	49.9	**1.0**
2037	43.9	43.9	**0.0**	43.9	**0.0**	43.9	**0.0**
2038	40.5	40.5	**0.0**	40.5	**0.0**	40.5	**0.0**
2039	36.9	36.9	**0.0**	36.9	**0.0**	36.9	**0.0**
2040	34.5	34.5	**0.0**	34.5	**0.0**	29.9	**4.6**
2041	33.2	33.2	-	33.2	-	26.9	**6.2**
2042	22.2	22.2	-	22.2	**0.0**	17.2	**5.0**
2043	15.5	15.5	**0.0**	15.5	**(0.0)**	14.1	**1.3**
2044	12.6	12.6	-	12.6	-	12.6	**0.0**
2045	3.3	3.3	**0.0**	3.3	-	3.2	**0.1**
2046	0.3	0.3	**0.0**	0.3	**0.0**	0.3	**(0.0)**
TOTAL	**1,198.4**	**1,066.2**	**132.2**	**1,038.5**	**159.9**	**1,003.0**	**195.4**

	General Fund ($ millions)						
	Current UAL	Scenario 1 (89% Target Funding)		Scenario 2 (92% Target Funding)		Scenario 3 (95% Target Funding)	
Fiscal Year	Payments	Payments	Savings	Payments	Savings	Payments	Savings
2021	32.9	25.9	**7.0**	25.9	**7.0**	25.9	**7.0**
2022	37.1	30.1	**7.0**	30.1	**7.0**	30.1	**7.0**
2023	40.5	33.5	**7.0**	32.5	**8.0**	32.5	**8.0**
2024	42.3	35.3	**7.0**	34.3	**8.0**	33.3	**9.0**
2025	42.8	35.8	**7.0**	33.8	**9.0**	32.8	**10.0**
2026	45.4	38.4	**7.0**	36.4	**9.0**	35.4	**10.0**
2027	45.9	37.9	**8.0**	35.9	**10.0**	35.9	**10.0**
2028	47.2	39.2	**8.0**	37.2	**10.0**	37.2	**10.0**
2029	48.5	39.5	**9.0**	38.5	**10.0**	38.2	**10.3**
2030	49.8	40.8	**9.0**	39.8	**10.0**	38.2	**11.6**
2031	51.2	41.2	**10.0**	40.3	**10.9**	38.2	**13.0**
2032	47.7	37.7	**10.0**	37.7	**10.0**	37.7	**10.0**
2033	46.7	43.1	**3.6**	40.3	**6.4**	38.2	**8.5**
2034	43.4	41.7	**1.7**	40.3	**3.2**	38.2	**5.2**
2035	41.3	41.1	**0.2**	39.7	**1.6**	38.2	**3.1**
2036	38.4	38.4	**0.0**	38.4	**0.0**	37.9	**0.4**
2037	33.4	33.4	**0.0**	33.4	**0.0**	33.4	**0.0**
2038	30.9	30.9	**0.0**	30.9	**0.0**	30.9	**0.0**
2039	28.2	28.2	**0.0**	28.2	**0.0**	28.2	**0.0**
2040	26.3	26.2	**0.0**	26.2	**0.0**	24.1	**2.1**
2041	25.2	25.2	-	25.2	-	22.3	**2.9**
2042	17.6	17.6	-	17.6	**0.0**	15.3	**2.3**
2043	14.7	14.7	**0.0**	14.7	**(0.0)**	14.1	**0.6**
2044	12.6	12.6	-	12.6	-	12.6	**0.0**
2045	3.3	3.3	**0.0**	3.3	-	3.2	**0.1**
2046	0.3	0.3	**0.0**	0.3	**0.0**	0.3	**(0.0)**
TOTAL	**893.3**	**791.8**	**101.6**	**773.2**	**120.1**	**752.1**	**141.2**

Est. Annual Savings to General Fund through FY 2032

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IV. Stress Testing & Sensitivity Results

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STRESS TESTING/SENSITIVITY ANALYSIS (Part I)

- PV Savings still strong under high stress situations
- Larger Scenarios 2 and 3 provide more est. savings than Scenario 1, even under multiple stress scenarios

