

# Pension Obligation Bonds Options for the Retirement Board

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## Overview of Pension Obligation Bonds

## Analysis of POBs

## Retirement Board's Role and Options





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

# Pension Obligation Bond History

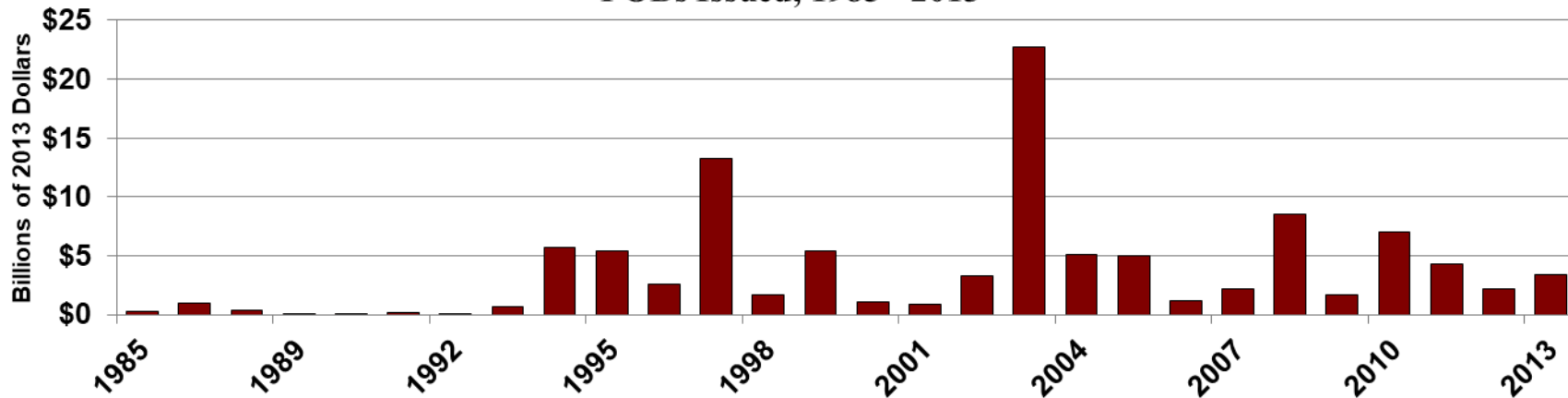


- Since 1986, argument for Pension Obligation Bonds has often been based on “actuarial arbitrage”
  - “Actuarial arbitrage” is based on the difference between the borrowing rate and the assumed rate of return
  - Arbitrage implies that there is a guaranteed gain, but there is no guarantee in this situation
- \$105 billion in POBs issued (1985 to 2013)
- S&P has recently reported a significant increase in POB issuances
  - ~\$16 billion in 2020 with ~\$14 billion from California
- Success or failure has largely depended on timing of issuance

