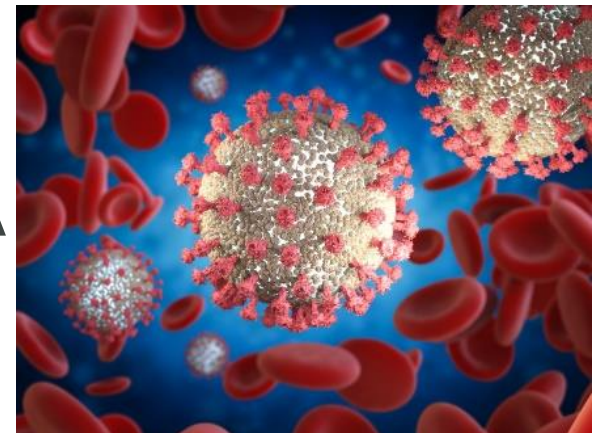


ITEM #2(1) - 10-16-2020 JOINT MEETING OF THE BOARDS & CITY COUNCIL

Implications of COVID-19 on Pension Plan Funding Ratios and Potential Future Contributions

October 16, 2020

Bill Hallmark, ASA, EA, FCA, MAAA





- Emerging Issues for Public Plans
- Updated status of San José's Plans
- 5-Year projections
- Interest rates and future discount rates
- Conclusions
- Appendix

Public Plans – Emerging Issues

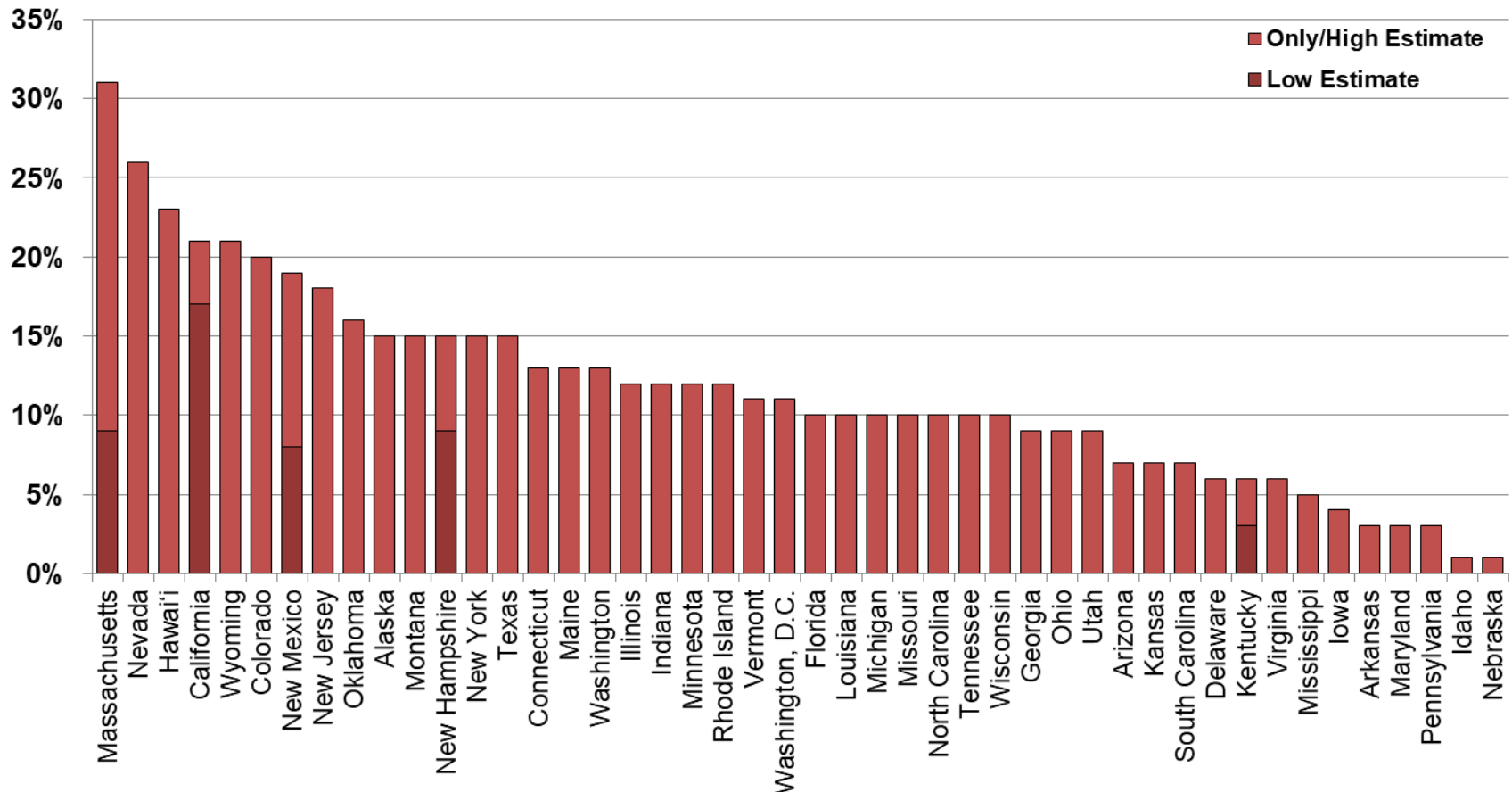


- Investment returns are not the issue – so far
 - Investment returns are below expectations, but by a routine amount
 - Median fiscal year return was about 3%
- Primary emerging impact is related to revenue/budget shortfalls
 - Potential layoffs or furloughs
 - Early retirement incentive programs
 - Potential salary freezes/reductions
 - Discussion of reduced or deferred contributions
- Other potential changes to watch
 - Retirement, disability, and mortality experience
 - COVID-19 presumptions for duty disability/death