Comparison of Savings
Present Value Savings (% of Refunded UAL and $ Amount)*

	Scenario 1 $354M	Scenario 2 $431M	Scenario 3 $503M
Base Case: 7% Annual Returns	28.67% $101M	27.99% $121M	28.03% $141M
Stress Test 1: -20% in First Year After POB 7% Thereafter	1.96% $7M	1.29% $6M	1.33% $7M
Stress Test 2: 6% Annual Returns	14.51% $51M	14.34% $62M	14.71% $74M
Stress Test 3: 5% Annual Returns	4.93% $17M	5.11% $22M	5.72% $29M

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* Stress test calculations are preliminary and subject to change. Stress test only considers actuarial discount rate, potential investment performance and debt repayment schedule to determine present value impact. Stress test does not incorporate any actuarial elements of the pension plan.

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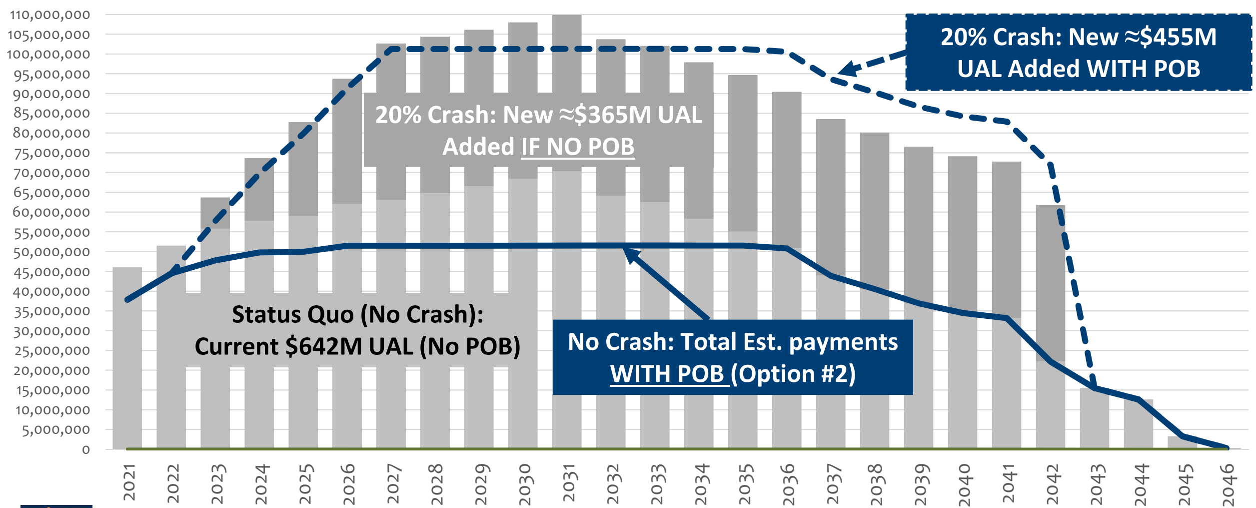
STRESS TEST #1: 20% Negative Returns After POB (No Recovery) Projected Cash Flow Impact (No POB vs. With POB)



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* Estimated. Note - Risk of market crash is AFTER POB is issued. For discussion related to how current market crash impacts City, please see Section VI.

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STRESS TESTING/SENSITIVITY ANALYSIS (PART II – 3rd Party Actuary)

Bartel and Associates performed two analyses:

1. Performance of City's 2004 & 2005 POBs ($150M total) based on actual CalPERS returns
   - A. Time period includes the Great Recession & multiple assumption changes by CalPERS
   - **B. Results: $56 million of savings generated as of January 2020**
2. Projected savings for the proposed 2020 POBs
   - A. Bartel analyzed 1,000 random trials of potential future annual investment returns