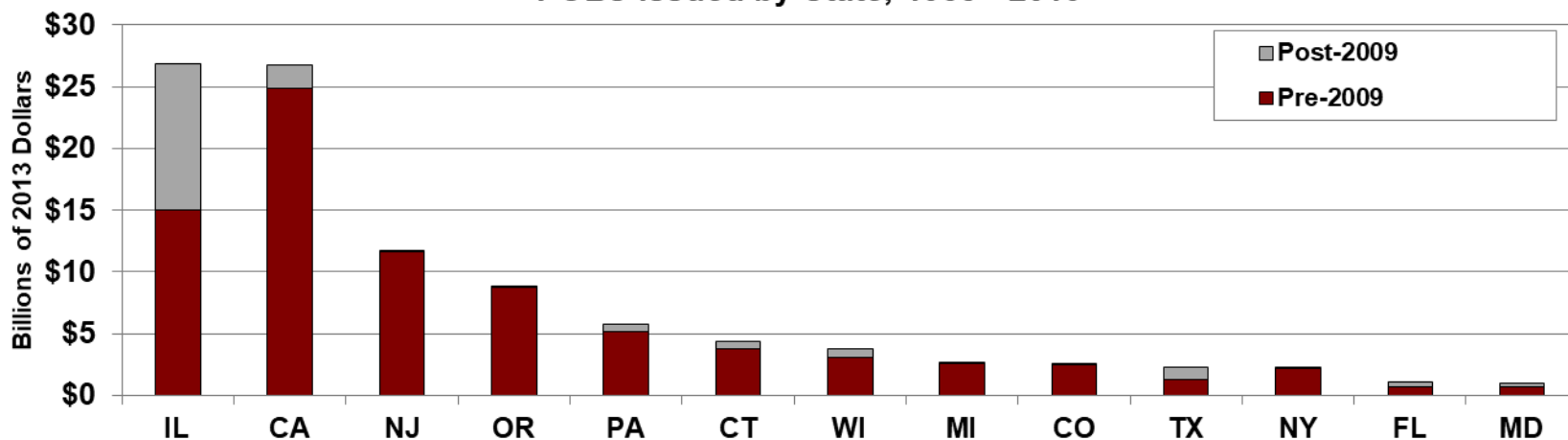
# Pension Obligation Bond History



POBs Issued, 1985 - 2013

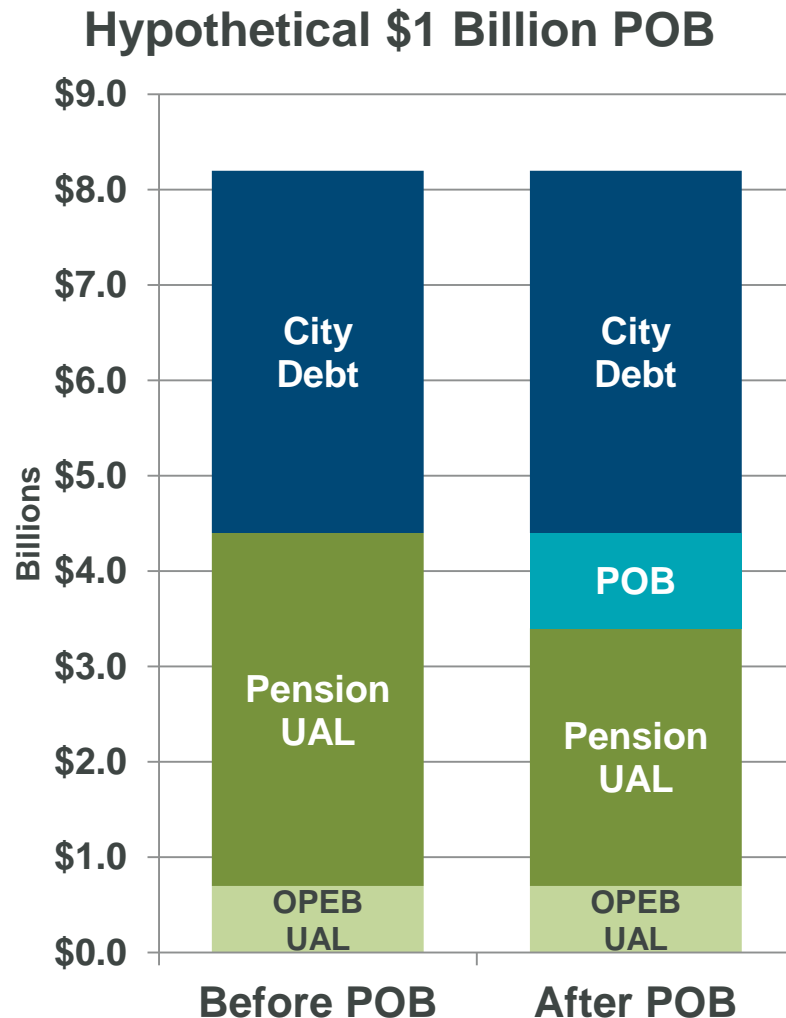


POBs Issued by State, 1985 - 2013



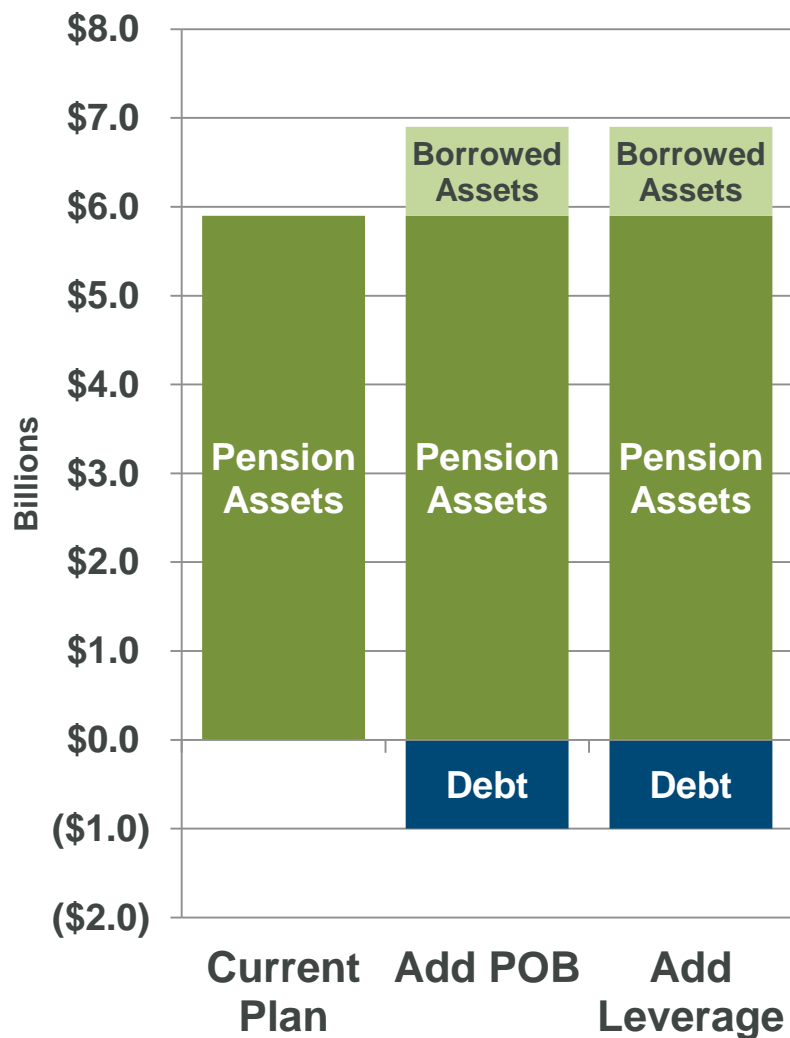
Figures compiled by Center for Retirement Research at Boston College from Bloomberg Online Service (2012), and SDC Thomson Reuters (2013) databases.

# POBs Don't Change Total City Liability



- From pension plans perspective
  - POBs reduce the UAL
  - POB liability and payments don't appear on plan financials
- From City perspective
  - Total liability does not change
  - UAL is reduced by amount of POB
  - **Exchanges “soft” liability for “hard” liability**

# POBs Add Leverage to the City



- **From the City's perspective,** POBs have the same economic impact as adding leverage to the plan portfolio
  - Borrow assets at low interest rate
  - Invest proceeds in pension investments
  - Pays off if return on pension investments is greater than interest on debt
- Differences:
  - City (not Retirement Board) makes the decision to issue a POB
  - City owes the debt. Pension assets are not at risk
  - If City defaults on POB, pension still keeps borrowed assets



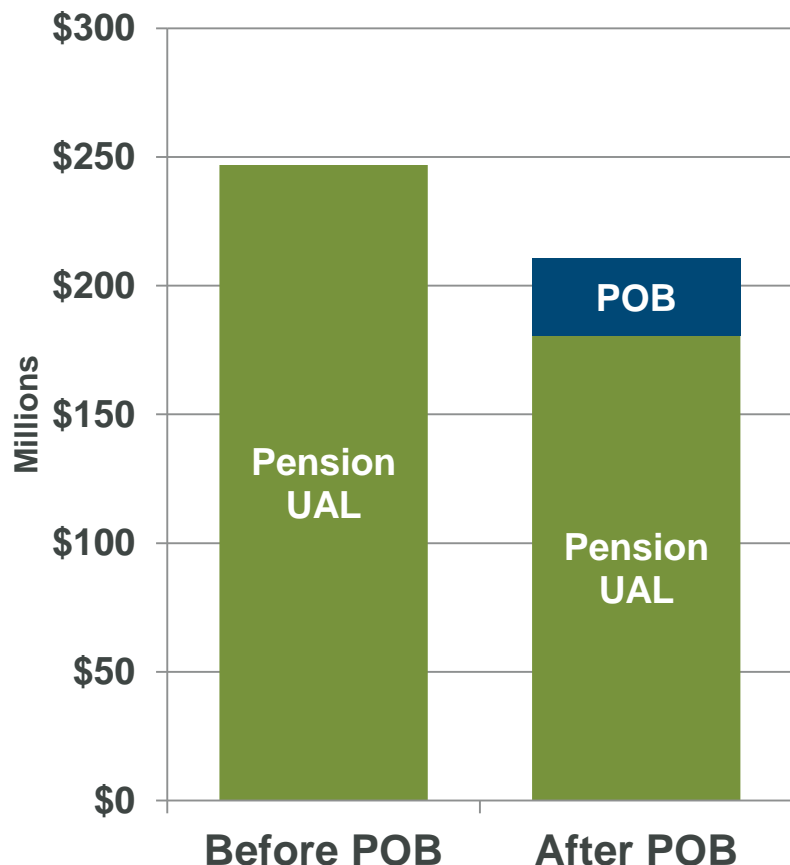
# POBs May Change Contribution Pattern



## Interest Only Payments

6.625% on Pension UAL

3.0% on POB



- Retirement Board sets City payments on pension UAL
  - Annual updates for changes in UAL
  - Can change payment schedule at any time?
- POB payments are fixed at issuance
  - May be able to re-finance if interest rates drop
- Lower interest rate on POB may result in lower initial total payments from City
  - May create incentive for POB
  - May create appearance of arbitrage or “refinance” advantage



# POB Analysis



# City's View of the Challenge

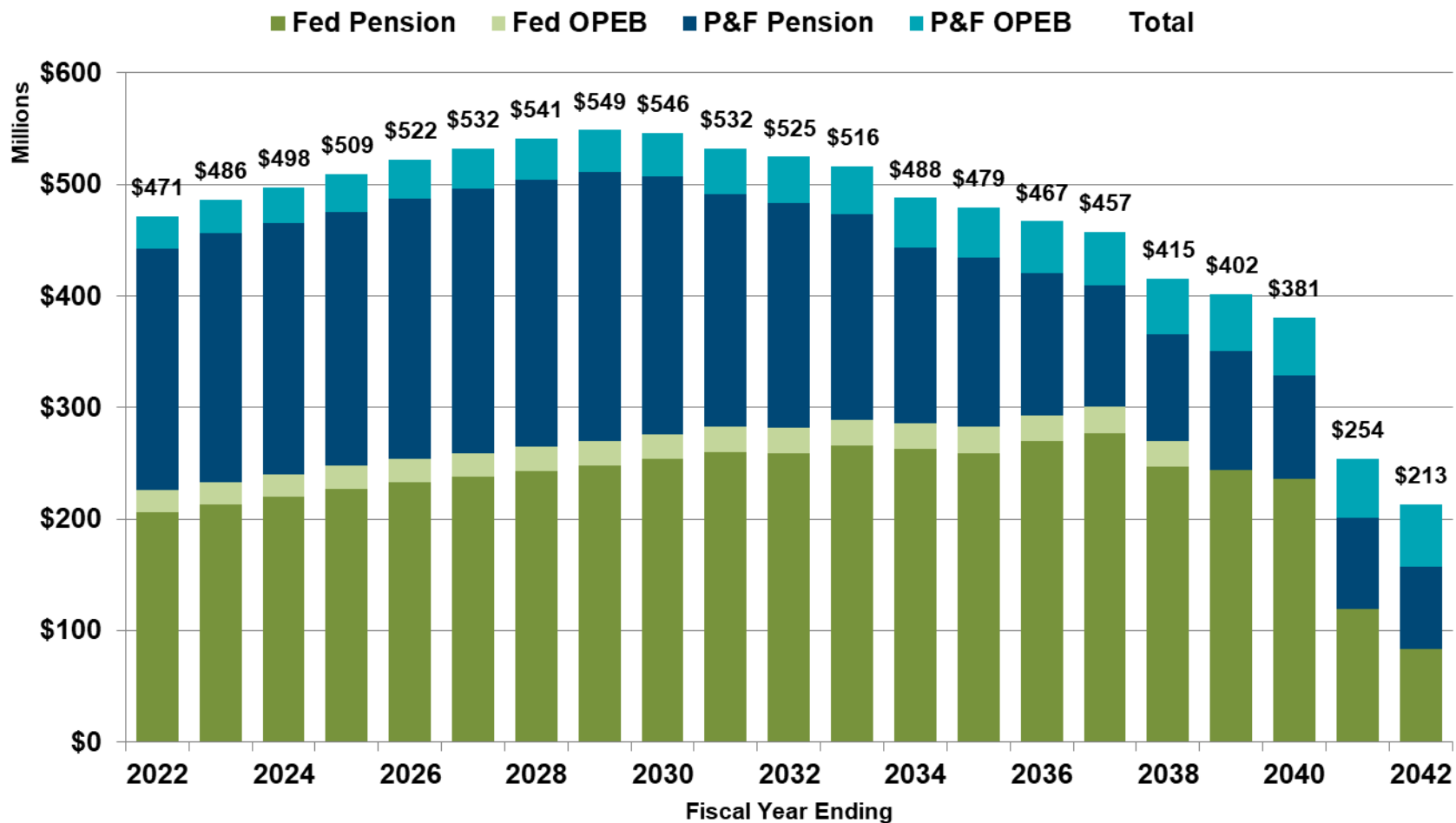


- Retirement costs are increasing portion of General Fund Budget
  - 6.5% in 2000-2001
  - 20.7% in 2020-2021
- Only Chicago has higher fixed costs as a percentage of government expenditures
  - Fixed costs = Debt service + Pension and OPEB contributions
- Constrains ability to fund other City priorities
- \$3.7 billion pension UAL as of June 30, 2020 based on Market Value of Assets