Revenue Impact Estimates

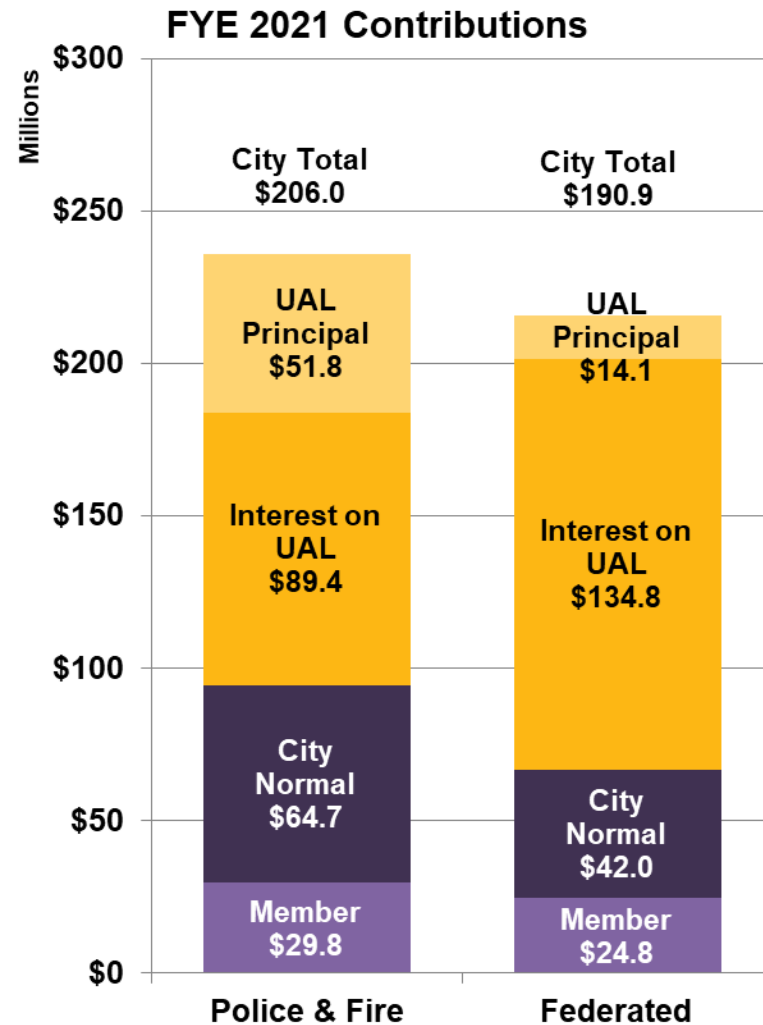
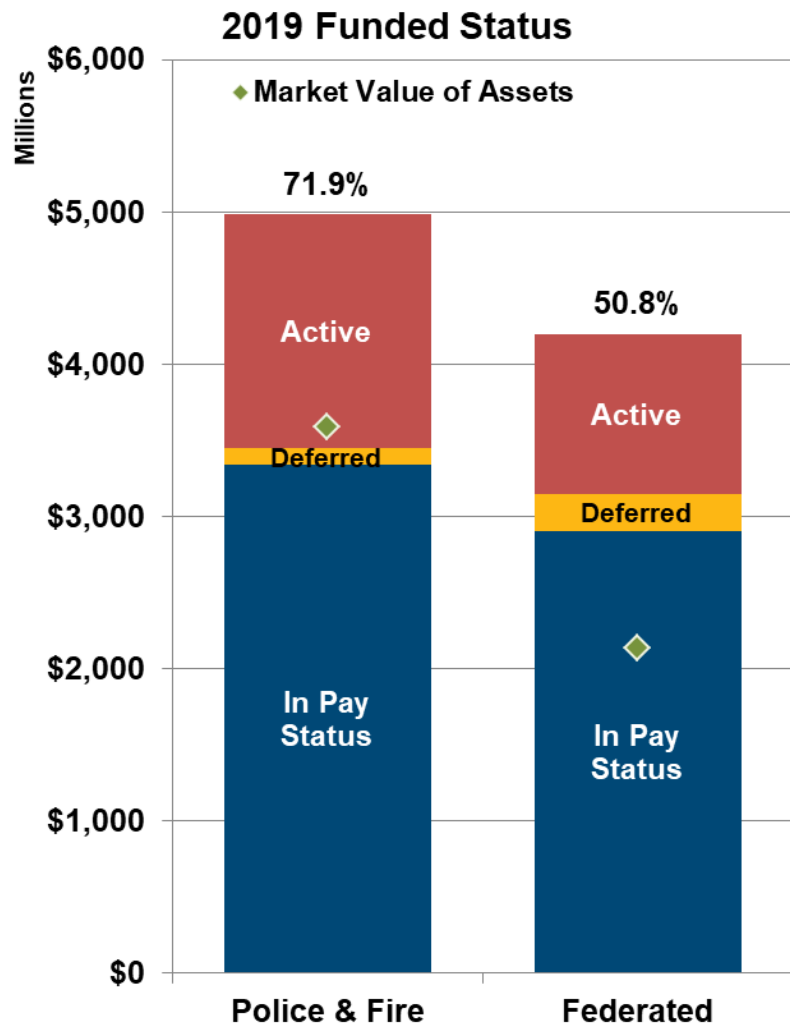


Projected FY 2021 Decline in General Fund Tax Revenues as % of pre-COVID-19 Projections



Estimates collected by Center on Budget and Policy Priorities, <https://www.cbpp.org/research/state-budget-and-tax/states-grappling-with-hit-to-tax-collections>

2019 Valuation Results



Updated Status of San José's Plans



Funded Status of Pension Plans

	June 30, 2019			June 30, 2020 - Estimated		
	Police & Fire	Federated	Total	Police & Fire	Federated	Total
Actuarial Liability	\$ 4,988,427	\$ 4,200,708	\$ 9,189,135	\$ 5,177,019	\$ 4,323,371	\$ 9,500,390
Market Value of Assets	<u>3,588,423</u>	<u>2,132,152</u>	<u>5,720,575</u>	<u>3,702,023</u>	<u>2,208,016</u>	<u>5,910,039</u>
Unfunded Actuarial Liability	\$ 1,400,004	\$ 2,068,556	\$ 3,468,560	\$ 1,474,996	\$ 2,115,355	\$ 3,590,351
Funded Percentage	71.9%	50.8%	62.3%	71.5%	51.1%	62.2%

