MEKETA
INVESTMENT GROUP

City of San Jose Police and Fire Department Retirement Plan

August 5, 2021

Pension Obligation Bond
Planning Draft

Background

- When considering adding funds to the Retirement Plan, the ideal investment strategy would be a risk-free arbitrage. However, such arbitrage is currently not available.

- All else being equal, a simple strategy would be to add Pension Obligation Bonds ("POB") funds to the current investment pool and manage them the same way that the Board, Staff, and advisors do now (as we do with annual contributions from the City).

  – This approach has several advantages - as the current Strategic Asset Allocation has been thoroughly discussed and debated.

  – This approach would also prevent the need to manage multiple pools of capital (which can, in turn, lead to comparisons without regard to time horizon).

- Ultimately, the decision will come to one single number – risk.

  – In reality, this number is not easy to derive, as it requires inputs from multiple stakeholders who may not agree on goals and other factors.

- To make an informed decision, additional data will be required:

  – Size of the bond issue

  – Structure of the issue (laddered vs one-time, floating vs fixed, maturity)

  – Impact on future cash flows

Risk Considerations

- Risk tolerance risk tolerance (lambda) is not a linear function - it is more a step-down function. In other words, within certain bands of funded status, the Plan's lambda will remain constant.

- Another factors that influences lambda is the dollar amount drawdown the City can tolerate given a larger asset size.

  - We will want to understand whether losing additional money for the incremental capital (i.e., POB proceeds) would have an impact on the City's budget.

One Asset Allocation/Risk Perspective

- It is unusual for a pension plan to receive a large one-time contribution, so it presents a challenging decision for the Board. The information provided below provides one framework to think about the issue (using estimates):

Retirement Plan value as of 3/31/21	$4.5 billion
Current Meketa 20-Year Expected Return	6.8%
Current Actuarial Discount Rate	6.625%
Current Actuarial Annual Contribution	$217 million
Annual Contribution % of Market Value	4.9%
Meketa Long-Term Inflation Expectation	2.1%
Annual Contribution % Plus Inflation	7.0%

If Retirement Plan had $500 million Higher Market Value	$5.0 billion
Annual Contribution % of Higher Market Value	4.4%
New Annual Contribution % Plus Inflation	6.5%

- This framework would indicate that an actuarial assumed rate of return of 6.5% would be roughly equivalent to the current asset allocation's risk level, if the total market value were $500 million higher and the goal were to keep city contributions at the same percentage of market value.

Another Asset Allocation/Risk Perspective

- Another potential way of viewing the asset allocation and risk decision, again assuming a hypothetical $500 million contribution, is how the total portfolio's expected return would be affected by contributing the full $500 million to long-term credit. Long-term credit would be expected to attain returns similar to the cost of issuing the pension obligation bonds.

	Current	With $500M LTC
Growth	**69**	**61**
US Equity	25	23
Dev. Market Equity (non-US)	12	11
Emerging Market Equity	9	8
Buyouts	7	6
Venture Capital	3	3
Private Debt/Real Estate/Real Assets	5	6
Emerging Market Bonds	2	2
High Yield Bonds	2	2
Low Beta	**8**	**7.5**
Absolute Return	3	3
Cash Equivalents (Immunized CFs)	5	4.5
Other	**23**	**31.5**
Core Real Estate	5	4.5
Commodities	2	2
TIPS	2	2
Investment Grade Bonds	11	10
Long-term Govt Bonds	3	3
Long-Term Credit	0	10
Meketa Expected Return (10 years)	*5.9*	*5.6*
Meketa Expected Return (20 years)	*6.8*	*6.5*

- This framework results in an overall long-term expected return of 6.5%.

Additional Considerations

- If new assets are allocated in a less-risky manner compared to the current Strategic Asset Allocation, the fund may be less comparable to peers, so one means of benchmarking performance may be less useful. We know that not all stakeholders fully appreciate how differences in risk profile impact returns.