# 2020 Valuation Projection



## Projected Annual City Contributions





- Reduce contributions for pension and OPEB
- Prevent contributions from rising through 2029 and eroding funding for other City services and programs
- Use savings to accelerate the amortization of the UAL
- Use savings to ease current budget pressures

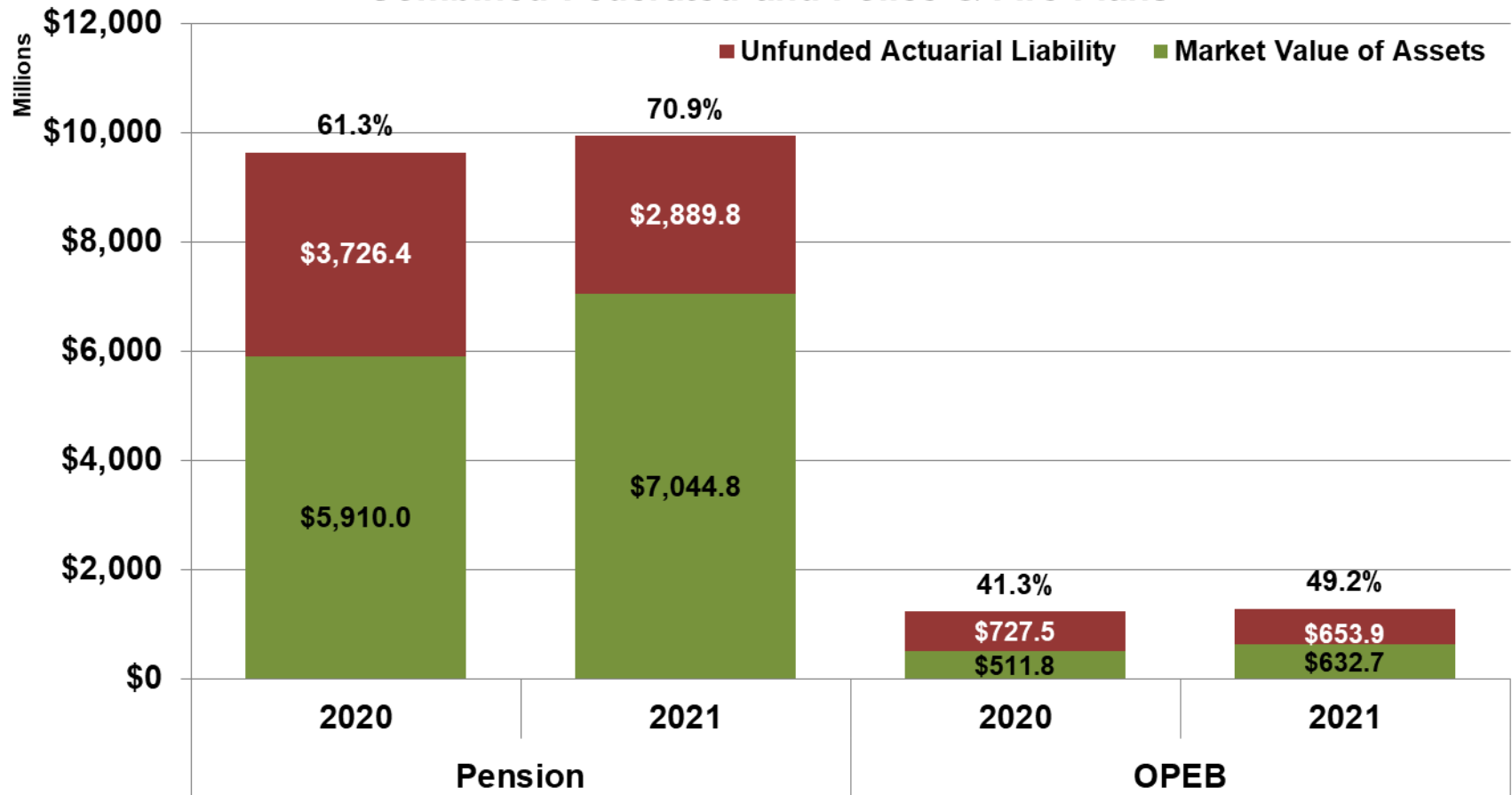


- San José is not Chicago
  - Contributions are high by choice rather than necessity
  - San José is paying down its UAL relatively rapidly compared to other public plans
- If objective is a different pattern of contributions (e.g., lower now, but higher for a longer period of time)
  - Retirement boards may be able to accommodate through changes to the amortization policy, for example
  - There are risks to assess
- Pension Obligation Bonds add leverage to the City's contributions
  - Borrow at a low interest rate and invest so the return exceeds the borrowing rate
  - Same dynamic for the City's contributions as if the Board decided to add leverage to its portfolio
  - Impact on contribution patterns should be a secondary consideration for issuing a Pension Obligation Bond, especially for a single employer plan