Amounts in thousands

- No significant change expected
 - Aggregate UAL expected to increase 3.5%
 - Aggregate funded ratio expected to decrease 0.1%
- Estimated 2020 amounts reflect:
 - Actual Market Value of Assets (Approximate returns for FYE 2020 of 3.8% for P&F and 4.3% for Fed)
 - Projected Actuarial Liability from 2019 reflecting actual benefit payments and assuming all assumptions were met
- Actuarial Liability as of June 30, 2020 likely to change due to:
 - Demographic experience since 2019
 - Any economic assumption changes the Retirement Board's elect to adopt

Post-Pandemic Return Scenarios

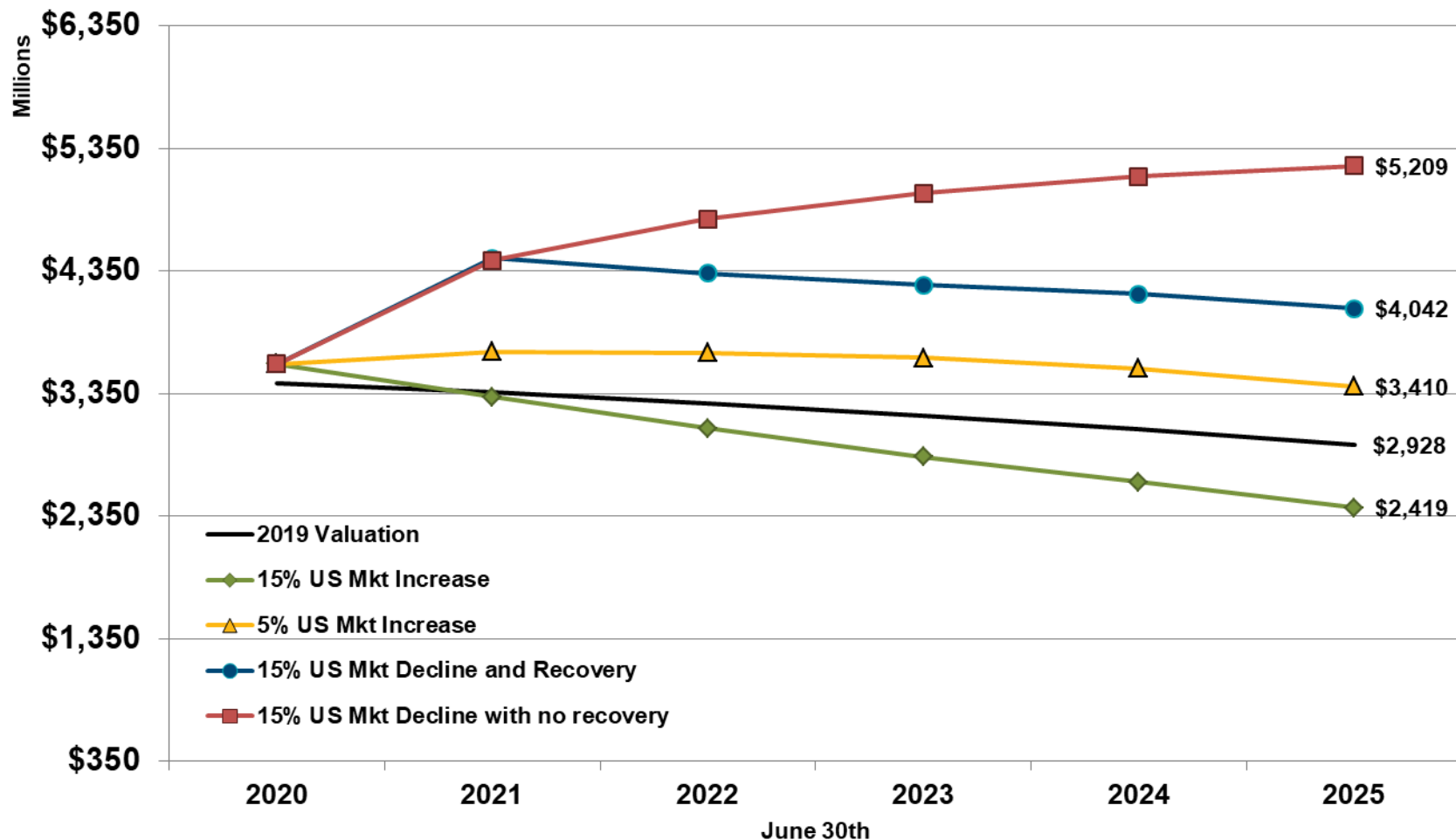


- Meketa developed four post-pandemic investment return scenarios to help illustrate the potential impact on funded status and contributions
 1. **15% Increase in US Market**
 - Fed average 5-year return = 8.9%
 - P&F average 5-year return = 8.5%
 2. **5% Increase in US Market**
 - Fed average 5-year return = 6.0%
 - P&F average 5-year return = 5.8%
 3. **15% Decline in US Market with Recovery**
 - Fed average 5-year return = 3.9%
 - P&F average 5-year return = 3.8%
 4. **15% Decline in US Market with No Recovery**
 - Fed average 5-year return = -0.1%
 - P&F average 5-year return = 0.1%