- Should the new contribution be segregated into a separate diversified sleeve of the portfolio, investment management fees may be higher, given a lower sleeve asset base to negotiate fees. If a large contribution were allocated primarily to long-term bonds, total portfolio fees would decrease.
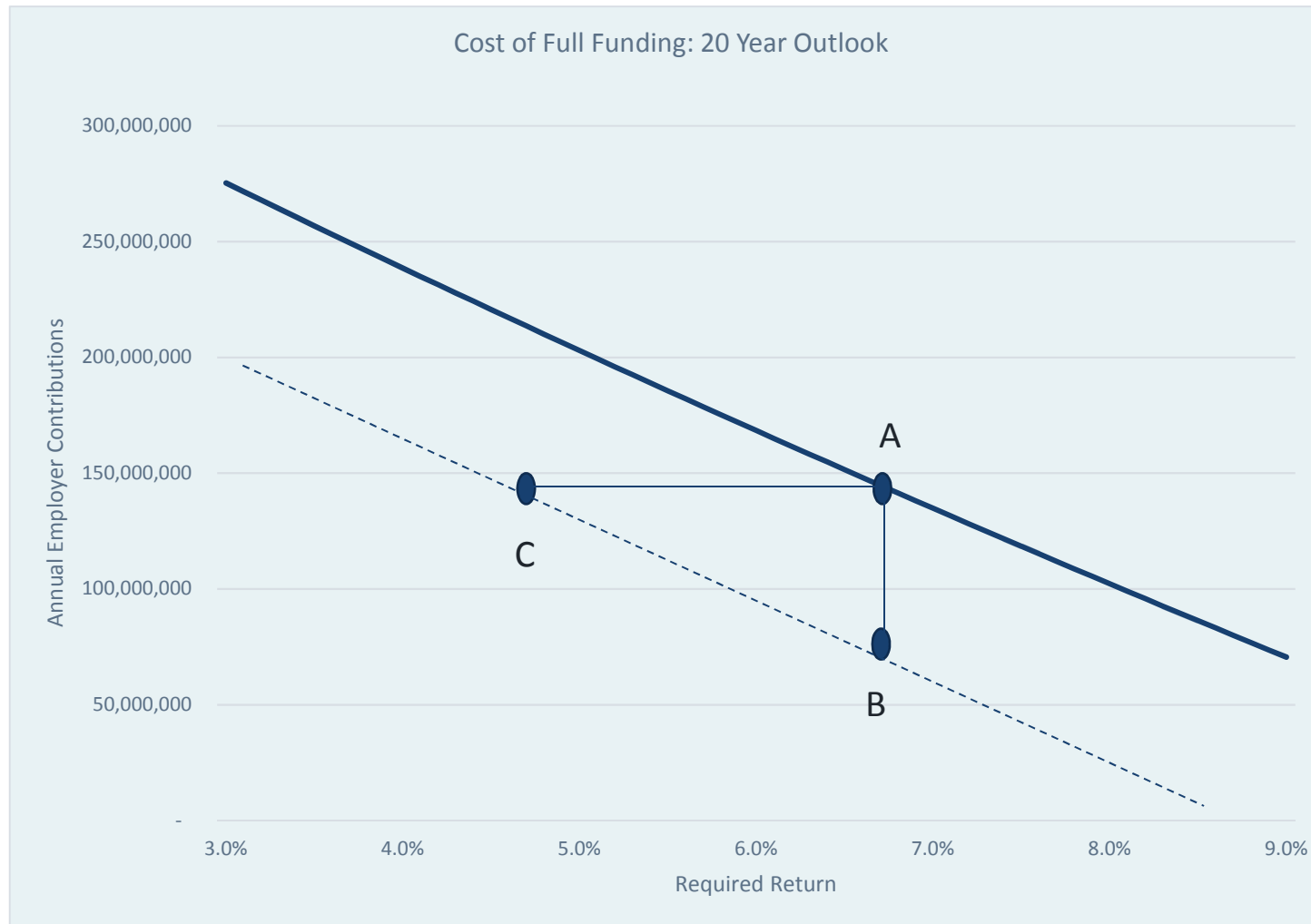
AUGUST 5, 2021

Discussion of Pension Obligation Bond Proceed Investment

City of San Jose

What is the required return?