# Outlook Has Improved for FYE 2021



## Projected Change in Funded Status with 20% Return Combined Federated and Police & Fire Plans

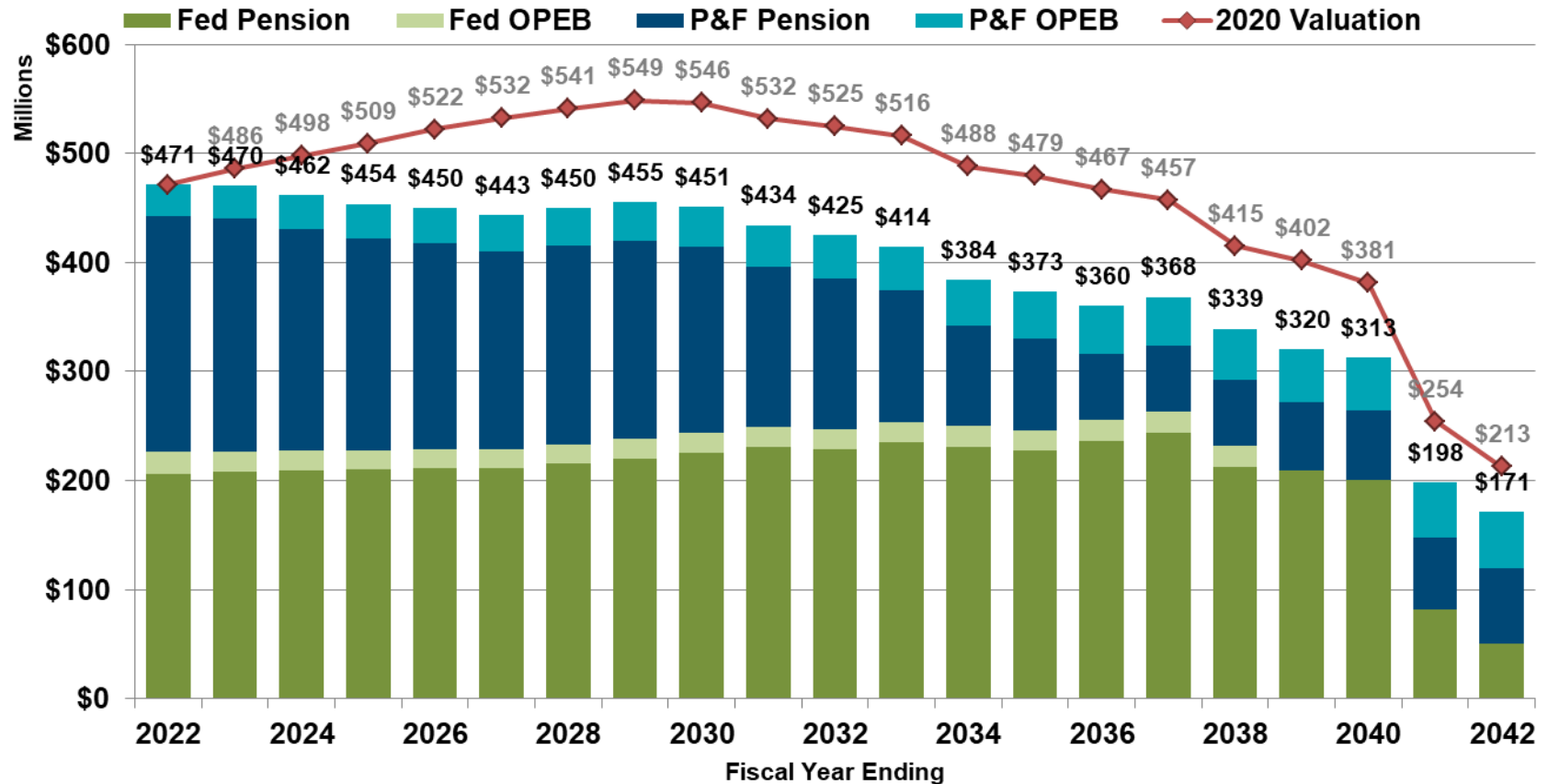


OPEB unfunded liability and funded percentage is for the explicit subsidy only

# Outlook Has Improved for FYE 2021

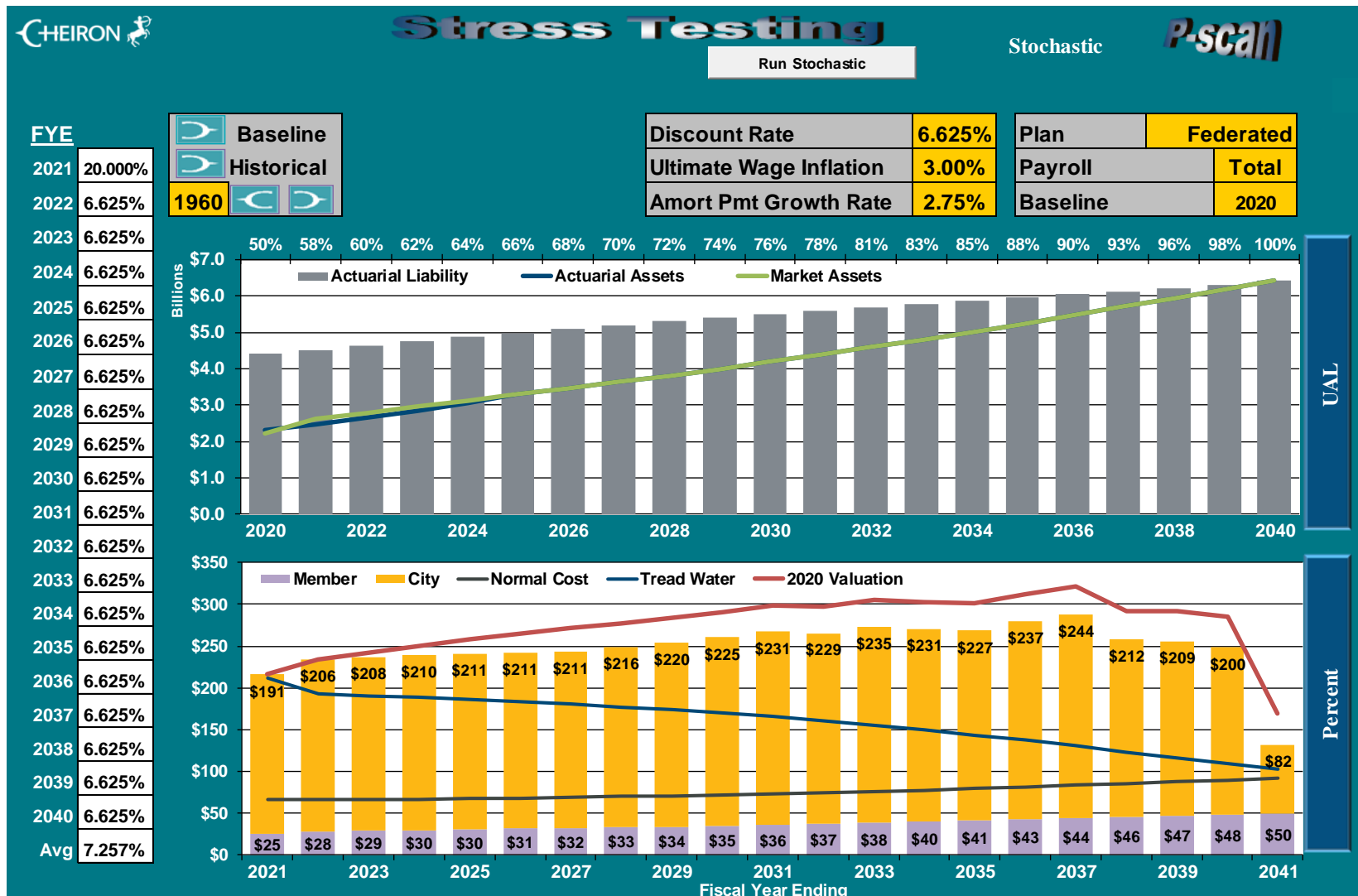


## Projected Annual City Contributions Assumed 20% Return for FYE 2021





# Federated Outlook with 20% Return





# Retirement Board's Role and Options



# Retirement Board's Role



- Retirement Board sets the funding policy for the Plan to ensure benefits are secure
  - Contribution stability and predictability
  - Generational equity
- City pays the contribution adopted by the Retirement Board
- Current funding policy anticipates regular annual contributions, but not a large lump sum financed by a bond
  - Retirement Board needs to decide how it would treat such a deposit in setting City contributions
  - Coordination with the City is critical



- Traditional Methods
  - Normal amortization credit
  - Match terms of POB
  - City select current amortization base(s) to replace with POB
- Proposed Method
  - Eliminate short-term incentive

# Normal Amortization Credit



- Experience gains are currently amortized over 20 years with credits increasing 2.75% per year
- With no change in the Board's policy, the deposit of the proceeds of a POB would generate a 20-year amortization credit reducing employer contributions
  - Would not matter if POB had a 5-year or a 30-year term
  - Would not matter if POB payments were level dollar amounts, increased at 2.75%, or were interest only with a balloon payment
- POB amortization credit would change whenever the Board made a change
  - Discount rate
  - Payment increase rate
  - Amortization period
- Investment gains and losses on POB proceeds treated as Plan assets – smoothed over 5 years and amortized over 20 years

# Match Terms of POB



- Plan amortization credit match terms POB payment
  - Period
  - Annual increase in payment (or level)
  - Interest rate remains different
- Eliminates most risky approach
  - Borrow over long period (e.g., 30 years)
  - Receive credit against pension contribution over shorter period (e.g., 15 years)
- Terms are not changed by future Board actions
  - Discount rate may still change
- Investment gains and losses on POB proceeds treated as Plan assets – smoothed over 5 years and amortized over 20 years

# Traditional Examples



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

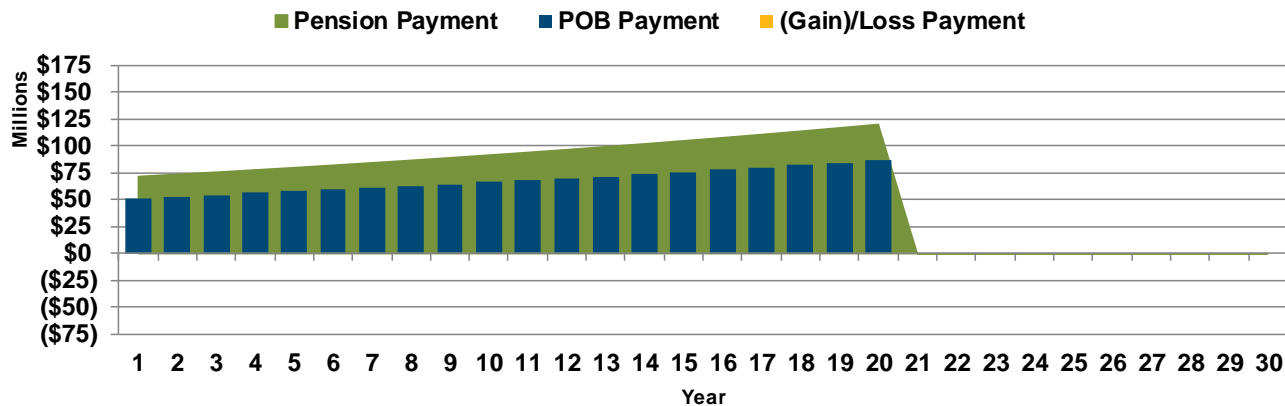
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

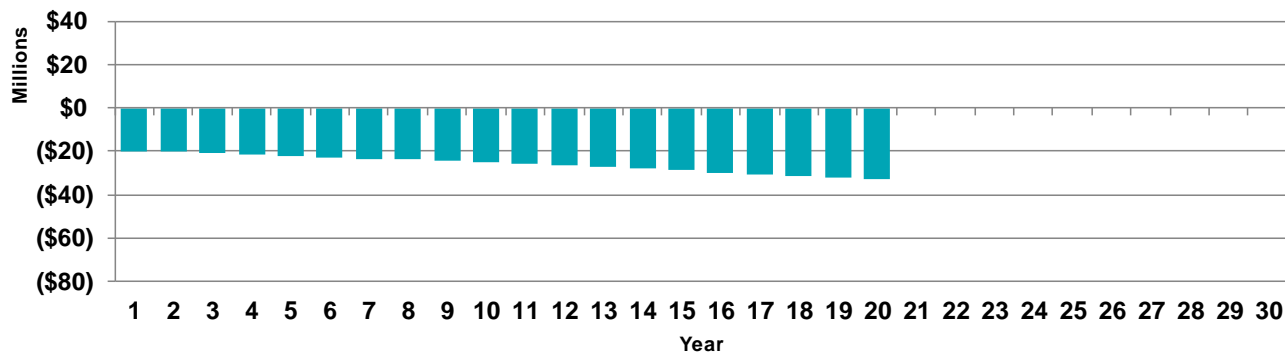
POB Amount	\$ 1,000,000,000
Method	Traditional