Meketa Return Scenarios – UAL



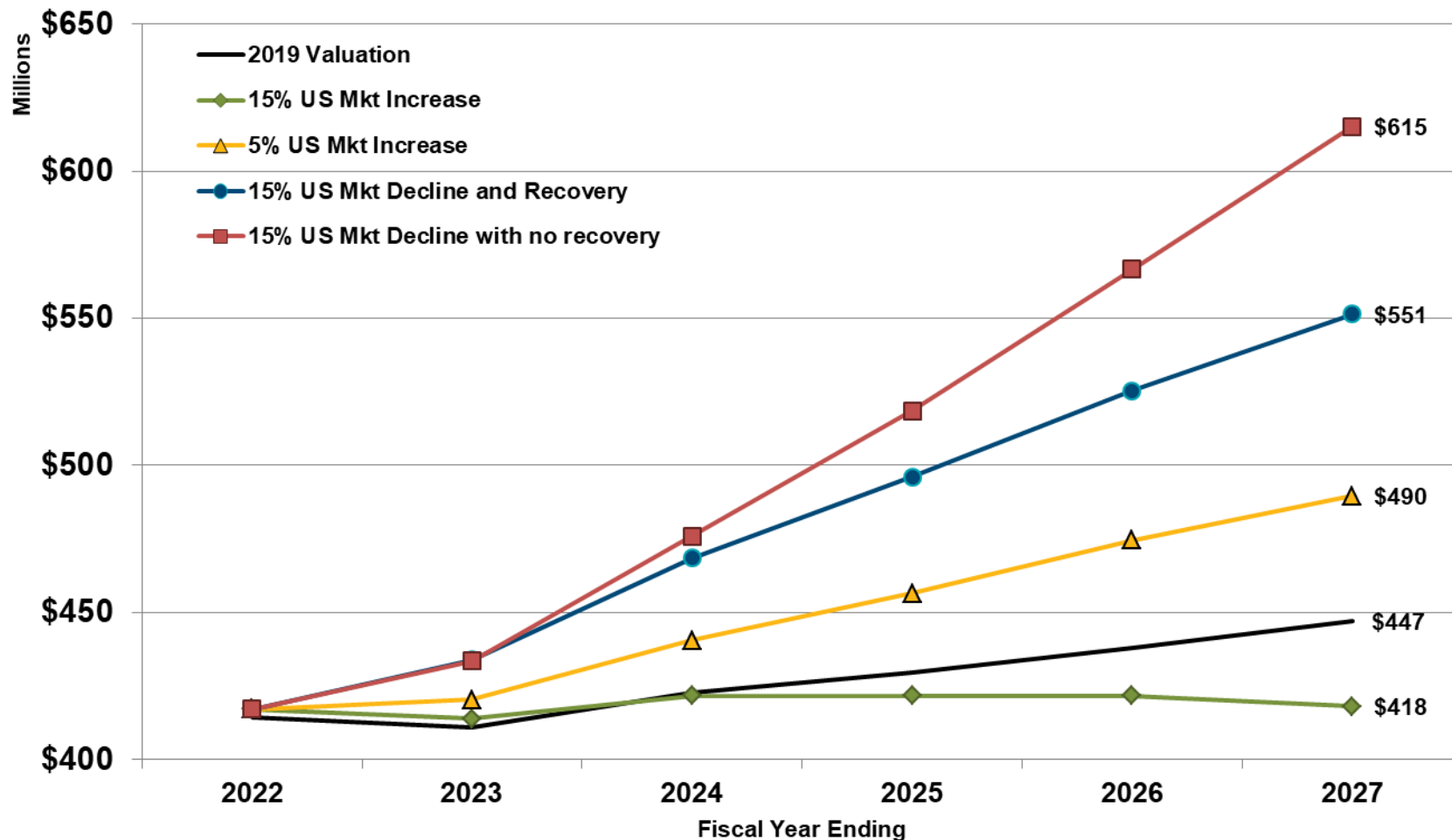
Projected Unfunded Actuarial Liability - Meketa Scenarios



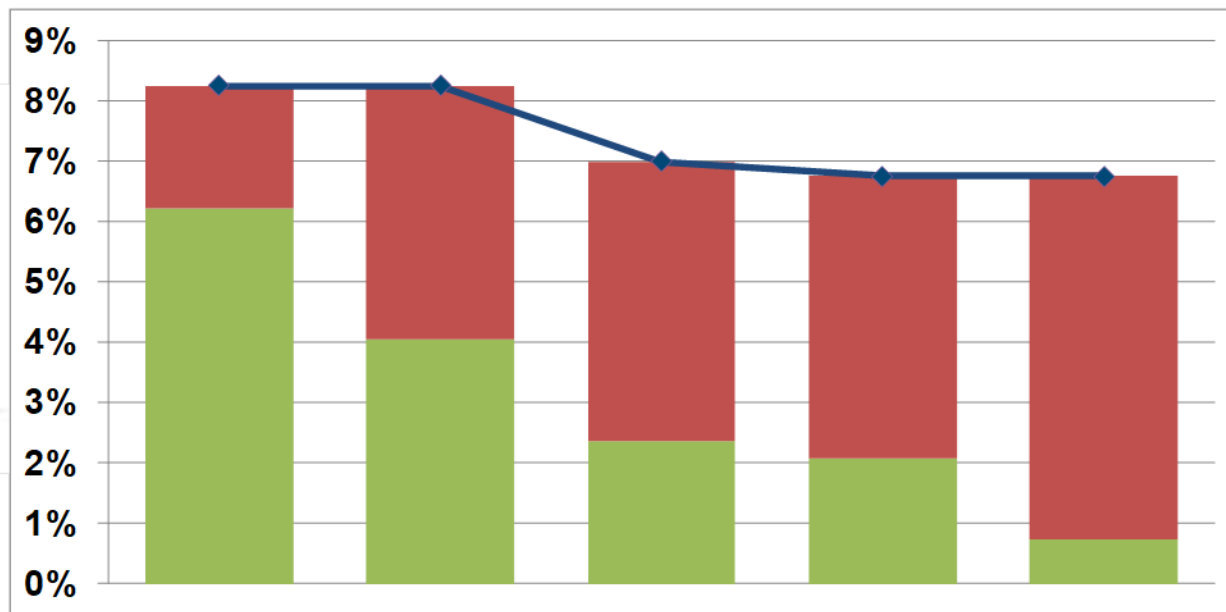
Meketa Scenarios – Contributions



Projected Contributions - Meketa Scenarios



Expected Risk Premium



	1995	2005	2015	2019	2020
Federated Discount Rate	8.25%	8.25%	7.00%	6.75%	6.75%
Yield on 10-Year Treasury	6.21%	4.06%	2.36%	2.07%	0.73%
Expected Risk Premium	2.04%	4.19%	4.64%	4.68%	6.02%

- Decline in interest rates has caused plans to:
 - Reduce expected returns
 - Increase risk in investment portfolio
- If recent interest rate decline persists, further discount rate reductions are likely

Impact of Lower Discount Rate



Potential Impact of Reduced Discount Rate June 30, 2019 Actuarial Valuation Results