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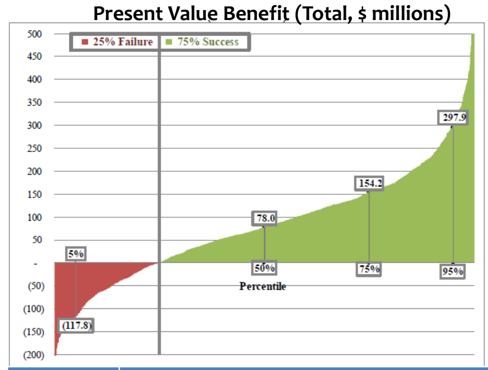
STRESS TESTING/SENSITIVITY ANALYSIS
Bartel Analysis – POB Option 2 ($431M)

Summary of Results

1. Probability of Present Value (PV) Savings: 75%
2. **Estimated PV Benefit: $83.8M**
   – Safety Plan: $43.7M; Miscellaneous Plan: $40.2M
3. If successful (75%), average benefit is $133.7M
4. If not successful (25%), average loss is $68.1M
5. Why lower than $120M PV savings estimated in Section III?
   – Actuary assumes more conservative CalPERS investment returns; 6.4% for next 9 years and 6.9% over 20 years
      – Savings in Section III assumes 7% CalPERS returns

Present Value Benefit (Total, $ millions)



Expected Benefit	Average benefit of $83.8 million
5^{th} Percentile	5% probability losses greater than $117.8 million
25^{th} Percentile	Break-even (75% probability POB yield benefit to City)
Median	50% probability benefit will be higher or lower than $78 million
75^{th} Percentile	25% probability of benefit greater than $154.2 million
95^{th} Percentile	5% probability of benefit greater than $297.9 million

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STRESS TESTING/SENSITIVITY ANALYSIS
Takeaways

1. Even under extremely distressed scenarios (20% market crash right after POB with no recovery or prolonged 5% annual returns), the City is better off with a POB than without
2. More conservative 3rd party actuarial analysis projects expected PV savings at $84M, or 20% of refunded UAL
   – Typically, City's minimum target for refundings is 5% PV savings

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V. GFOA Considerations and Addressing Other POB Concerns

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THE GFOA VIEW – AND HOW THE PROPOSED POBS DIFFER

Invested POB proceeds might earn less than the borrowing costs	• Yes. Instead of CalPERS's expected earnings rate of 7.0%, lower actual returns could occur. The chances of returns below the est. borrowing cost (3.0 – 3.5%) are low, but they do exist. Bartel and Associates evaluated reinvestment risk and calculates a 75% - 80% likelihood of success.
"POBs are complex instruments that carry considerable risk… and may include swaps or derivatives…"	• No. These are fixed rate bonds and no swaps are used.
"Issuing taxable debt to fund the pension liability increases the jurisdiction's bonded debt burden and potentially uses up debt capacity…"	• No. The Validation Proceeding will exclude POBs from any debt limit. The proposed POBs merely replace a portion of the City's payments to PERS with debt service. Anticipated to reduce the cost of servicing the City's UAL by over $150M .
POBs are "typically issued without call options" making it more difficult to refund bonds if interest rates fall or a different debt service structure is desired in the future.	• No. These bonds will be issued with a call feature, allowing the City to refinance them in the future.
"POBs are frequently structured in a manner that defers the principal payments…"	• No. Term of proposed POBs matches term of UAL being refinanced. City is amortizing principal immediately under all options.
"Rating agencies may not view the proposed issuance of POBs as credit positive…"	• Not Likely. Recent rating reports on other CA city POBs indicate that the rating agencies understand the merits of using POBs to lower the issuer's cost of carry and to create a more affordable pension cost profile.

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CRITICISM OF POBS FALL INTO 4 CATEGORIES

Financial impacts of borrowing and investing in risky assets	• The presentation addresses the first issue at length – stress tests and the City's own experience with POBs demonstrate that this risk is manageable, and that the City has carefully evaluated and mitigated it
POBs exchange a "soft" liability for "hard" bonded debt	• The City's liability to CalPERS is already debt: it is legally enforceable and has a mandatory payment schedule • Rating agencies treat unfunded pension liabilities as debt in calculating liability and fixed expense ratios • It is expensive debt - CalPERS charges 7% interest on the UAL
POBs have sometimes contributed to or enabled unsound policy decisions	• One-shot budget relief & Contribution holidays • Benefit enhancements – improved funded status leads to granting of increased pension benefits • City's proposed POBs DO NOT finance current year obligations nor provide any sort of benefit enhancements
POBs are "kicking the can down the road"	• The City's proposed strategy DOES NOT include an extension of maturity or deferral of payments

POBs should be part of a plan that fully addresses the pension liability

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VI. Impacts of Recent Market Developments

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TAXABLE INTEREST RATE TRENDS

*Interest rates through April 17, 2020.