### Year

1	6.625%
2	6.625%
3	6.625%
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28	6.625%
29	6.625%
30	6.625%



## Net Contribution (Gain) or Loss



# Traditional Examples: Returns = POB Interest



## Pension Parameters

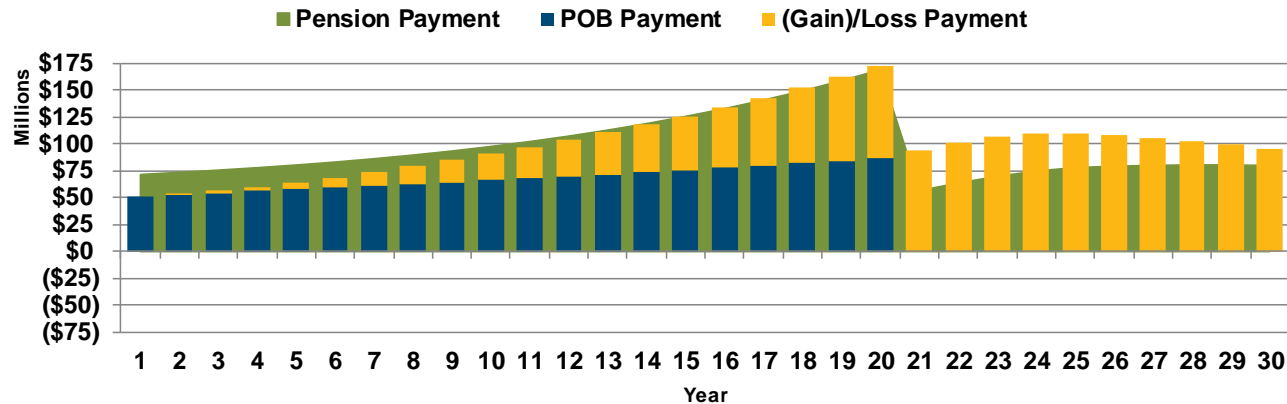
Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

## POB Parameters

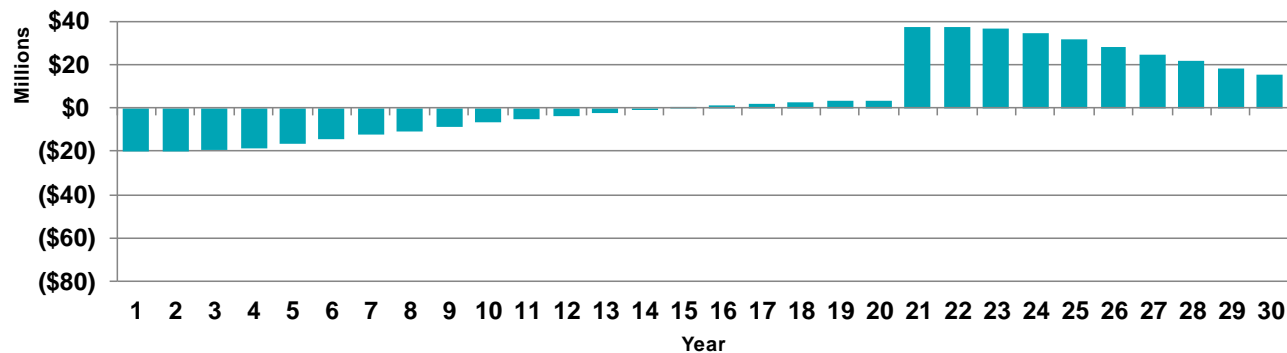
Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

POB Amount	\$ 1,000,000,000
Method	Traditional

Year	
1	3.000%
2	3.000%
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18	3.000%
19	3.000%
20	3.000%
21	6.625%
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27	6.625%
28	6.625%
29	6.625%
30	6.625%



## Net Contribution (Gain) or Loss





# Traditional Examples: 0% Return for Five Years



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

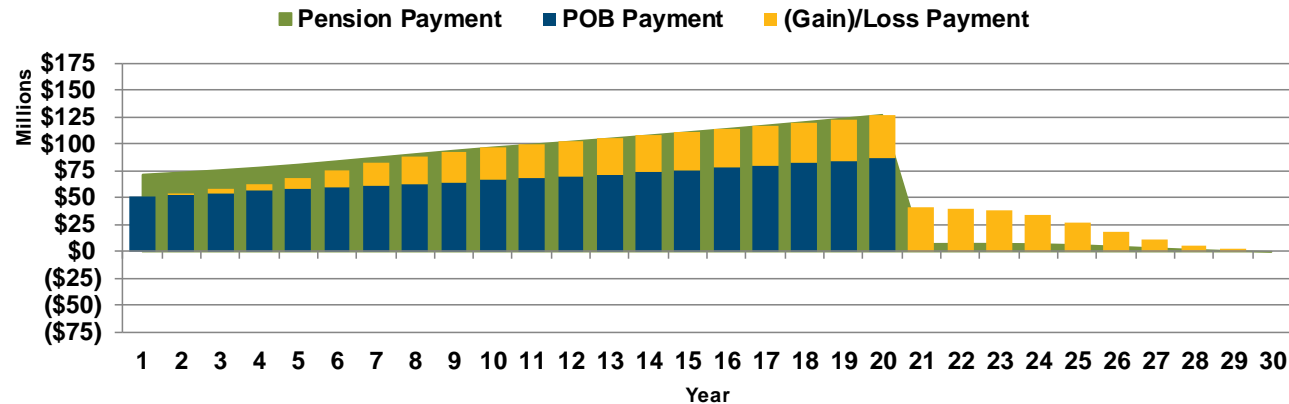
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

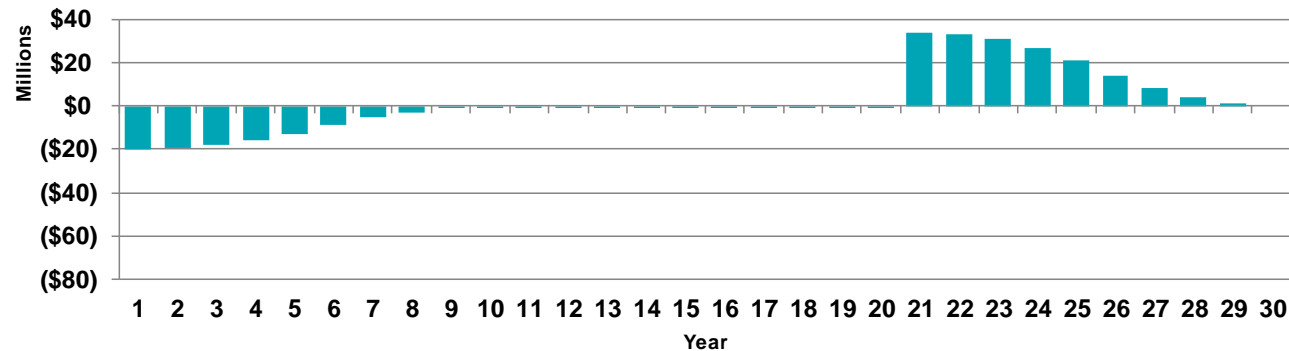
POB Amount	\$ 1,000,000,000
Method	Traditional

### Year

1	0.000%
2	0.000%
3	0.000%
4	0.000%
5	0.000%
6	6.625%
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27	6.625%
28	6.625%
29	6.625%
30	6.625%



## Net Contribution (Gain) or Loss



# Traditional Examples: 13.25% Return for Five Years



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

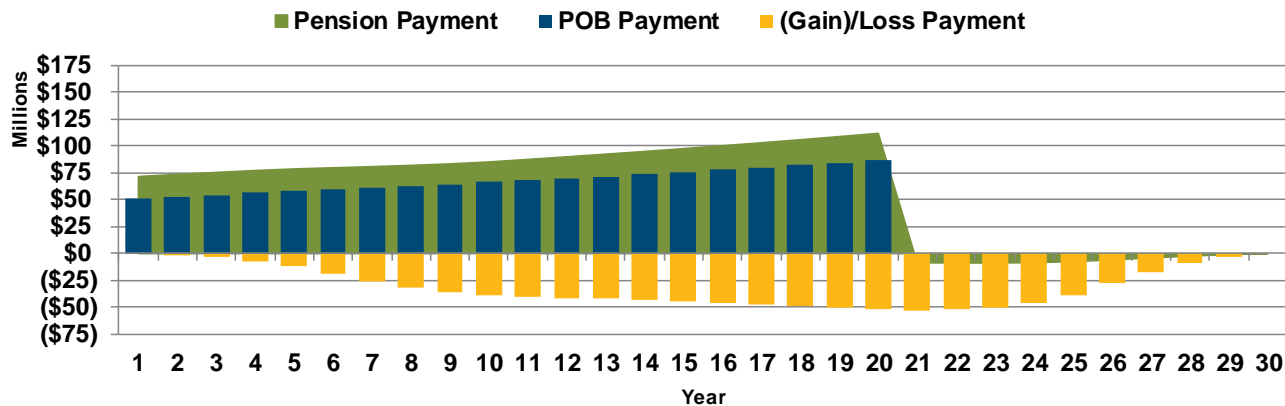
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