Discount Rate	6.75%	6.50%	6.25%
<u>Police and Fire</u>			
Actuarial Liability	\$ 4,988	\$ 5,162	\$ 5,342
Market Value of Assets	<u>3,588</u>	<u>3,588</u>	<u>3,588</u>
Unfunded Actuarial Liability	\$ 1,400	\$ 1,574	\$ 1,754
Funded Percentage	71.9%	69.5%	67.2%
<u>Federated</u>			
Actuarial Liability	\$ 4,201	\$ 4,339	\$ 4,482
Market Value of Assets	<u>2,132</u>	<u>2,132</u>	<u>2,132</u>
Unfunded Actuarial Liability	\$ 2,069	\$ 2,207	\$ 2,350
Funded Percentage	50.8%	49.1%	47.6%
<u>Aggregate</u>			
Actuarial Liability	\$ 9,189	\$ 9,501	\$ 9,825
Market Value of Assets	<u>5,721</u>	<u>5,721</u>	<u>5,721</u>
Unfunded Actuarial Liability	\$ 3,469	\$ 3,780	\$ 4,104
Funded Percentage	62.3%	60.2%	58.2%

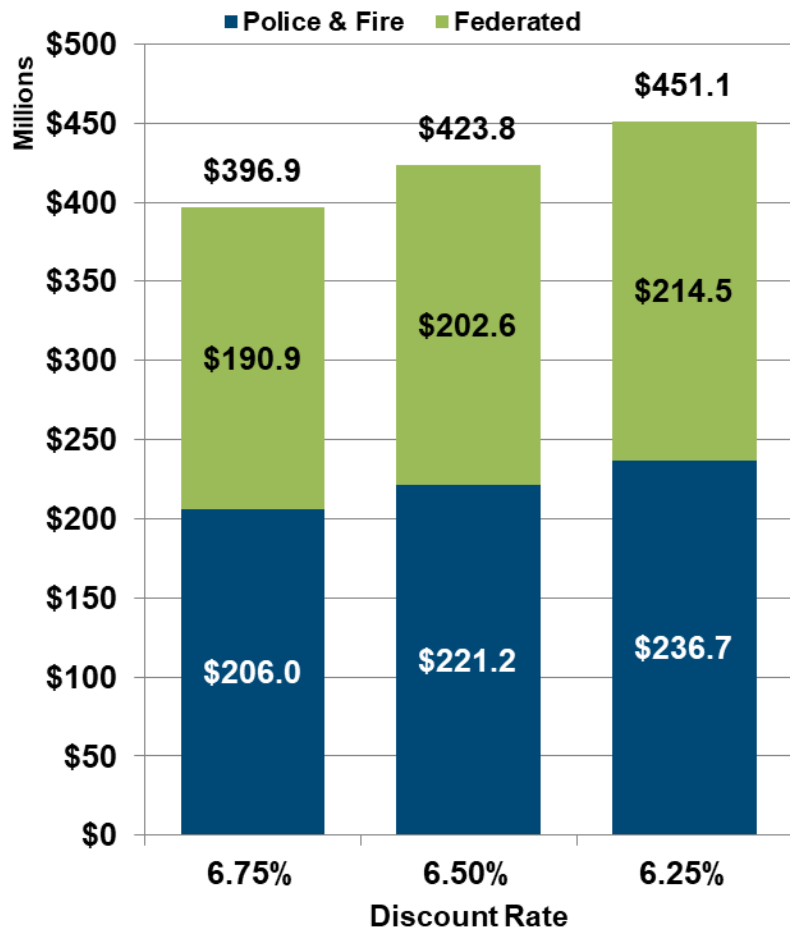
Dollar amounts in millions

- Retirement Boards will be reviewing economic assumptions in November
- If the discount rate is changed, it isn't likely to be more than 25 basis points
- Over the next several years, if interest rates remain at their current levels, larger cumulative discount rate reductions are possible

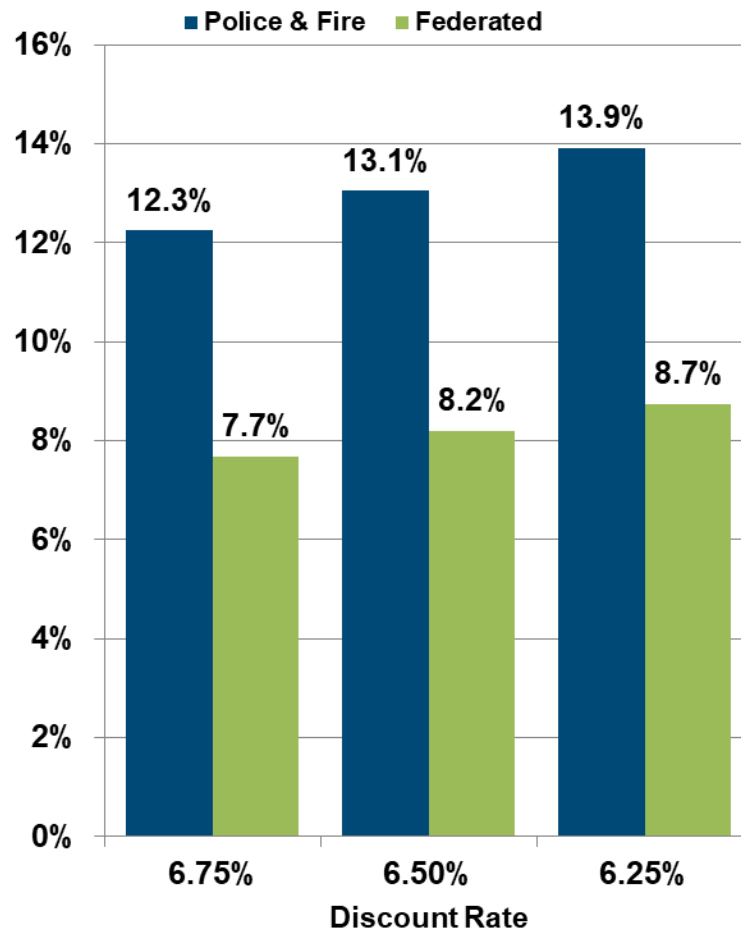
Impact of Lower Discount Rate



FYE 2021 City Contributions



FYE 2021 Member Rates





- Given the pandemic and related economic disruption, uncertainty about the future is even greater than usual
 - Markets have been volatile
 - Economic recovery could be relatively quick or take a long time
- Short and long-term impacts to the pension plans are also uncertain
- Retirement Boards can adjust the pension contribution requirements, but must protect the pension plans
- Over the long term, the sustainability of the pension plans depends in no small part on the financial strength of the City