Cost of Full Funding: 20 Year Outlook

(Y-axis: Annual Employer Contributions — 300,000,000; 250,000,000; 200,000,000; 150,000,000; 100,000,000; 50,000,000; -)

(X-axis: Required Return — 3.0%, 4.0%, 5.0%, 6.0%, 7.0%, 8.0%, 9.0%)

Points labeled A, B, C

How does a Pension Obligation Bond impact the plan?

- A: Starting Point

- B: Choose to keep discount rate the same, but reduce contributions by $x

- C: Choose to keep contributions the same, but reduce discount rate by %y

Hypothetical example

Required return based on today's assets, necessary benefit payments, a financial objective (i.e., full funding in X years), and calculates the discount rate and investment return necessary to achieve the objective.

# Volatility, drawdowns and risk tolerance

Risk Tolerance

Risk Tolerance

Conservative ↑ / Aggressive ↓

Portfolio Volatility	Odds of 10-year return < 2%	95% VaR	95% CVaR
8% Risk	21 in 100	-14%	-17%
9% Risk	20 in 100	-15%	-18%
10% Risk	18 in 100	-16%	-19%
11% Risk	16 in 100	-18%	-22%
12% Risk	14 in 100	-20%	-25%
13% Risk	12 in 100	-22%	-28%
14% Risk	10 in 100	-24%	-29%
15% Risk	9 in 100	-25%	-31%

Once required return is set, Board can define how much risk is acceptable in pursuit of that return

Values displayed in the above table are for illustrative purposes only.

Decision framework for setting risk target: Police and Fire

100% FUNDED RATIO IN 15 YEARS
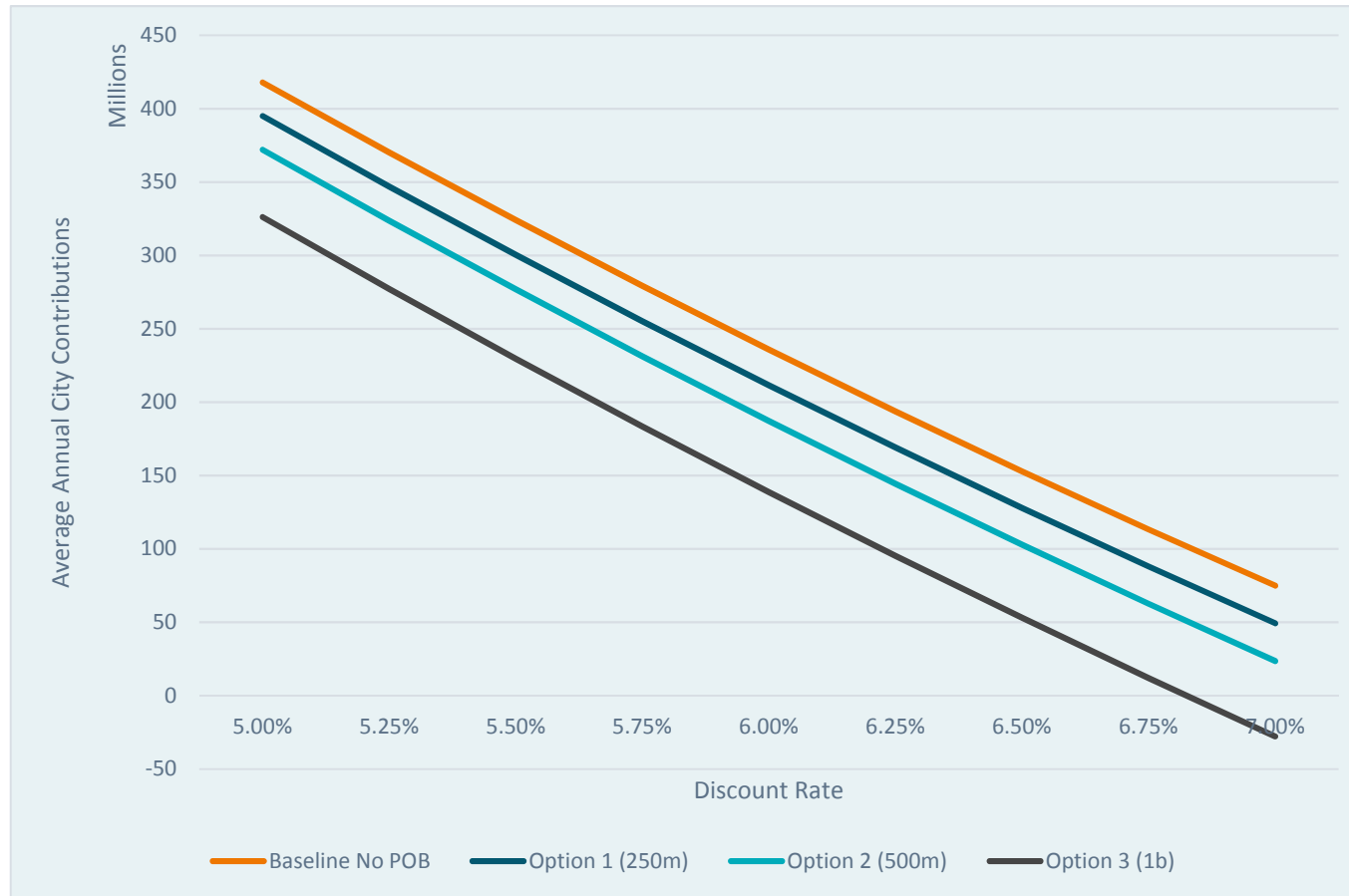
- We assume full funding is ultimate goal