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CREDIT SPREADS ARE WIDER AND MARKETS ARE EXTREMELY VOLATILE

1. Markets have been extremely volatile since late February due in part to the outbreak of the global coronavirus pandemic and oil price war
   - A sharp, rapid decline of equity markets has ended the longest bull market in recent history
2. Treasury yields are hovering near all-time lows, but credit spreads and market are signaling a heightened risk aversion by investors
3. Recent efforts by the Federal Reserve to support orderly market activity and support to state and local governments from the CARES Act have been received positively by investors of municipal bonds
4. POB issuance continues to be active with issuers seeking to take advantage of current borrowing conditions:
   - Recently Closed: Glendora, Marysville, Hawthorne, Pasadena and Chowchilla
   - Pipeline: Riverside County, Cities of Ontario, Azusa, West Covina and 15+ other cities

- **Recommended strategy is to prepare necessary aspects of transaction, then re-evaluate and assess market in May/June**

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HOW DOES RECENT STOCK MARKET CRASH IMPACT POB?

1. As of mid-April, stock market indices have dropped about 15-17% from recent highs, and 5% since start of Fiscal Year (July 1, 2019)
   – CalPERS returns for FY 2019/20 are unknown at this time; early estimates put returns at negative 0% to 5% *(7%-12% actuarial loss)*
2. Recent correction doesn't impact the POB est. savings analysis
   – Savings from POB is dependent on long-term **FUTURE returns starting from the point after the POB is issued**
3. How *does* the recent market crash impact the City?
   – With or without the POB, the City's UAL is **likely to increase** if FY 2019/20 returns are poor)
   – For example, a **-5% return** for CalPERS could mean a ≈**$225M increase** in the City's UAL (see next slide)

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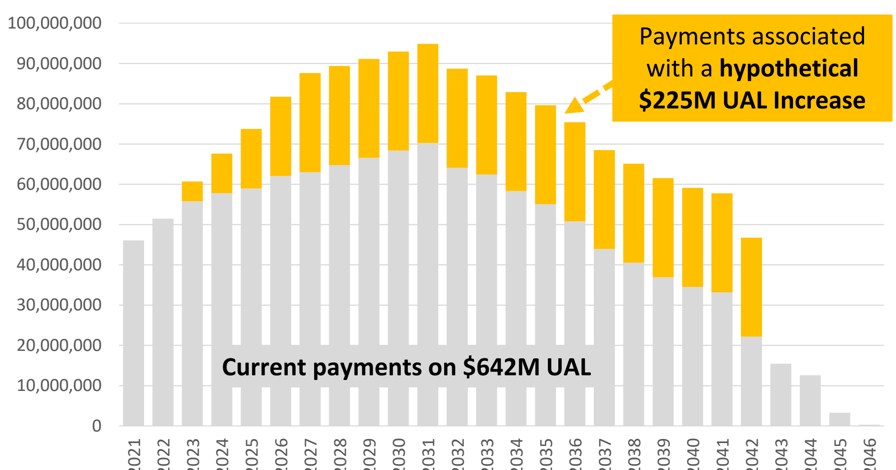
POTENTIAL UAL INCREASE IF -5% RETURNS FOR FY2019/20*

- If CalPERS returns are -5%, UAL increase is estimated to be ≈$225M
- Added payments to UAL shown in yellow ($24M higher starting 2027)
- Projected GF deficits would be higher
- If poor returns this year, current UAL will increase by the same amount whether a POB is issued or not
- CalPERS may recover some of these losses in future years to offset the increased payments



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* Estimated

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INVESTING MONEY AFTER A MARKET CRASH