- The purpose of this presentation is to illustrate the potential impacts of the COVID-19 pandemic on the funded status and contributions for the City of San José Police and Fire Department Retirement Plan and the City of San José Federated City Employees' Retirement System.
- This presentation is based on the June 30, 2019 actuarial valuations updated with actual asset information through June 30, 2020. Please refer to the June 30, 2019 actuarial valuation reports for a description of the census data, actuarial assumptions and methods, and a summary of the plan provisions.
- 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 a credentialed actuary, I 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. I am not an attorney and our firm does not provide any legal services or advice.
- This presentation was prepared exclusively for the City of San José for the purpose described herein. This presentation is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary



Appendix

Meketa Return Scenarios



Total Portfolio Returns for Fiscal Years Ending June 30th

Scenario	2021	2022	2023	2024	2025
15% US Market Increase					
Fed	10.62%	9.49%	8.73%	7.91%	7.65%
P&F	10.06%	9.02%	8.32%	7.57%	7.33%
5% US Market Increase					
Fed	4.12%	5.81%	6.33%	6.66%	7.25%
P&F	4.00%	5.59%	6.09%	6.41%	6.94%
15% US Market Decline and Recovery					
Fed	-9.39%	8.96%	7.76%	6.64%	6.86%
P&F	-8.64%	8.50%	7.40%	6.36%	6.57%
15% US Market Decline and No Recovery					
Fed	-9.11%	-0.07%	2.42%	3.29%	3.73%
P&F	-8.36%	0.11%	2.44%	3.27%	3.68%

Unfunded Liability Projections



5-Year Pension UAL Projections - Meketa Economic Scenarios

June 30th	2020		2021		2022		2023		2024		2025	
<u>2019 Valuation Projections</u>												
Police & Fire	\$	1,368.4	\$	1,314.6	\$	1,246.7	\$	1,182.8	\$	1,108.1	\$	1,027.2
Federated		<u>2,063.9</u>		<u>2,048.7</u>		<u>2,023.9</u>		<u>1,991.4</u>		<u>1,950.4</u>		<u>1,900.7</u>
Total	\$	3,432.3	\$	3,363.3	\$	3,270.6	\$	3,174.2	\$	3,058.5	\$	2,927.9
Updated 5-Year Projection Scenarios												
<u>15% US Market Increase</u>												
Police & Fire	\$	1,475.0	\$	1,306.2	\$	1,143.7	\$	1,001.6	\$	876.0	\$	754.6
Federated		<u>2,115.4</u>		<u>2,018.5</u>		<u>1,924.9</u>		<u>1,833.4</u>		<u>1,750.6</u>		<u>1,664.7</u>
Total	\$	3,590.4	\$	3,324.7	\$	3,068.6	\$	2,835.0	\$	2,626.6	\$	2,419.3
Change from 2019	\$	158.1	\$	(38.6)	\$	(202.0)	\$	(339.2)	\$	(431.9)	\$	(508.6)
<u>5% US Market Increase</u>												
Police & Fire	\$	1,475.0	\$	1,530.0	\$	1,518.9	\$	1,493.1	\$	1,440.6	\$	1,353.9
Federated		<u>2,115.4</u>		<u>2,161.5</u>		<u>2,164.9</u>		<u>2,149.3</u>		<u>2,115.8</u>		<u>2,055.7</u>
Total	\$	3,590.4	\$	3,691.5	\$	3,683.8	\$	3,642.4	\$	3,556.4	\$	3,409.6
Change from 2019	\$	158.1	\$	328.2	\$	413.2	\$	468.2	\$	497.9	\$	481.7

UAL = Actuarial Liability - Market Value of Assets

Dollar amounts in millions

Unfunded Liability Projections



5-Year Pension UAL Projections - Meketa Economic Scenarios

June 30th	2020		2021		2022		2023		2024		2025	
<u>2019 Valuation Projections</u>												
Police & Fire	\$	1,368.4	\$	1,314.6	\$	1,246.7	\$	1,182.8	\$	1,108.1	\$	1,027.2
Federated		<u>2,063.9</u>		<u>2,048.7</u>		<u>2,023.9</u>		<u>1,991.4</u>		<u>1,950.4</u>		<u>1,900.7</u>
Total	\$	3,432.3	\$	3,363.3	\$	3,270.6	\$	3,174.2	\$	3,058.5	\$	2,927.9
Updated 5-Year Projection Scenarios												
<u>15% US Market Decline and Recovery</u>												
Police & Fire	\$	1,475.0	\$	1,997.0	\$	1,914.2	\$	1,855.7	\$	1,809.3	\$	1,735.8
Federated		<u>2,115.4</u>		<u>2,458.5</u>		<u>2,417.1</u>		<u>2,381.9</u>		<u>2,354.2</u>		<u>2,306.3</u>
Total	\$	3,590.4	\$	4,455.5	\$	4,331.3	\$	4,237.6	\$	4,163.5	\$	4,042.1
Change from 2019	\$	158.1	\$	1,092.2	\$	1,060.7	\$	1,063.4	\$	1,105.0	\$	1,114.2
<u>15% US Market Decline with No Recovery</u>												
Police & Fire	\$	1,475.0	\$	1,986.6	\$	2,185.6	\$	2,313.5	\$	2,396.3	\$	2,447.3
Federated		<u>2,115.4</u>		<u>2,452.4</u>		<u>2,589.1</u>		<u>2,672.1</u>		<u>2,727.7</u>		<u>2,761.4</u>
Total	\$	3,590.4	\$	4,439.0	\$	4,774.7	\$	4,985.6	\$	5,124.0	\$	5,208.7
Change from 2019	\$	158.1	\$	1,075.7	\$	1,504.1	\$	1,811.4	\$	2,065.5	\$	2,280.8