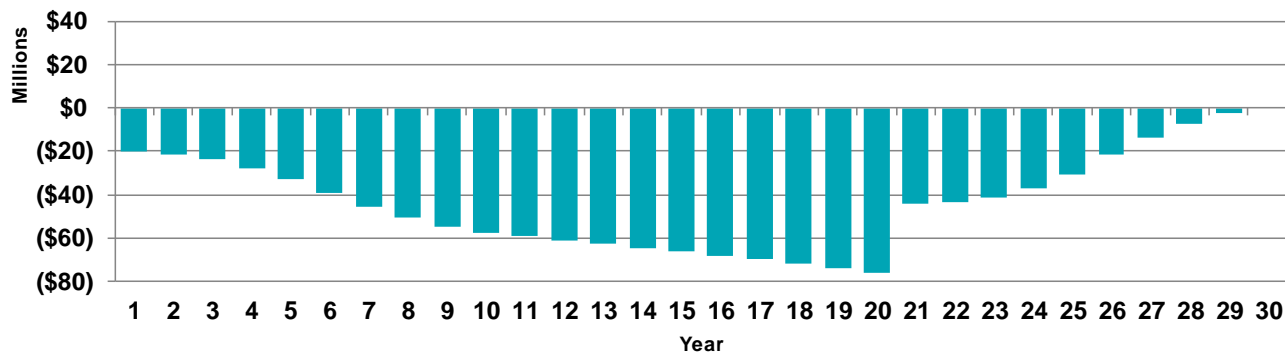
POB Amount	\$ 1,000,000,000
Method	Traditional

### Year

1	13.250%
2	13.250%
3	13.250%
4	13.250%
5	13.250%
6	6.625%
7	6.625%
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28	6.625%
29	6.625%
30	6.625%



## Net Contribution (Gain) or Loss



# City Selects Amortization Bases to Replace

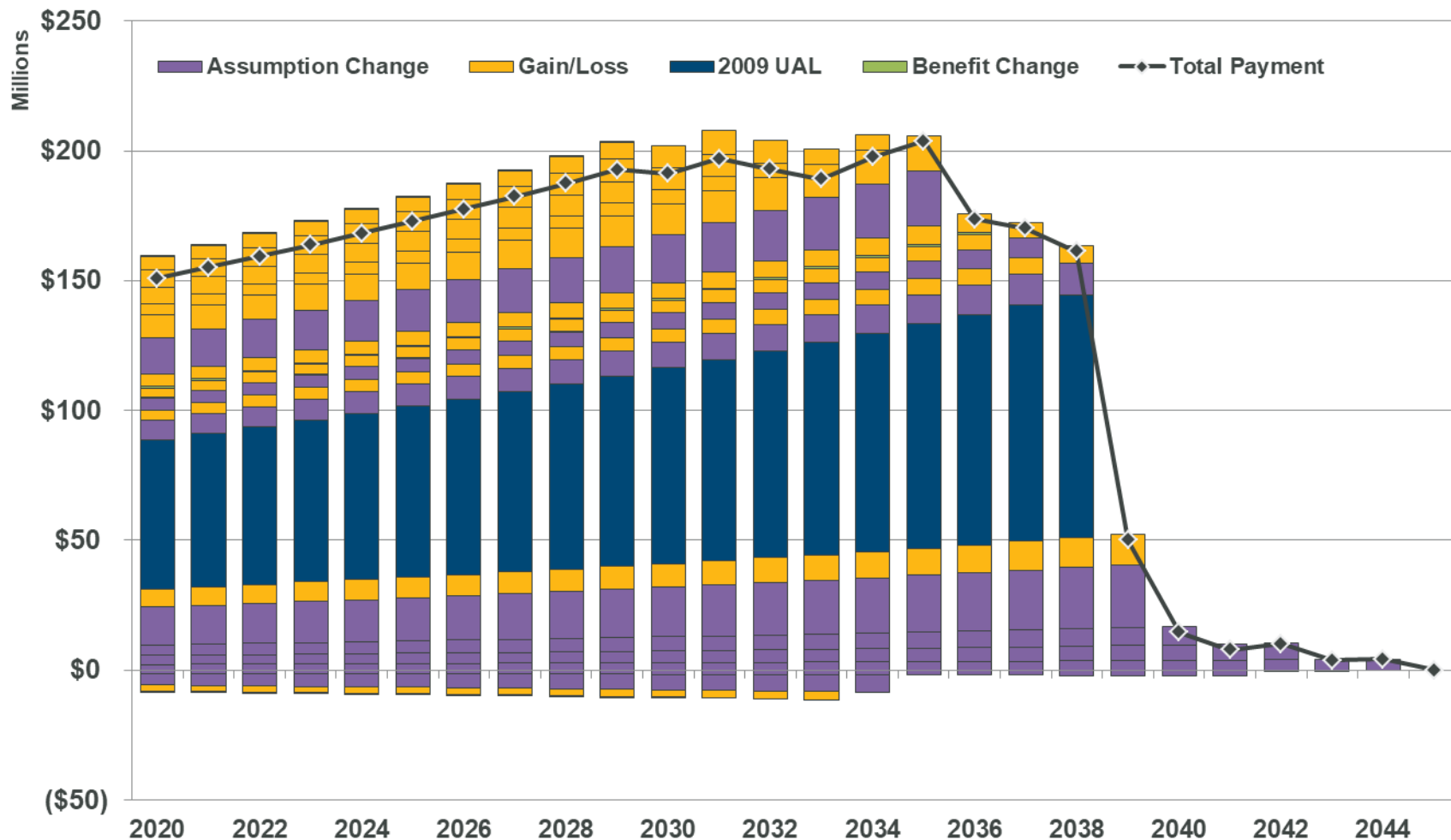


- CalPERS method and method assumed by City's Municipal Advisor
- Allows City to adjust contribution pattern
  - City selects an existing amortization base
  - Effectively, “replaces” Plan UAL payment schedule with a POB payment schedule
- City controls any period or payment schedule mismatch
  - Allows City to potentially defer payments
  - Could issue a 30-year POB to replace an amortization base with 5 years remaining
  - Not very significant risk for Federated
    - Shortest amortization has 10 years remaining and is relatively small
    - Largest and most logical has 19 years remaining
- Makes POB appear like a refinancing
- Investment gains and losses on POB proceeds treated as Plan assets – smoothed over 5 years and amortized over 20 years

# Select From Current Schedule



## Scheduled Tier 1 UAL Payments



# 2010 Actuarial Loss



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	10

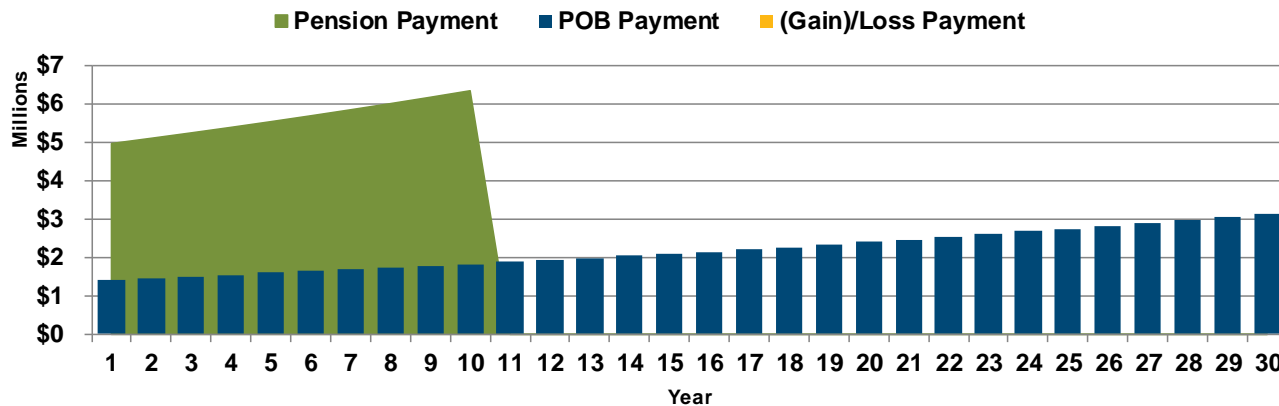
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	30