As discussed, POB savings depend on future returns AFTER the POB is issued

1. The recent sizable drop in the US equity market may be beneficial for the proposed financing strategy as the market has historically rebounded from prior similar events*
2. **2001/2002 Crash: CalPERS Returns Through 2019**
   A. Starting right before 2001-2002 Crash (-13%): **6.2%**
   B. Starting right after 2001-2002 Crash (-13%): **7.7%**
3. **2008/2009 Crash: CalPERS Returns Through 2019**
   A. Starting right before 2008-2009 Crash (-28%): **5.5%**
   B. Starting right after 2008-2009 Crash (-28%): **9.5%**

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* Past performance doesn't guarantee future results

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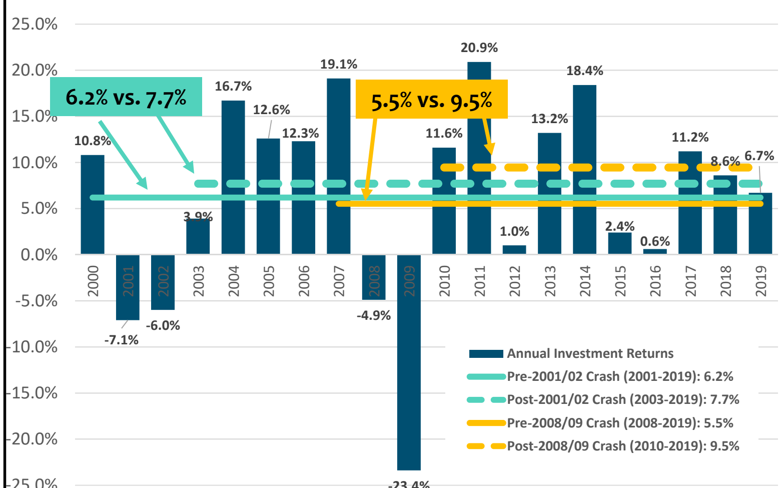
INVESTING MONEY *BEFORE VS. AFTER* A MARKET CRASH

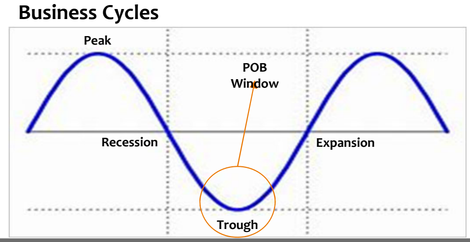
Annual and Average CalPERS Returns



"I've done historical research on stock market and business cycles, economic recessions and expansions, for all bull and bear markets since World War II, and can attest that there is no business cycle in that history when the S&P index was off by more than 35% and it wasn't higher in two years, and returned high double digits over the following decade. The worst such period followed the 1973-74 bear market and ensuing stagflation period, but even then, equity investments acquired during what have been the "POB window" did admirably over a decade."

- Girard Miller, "Commentary: The time is ripe for public pension obligation bonds"

Business Cycles



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OTHER CONSIDERATIONS

1. Potential UAL increase from poor FY 2019/20 returns should be considered when determining optimal size of POB

   For example, the $430M Option 2 is currently 67% of the UAL

   - However, if the UAL will be increasing from $642M to $942M, this $430M pay off is effectively only about 46% of the UAL

2. City can use future surpluses and/or monies freed up from maturing debt payments to continue applying to pension challenge (see next slide)

   – Can use to pay down more UAL, grow Section 115 Trust assets, and/or pay off the POBs

3. Proposed POB helps relieve some, but not all, of the projected deficits

   – If more than $7M of savings for FY 2021 is desired due to COVID-19 driven revenue declines, POB structure could likely generate $10M to $15M if needed