UAL = Actuarial Liability - Market Value of Assets

Dollar amounts in millions

Pension Contribution Projections



5-Year Pension Contribution Projections - Meketa Economic Scenarios

Fiscal Year Ending	2022	2023	2024	2025	2026	2027
<u>2019 Valuation Projections</u>						
Police & Fire	\$ 215.7	\$ 206.9	\$ 212.8	\$ 213.8	\$ 217.7	\$ 221.6
Federated	198.7	204.1	210.0	215.7	220.4	225.4
Total	\$ 414.4	\$ 411.0	\$ 422.8	\$ 429.5	\$ 438.1	\$ 447.0
Updated 5-Year Projection Scenarios						
<u>15% US Market Increase</u>						
Police & Fire	\$ 217.7	\$ 209.2	\$ 212.8	\$ 209.9	\$ 208.7	\$ 204.9
Federated	199.5	204.7	208.8	211.7	213.0	213.3
Total	\$ 417.2	\$ 413.9	\$ 421.6	\$ 421.6	\$ 421.7	\$ 418.2
Change from 2019	\$ 2.8	\$ 2.9	\$ (1.2)	\$ (7.9)	\$ (16.4)	\$ (28.8)
<u>5% US Market Increase</u>						
Police & Fire	\$ 217.7	\$ 213.5	\$ 225.3	\$ 232.9	\$ 243.5	\$ 251.9
Federated	199.5	206.8	215.2	223.5	231.0	237.7
Total	\$ 417.2	\$ 420.3	\$ 440.5	\$ 456.4	\$ 474.5	\$ 489.6
Change from 2019	\$ 2.8	\$ 9.3	\$ 17.7	\$ 26.9	\$ 36.4	\$ 42.6

Dollar amounts in millions

Pension Contribution Projections



5-Year Pension Contribution Projections - Meketa Economic Scenarios

Fiscal Year Ending	2022	2023	2024	2025	2026	2027
<u>2019 Valuation Projections</u>						
Police & Fire	\$ 215.7	\$ 206.9	\$ 212.8	\$ 213.8	\$ 217.7	\$ 221.6
Federated	198.7	204.1	210.0	215.7	220.4	225.4
Total	\$ 414.4	\$ 411.0	\$ 422.8	\$ 429.5	\$ 438.1	\$ 447.0

Updated 5-Year Projection Scenarios

15% US Market Decline and Recovery

Police & Fire	\$ 217.7	\$ 222.4	\$ 243.8	\$ 259.1	\$ 277.0	\$ 292.7
Federated	199.5	211.4	224.7	237.0	248.3	258.7
Total	\$ 417.2	\$ 433.8	\$ 468.5	\$ 496.1	\$ 525.3	\$ 551.4
Change from 2019	\$ 2.8	\$ 22.8	\$ 45.7	\$ 66.6	\$ 87.2	\$ 104.4

15% US Market Decline with No Recovery

Police & Fire	\$ 217.7	\$ 222.2	\$ 248.7	\$ 274.0	\$ 304.4	\$ 334.9
Federated	199.5	211.3	227.2	244.6	262.3	280.3
Total	\$ 417.2	\$ 433.5	\$ 475.9	\$ 518.6	\$ 566.7	\$ 615.2
Change from 2019	\$ 2.8	\$ 22.5	\$ 53.1	\$ 89.1	\$ 128.6	\$ 168.2

Dollar amounts in millions

Funded Status Projections



5-Year Pension Funded Ratio Projections - Meketa Economic Scenarios

June 30th	2020	2021	2022	2023	2024	2025
<u>2019 Valuation Projections</u>						
Police & Fire	73.5%	75.5%	77.5%	79.3%	81.2%	83.1%
Federated	<u>52.2%</u>	<u>53.8%</u>	<u>55.5%</u>	<u>57.3%</u>	<u>59.1%</u>	<u>61.1%</u>
Total	63.8%	65.7%	67.6%	69.4%	71.4%	73.3%
Updated 5-Year Projection Scenarios						
<u>15% US Market Increase</u>						
Police & Fire	71.5%	75.6%	79.4%	82.5%	85.2%	87.6%
Federated	<u>51.1%</u>	<u>54.6%</u>	<u>57.8%</u>	<u>60.7%</u>	<u>63.4%</u>	<u>66.0%</u>
Total	62.2%	66.1%	69.6%	72.7%	75.4%	77.9%
Change from 2019	-1.6%	0.4%	2.0%	3.3%	4.1%	4.7%
<u>5% US Market Increase</u>						
Police & Fire	71.5%	71.5%	72.6%	73.9%	75.6%	77.7%
Federated	<u>51.1%</u>	<u>51.3%</u>	<u>52.5%</u>	<u>54.0%</u>	<u>55.8%</u>	<u>58.0%</u>
Total	62.2%	62.4%	63.5%	65.0%	66.7%	68.9%
Change from 2019	-1.6%	-3.3%	-4.1%	-4.5%	-4.6%	-4.4%

Funded Ratio = Market Value of Assets ÷ Actuarial Liability

Funded Status Projections



5-Year Pension Funded Ratio Projections - Meketa Economic Scenarios

June 30th	2020	2021	2022	2023	2024	2025
<u>2019 Valuation Projections</u>						
Police & Fire	73.5%	75.5%	77.5%	79.3%	81.2%	83.1%
Federated	<u>52.2%</u>	<u>53.8%</u>	<u>55.5%</u>	<u>57.3%</u>	<u>59.1%</u>	<u>61.1%</u>
Total	63.8%	65.7%	67.6%	69.4%	71.4%	73.3%
Updated 5-Year Projection Scenarios						
<u>15% US Market Decline and Recovery</u>						
Police & Fire	71.5%	62.8%	65.5%	67.6%	69.4%	71.5%
Federated	<u>51.1%</u>	<u>44.6%</u>	<u>47.0%</u>	<u>49.0%</u>	<u>50.8%</u>	<u>52.8%</u>
Total	62.2%	54.6%	57.1%	59.3%	61.0%	63.2%
Change from 2019	-1.6%	-11.1%	-10.5%	-10.2%	-10.3%	-10.1%
<u>15% US Market Decline with No Recovery</u>						
Police & Fire	71.5%	63.0%	60.6%	59.6%	59.4%	59.8%
Federated	<u>51.1%</u>	<u>44.8%</u>	<u>43.2%</u>	<u>42.8%</u>	<u>43.0%</u>	<u>43.5%</u>
Total	62.2%	54.7%	52.8%	52.1%	52.1%	52.5%
Change from 2019	-1.6%	-10.9%	-14.8%	-17.4%	-19.3%	-20.8%