- For successive bond proceed levels, effect is to reduce required return

- Decision on risk target is function of key risk metric:
  — Contribution $ amount
  — Funded ratio
  — Max drawdown

- Different metrics will lead to different risk target outcomes

	Summary Data	
	Discount Rate*	Funded Ratio (2021 Est)
Baseline	6.63%	85%
Option 1 (250M)	6.53%	90%
Option 2 (500M)	6.40%	94%
Option 3 (1b)	6.08%	103%

Contributions held steady at current level and assumed to be smoothed throughout the entire period. Projections of actuarial liability and expected benefit payments are broad approximations based on preliminary data. Actual experience will vary. Impact of POB contributions are excluded from the above analysis.

*Solved discount rate reflects discount rate which sets plan contribution rate approximately equal to a 15-year average, approximately $120M.

Contribution impact scenario: Police & Fire

100% FUNDED RATIO IN 15 YEARS: CHANGING DISCOUNT RATE
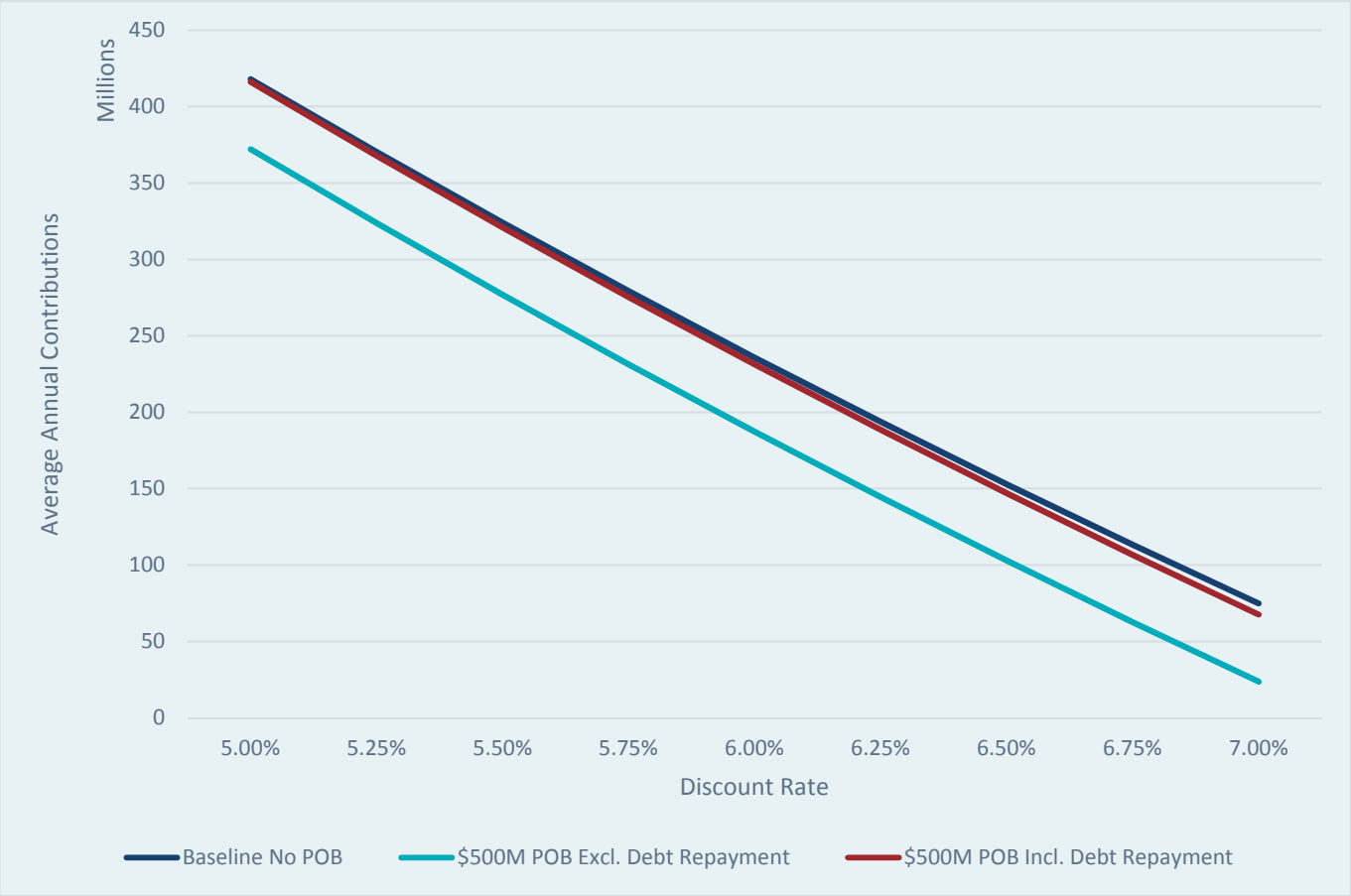
Graph displays the return and smoothed contributions necessary to fully fund Police & Fire (excl. OPEB) over the next 15 years.

Discount rate required to make contributions $200M annual over 15 years is approximately 6.25%.

Summary Data		
	Discount Rate*	FR (2021 Est)
Baseline	6.63%	85%
$500M POB Incl. Debt Rpmt	6.63%	94%
$500M POB Excl. Debt Rpmt	6.40%	94%

Contributions assumed to be smoothed throughout the entire period. Projections of actuarial liability and expected benefit payments are broad approximations based on preliminary data. Actual experience will vary.

*Solved discount rate reflects the expected return and discount rate which sets the plan contribution rate approximately equal to a 15-year average, approximately $120M.