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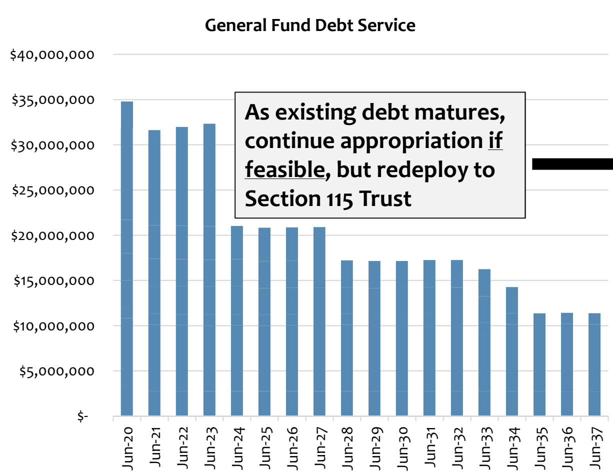
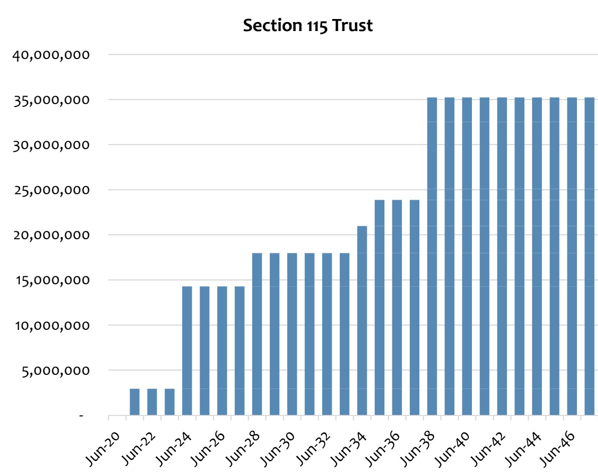
CITY CAN RE-DEPLOY MATURING DEBT PAYMENTS TOWARDS SECTION 115 TRUST, CALPERS, OR TO REDEEM POBS IN FUTURE





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VII. Recommended Strategy and Next Steps

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CFO RECOMMENDATION

1. **Target funding ratio around 92%** through POB issuance (Option 2)
2. **Maintain some flexibility to address COVID-19 Impacts If Needed**
   - Consider potential impacts of poor FY 2019/20 CalPERS returns and COVID-19 related near-term revenue impacts
   - Ultimate size likely between $430M to $525M (Max Allowed Under Resolution)
   - FY 2021 Savings could be increased beyond $7M if needed
3. Set a **maximum interest rate (TIC – True Interest Cost) of 4.25%**
   - 2.75% lower than the CalPERS discount rate of 7.00%
   - Equates to 20% PV est. savings ($85 million in today's dollars for the $430M Option 2)
   - City wouldn't move forward unless threshold is met
4. Maintain **same maturity as current UAL payment schedule**

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TIMELINE

January/February — **Initial presentations to Committee and Council**

February — **UW team hired through competitive RFP process**
- *City staff, NHA, UWs and legal team analyze dozens of structuring options and discuss benefits/risks*

March — **Initiate stress testing with third party actuary; begin credit presentation and legal documents/POS**
- *Budget Engagement Commission meeting: March 12th*
- *Multiple discussions with Finance Committee Chair*

April 21 — **City Council approval**
- *Presentation on options and stress testing results*
- *Final approval of financing and recommended option (approve team, POS, resolution, legal documents, etc.)*

May/June — **Credit Rating; Price and Close POBs; update budget**
- *Optimal timing of sale as well as deposit/transfer to CalPERS will be assessed depending on market conditions this Spring*
- *It could be recommended that transaction is delayed into the Summer if savings thresholds cannot be met*

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RECOMMENDATIONS

That the City Council:

1. Conduct a Public Hearing relative to the 2020 Taxable Pension Obligation Bonds;
2. Adopt a Resolution authorizing the issuance of the 2020 Taxable Pension Obligation Bonds, to refinance a portion of the City's Unfunded Accrued Liability with the California Public Employees' Retirement System, and providing the terms and conditions of such bonds;

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RECOMMENDATIONS

3. Authorize the City Manager, or his designee, to execute all documents necessary to close the bond refinancing and make certain changes to the final documents necessary to complete the transaction;
4. Approve the form of a Preliminary Official Statement to assist the Underwriter in marketing the 2020 Taxable Pension Obligation Bonds; and
5. Approve the financing team inclusive of Stradling Yocca Carlson & Rauth as Bond and Disclosure Counsel, NHA Advisors as Municipal Advisor and Bank of America Securities and Raymond James as Underwriters.