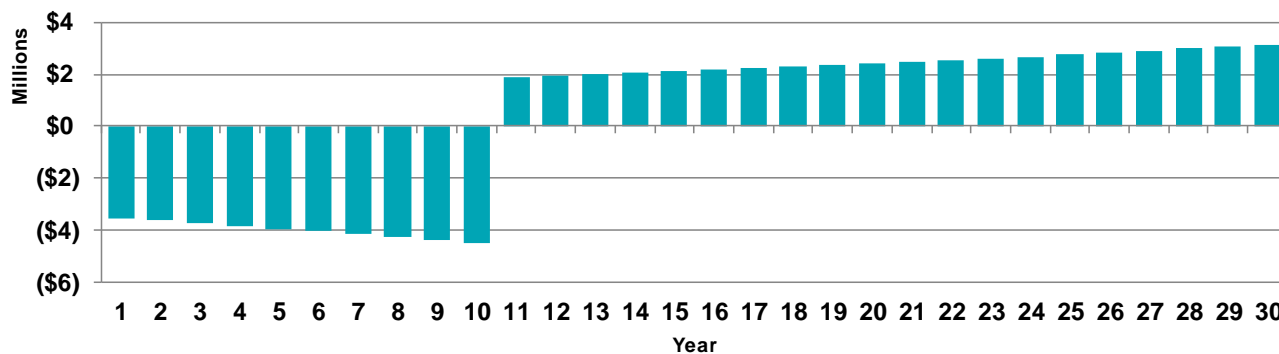
POB Amount	\$ 40,944,559
Method	Traditional

### Year

1	6.625%
2	6.625%
3	6.625%
4	6.625%
5	6.625%
6	6.625%
7	6.625%
8	6.625%
9	6.625%
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30	6.625%



## Net Contribution (Gain) or Loss



# Comments on Traditional Methods



- Traditional methods have different advantages, but...
- All provide a short-term incentive to issue a POB, which often drives the decision
  - Effectively credits City in advance for the difference between the expected return and the interest rate on the POB
  - Charges City later to true up for actual investment performance
- Primary long-term dynamic is adding leverage to the City
- Retirement Board's treatment of POB proceeds should not provide a short-term incentive for the POB
  - Retirement Board and City should be able to work out a reasonable contribution pattern independent of a POB
  - POB decision should be based on assessment of **range of potential investment returns (rather than assumed investment returns)** compared to the interest rate charged on the POB

# Eliminate Short-Term Incentive



- Proposed Method
  - Subtract remaining POB balance from assets to determine total City contribution
  - Subtract POB payment from total City contribution to determine City's Actuarially Determined Contribution to the pension plan
- No Change in Contributions Initially
  - City contribution to the pension plan is reduced by the exact amount of the City's POB payments
- Future City contributions adjust
  - As City pays off POB
  - As returns on POB assets differ from interest rate on POB

# Proposed Method: Returns = Assumed



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

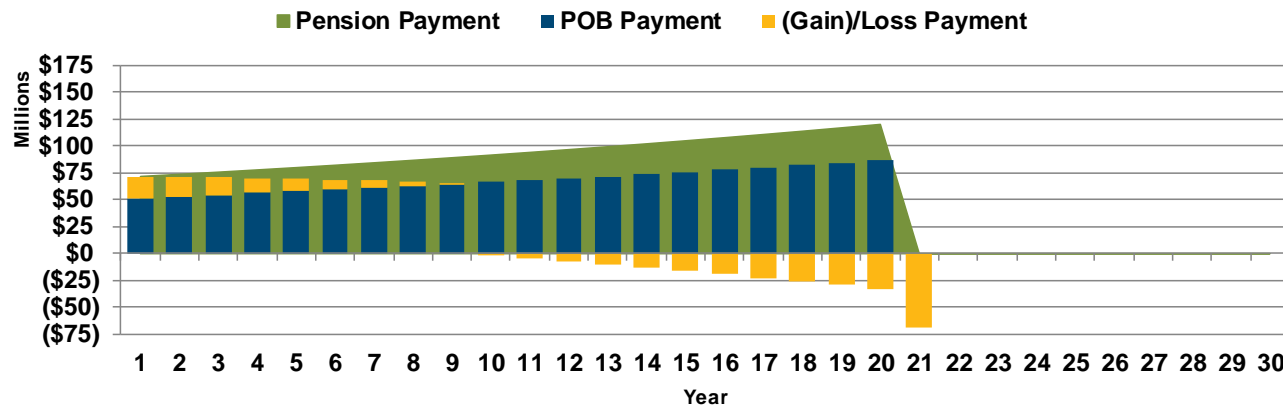
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

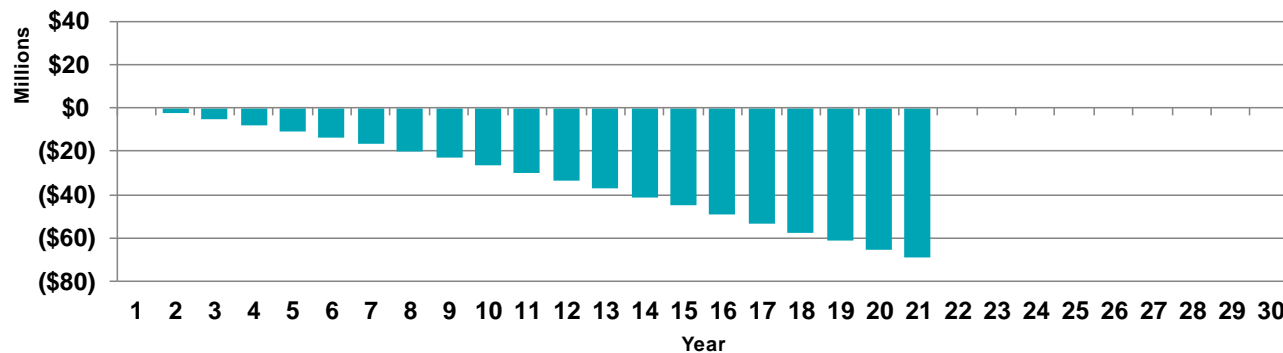
POB Amount	\$ 1,000,000,000
Method	Proposed

### Year

1	6.625%
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30	6.625%



## Net Contribution (Gain) or Loss





# Proposed Method: Returns = POB Interest



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

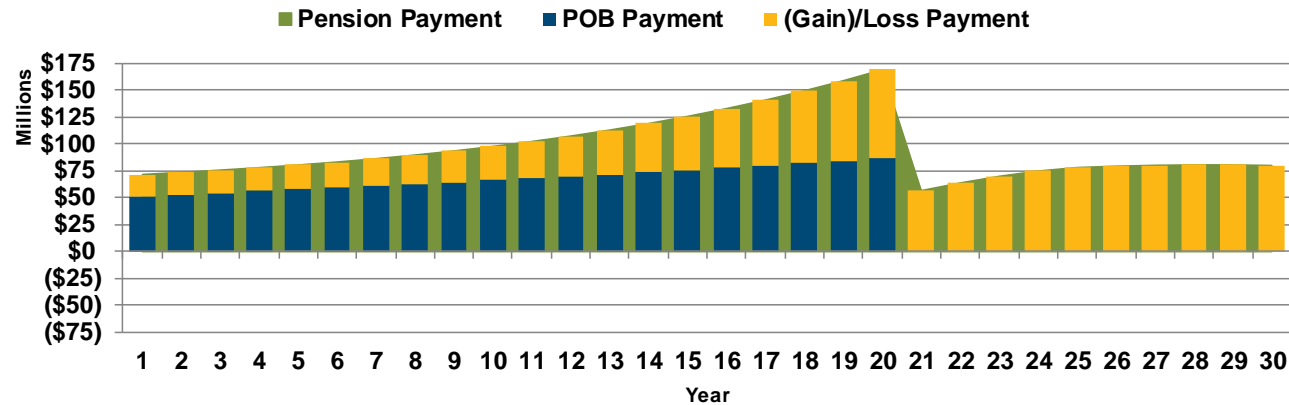
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

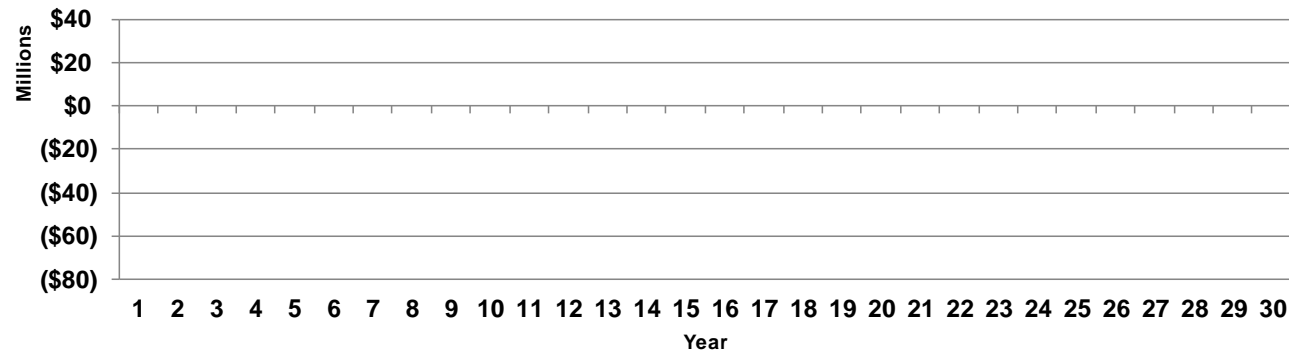
POB Amount	\$ 1,000,000,000
Method	Proposed