Verus

Return impact scenarios: Police & Fire

**100% FUNDED RATIO IN 15 YEARS: CHANGING EXPECTED RETURN (DISCOUNT RATE REMAINS 6.625%)**
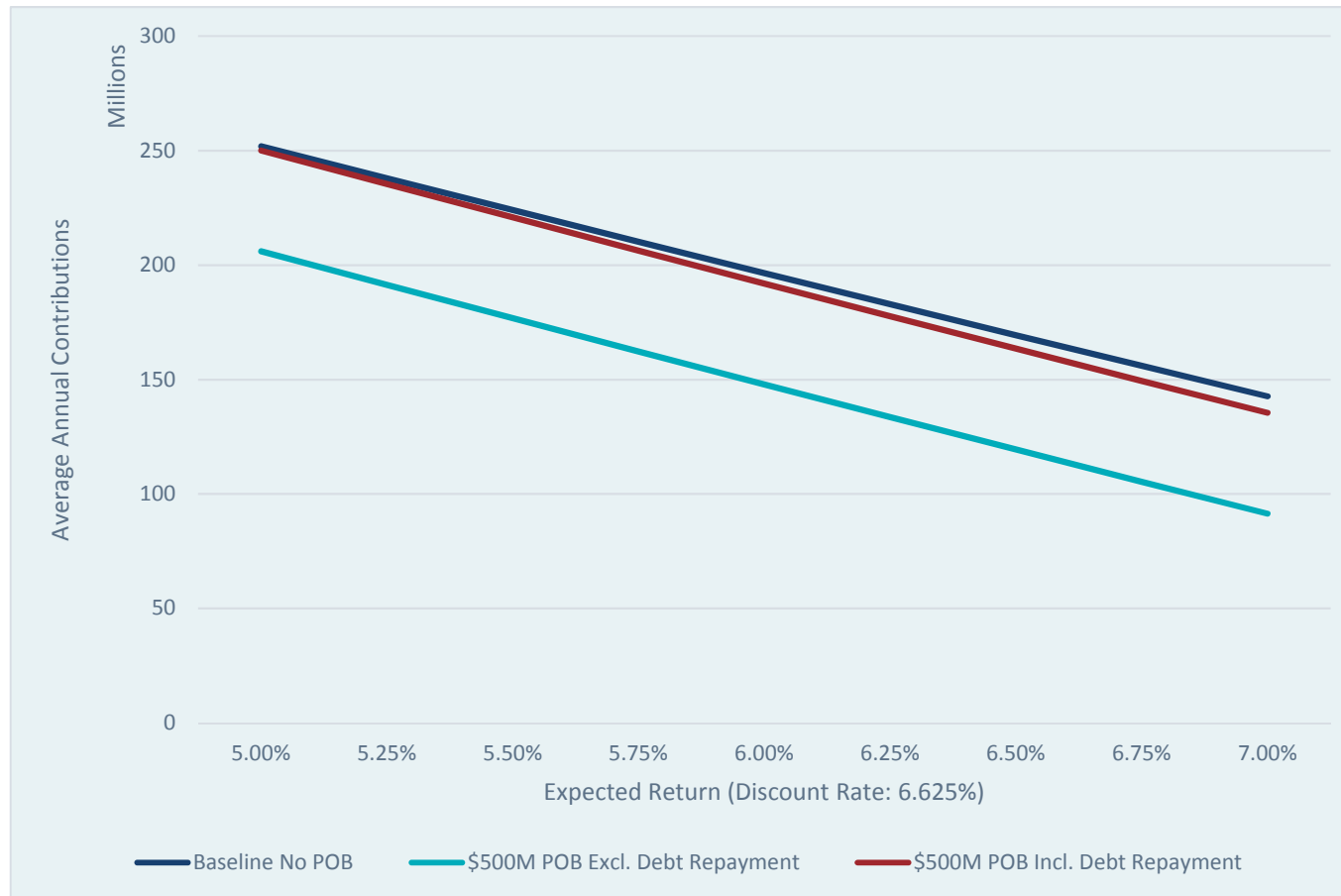
If the expected return for the current SAA is 5.9% (10-year Meketa projection of current policy), contributions increase from roughly $170M to $180M.

If the expected return for current SAA is 6.8% (20-year Meketa projection), contributions decline to $155M from $170M

Contributions assumed to be smoothed throughout the entire period. Projections of actuarial liability and expected benefit payments are broad approximations based on preliminary data. Actual experience will vary.

Drawdown impact scenarios: Police & Fire

**100% FUNDED RATIO IN 15 YEARS: CHANGING EXPECTED RETURN (DISCOUNT RATE REMAINS 6.625%). YEAR 1 DRAWDOWN OF -25%**
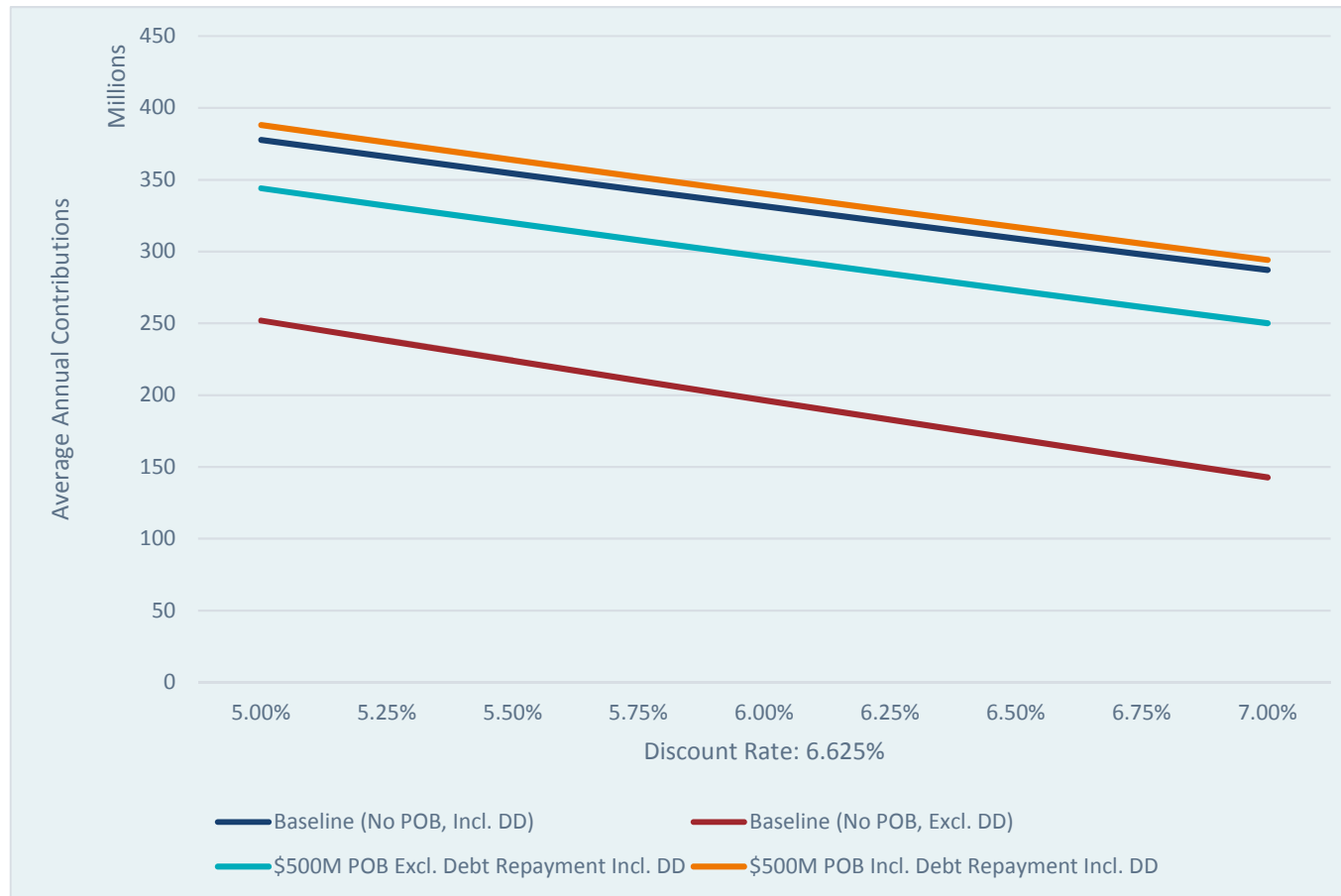
Using full funding over 15 years as a target, we observe that a 25% drawdown increases total contributions by approximately $140M a year, or, $2.1B over the 15-year period.

If the plan receives a $500M POB then experiences the drawdown, contributions increase by roughly $7M a year in addition to the above.

Contributions assumed to be smoothed throughout the entire period. Projections of actuarial liability and expected benefit payments are broad approximations based on preliminary data. Actual experience will vary. "DD" = "Drawdown".