## Year

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30	6.625%



## Net Contribution (Gain) or Loss



# Proposed Method: Low Returns



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

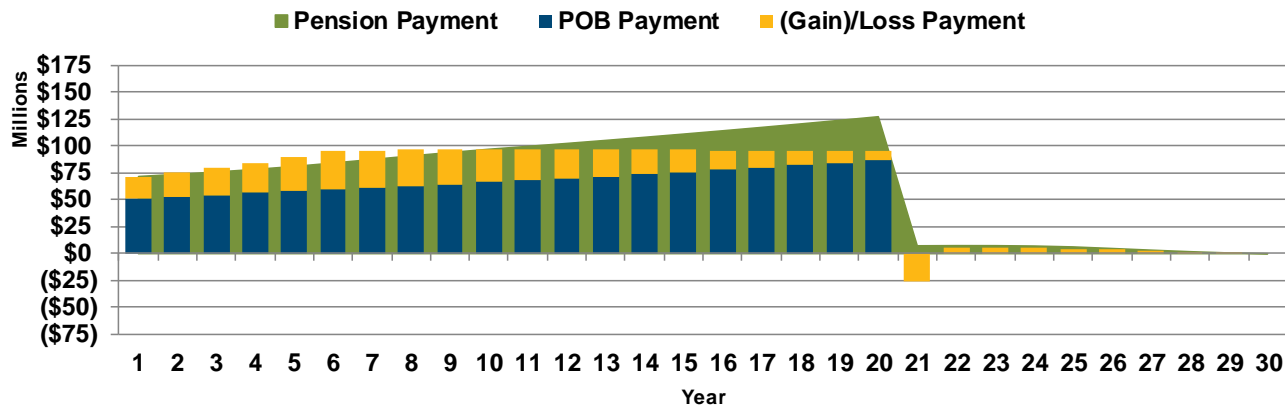
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

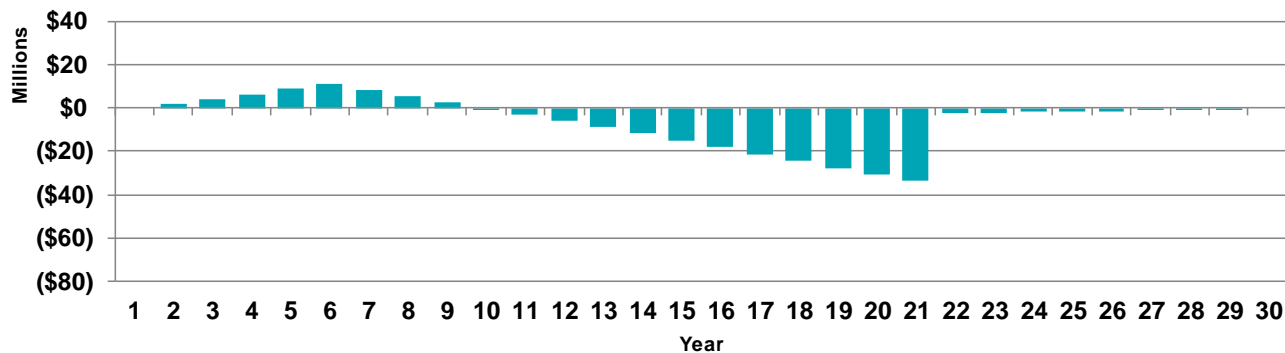
POB Amount	\$ 1,000,000,000
Method	Proposed

### Year

1	0.000%
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## Net Contribution (Gain) or Loss



# Proposed Method: High Returns



## Pension Parameters

Discount Rate	6.625%
Payment Increase Rate	2.75%
Amortization Period	20

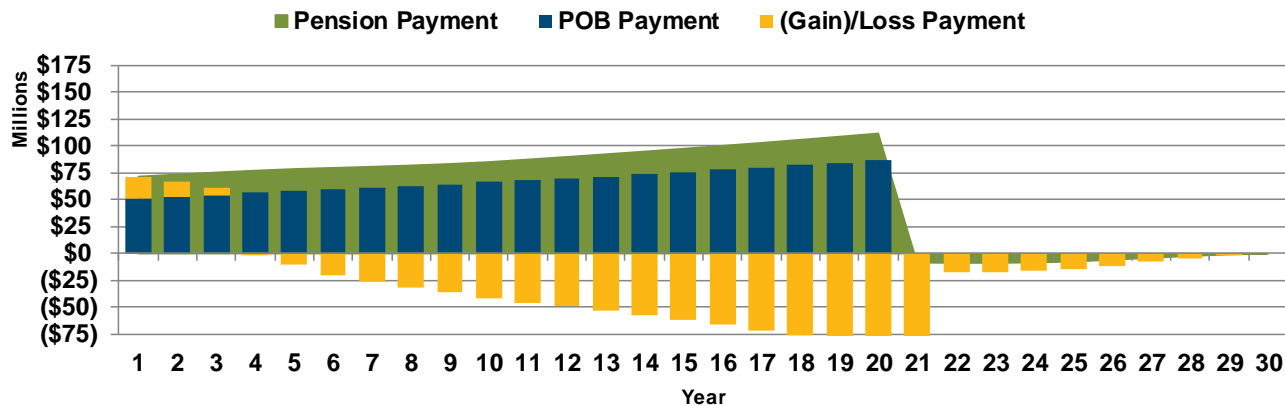
## POB Parameters

Interest Rate	3.00%
Payment Increase Rate	2.75%
Period	20

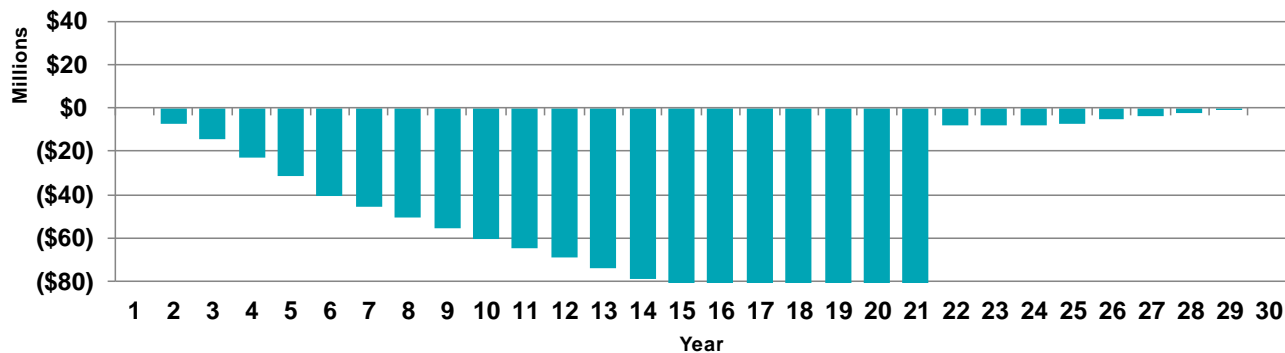
POB Amount	\$ 1,000,000,000
Method	Proposed

## Year

1	13.250%
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29	6.625%
30	6.625%



## Net Contribution (Gain) or Loss



# Conclusions



- From the City's perspective, Pension Obligation Bonds are similar to adding leverage to a portfolio
  - Borrow at low interest rate and invest to hopefully achieve a higher return
  - Should not generally be used to alter contribution patterns, particularly for single employer plans
- Contribution patterns can be adjusted by the Retirement Board through the amortization policy
- Proposed amortization policy for POBs
  - No initial change to City contribution
  - Contribution pattern changes as actual investment returns vary from POB interest rate
- No decisions today
  - Intended to help prepare Board for joint meeting with City Council
  - Decisions should be coordinated with City so there are no surprises



# Required Disclosures



- The purpose of this presentation is to provide an educational overview of Pension Obligation Bonds (POB) to the Retirement Board and to address different options of structuring potential POB proceeds for both the City of San José Police and Fire Department Retirement Plan and Federated City Employees Retirement System.
- In preparing our presentation, we relied on information (some oral and some written) supplied by the City of San José Department of Retirement Services. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23. A summary of the data, assumptions, methods, and plan provisions used to prepare the valuation results can be found in the June 30, 2020 actuarial valuation report.
- This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.
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