Appendix

EST. POB PAYMENTS
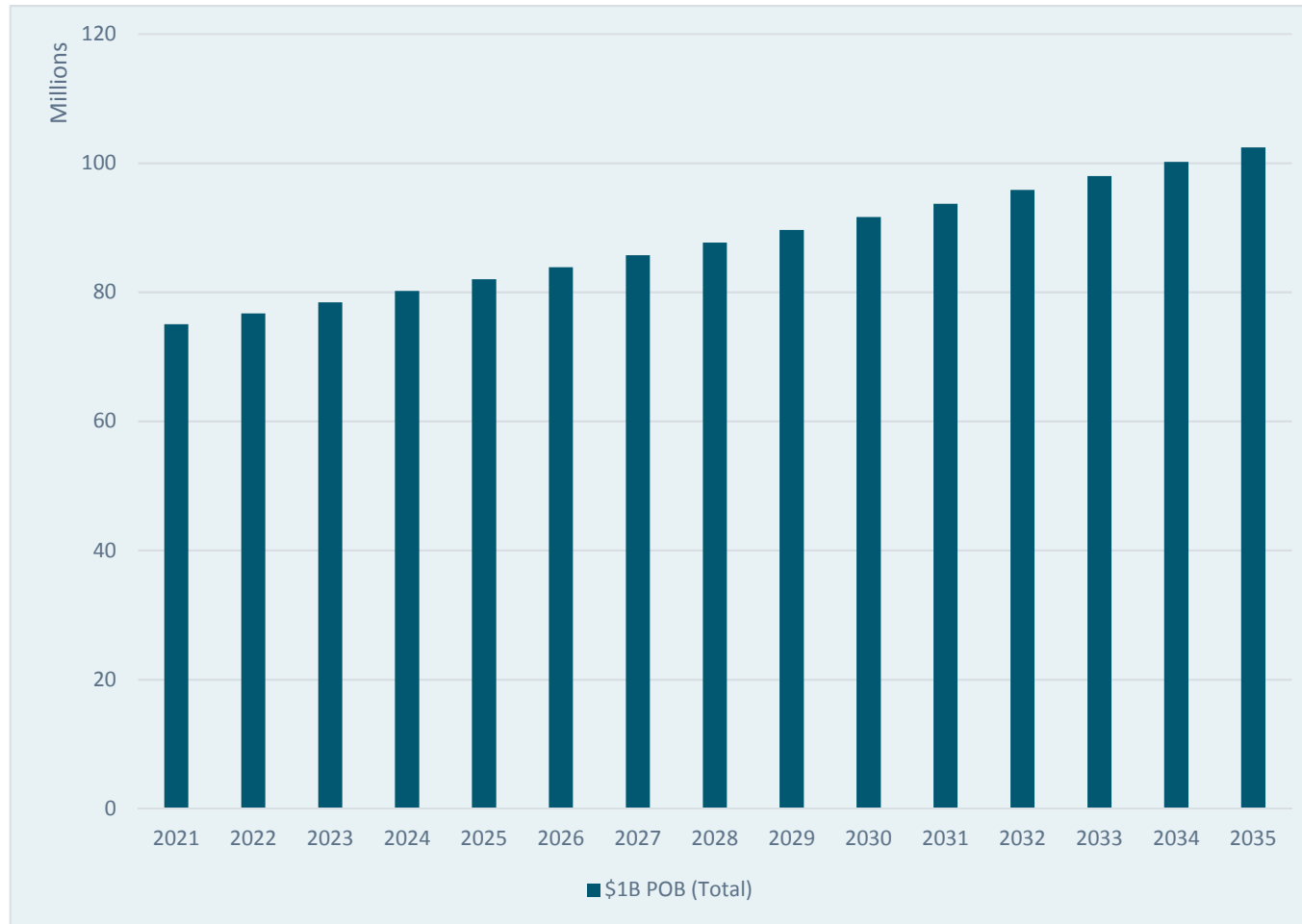
Source: Verus

Assumes a 3.5% interest rate and a 2.25% payment increase rate over a 15-year period.

A total $1B POB is assumed, where $500M is given to each of the two pension plans (Federated and Police & Fire).