Funded Ratio = Market Value of Assets ÷ Actuarial Liability

Simple Scenarios



Distribution of 5-Year Returns Meketa's Capital Market Assumptions 10-Year Horizon

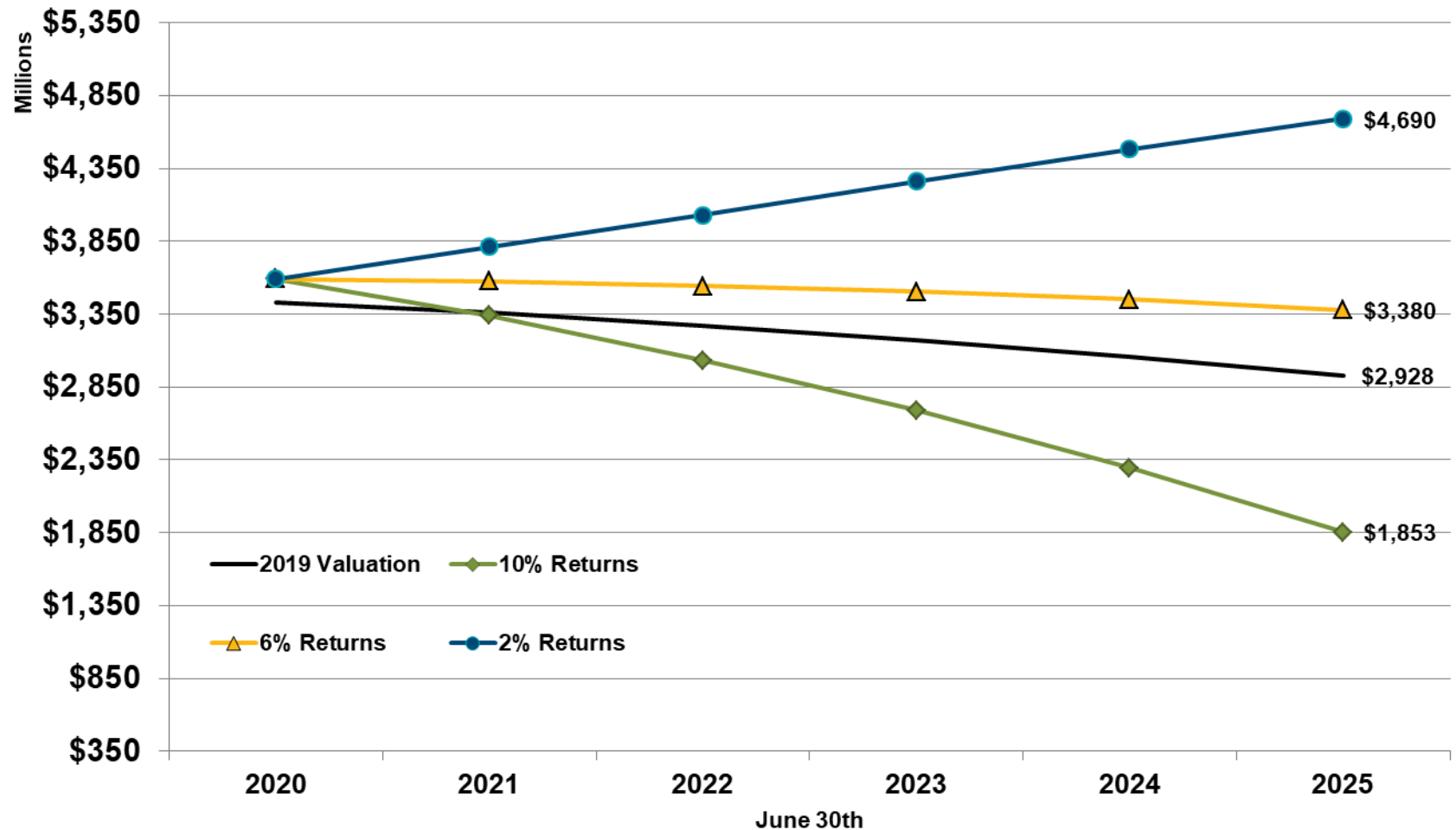
Percentile	Police & Fire	Federated
95th	15.5%	16.5%
75th	9.7%	10.3%
50th	5.9%	6.1%
25th	2.1%	2.1%
5th	-3.0%	-3.4%

- Simple scenarios are designed to represent the approximate returns for the 25th, 50th, and 75th percentiles of expected returns over a 5-year period
- 25% of returns are expected to be higher and 25% are expected to be lower than this range
- Actual returns are expected to vary each year, but the simple scenarios use the same return for each year of the projection

Unfunded Liability Projections



Projected Unfunded Actuarial Liability - Simple Scenarios



Unfunded Liability Projections



5-Year Pension UAL Projections - Simple Scenarios

June 30th	2020		2021		2022		2023		2024		2025	
<u>2019 Valuation Projections</u>												
Police & Fire	\$	1,368.4	\$	1,314.6	\$	1,246.7	\$	1,182.8	\$	1,108.1	\$	1,027.2
Federated		<u>2,063.9</u>		<u>2,048.7</u>		<u>2,023.9</u>		<u>1,991.4</u>		<u>1,950.4</u>		<u>1,900.7</u>
Total	\$	3,432.3	\$	3,363.3	\$	3,270.6	\$	3,174.2	\$	3,058.5	\$	2,927.9
Updated 5-Year Projection Scenarios												
<u>10% Returns</u>												
Police & Fire	\$	1,475.0	\$	1,308.4	\$	1,106.4	\$	886.9	\$	636.3	\$	360.7
Federated		<u>2,115.4</u>		<u>2,032.2</u>		<u>1,927.6</u>		<u>1,802.9</u>		<u>1,657.6</u>		<u>1,491.8</u>
Total	\$	3,590.4	\$	3,340.6	\$	3,034.0	\$	2,689.8	\$	2,293.9	\$	1,852.5
Change from 2019	\$	158.1	\$	(22.7)	\$	(236.6)	\$	(484.4)	\$	(764.6)	\$	(1,075.4)
<u>6% Returns</u>												
Police & Fire	\$	1,475.0	\$	1,456.1	\$	1,424.9	\$	1,398.5	\$	1,361.3	\$	1,317.4
Federated		<u>2,115.4</u>		<u>2,120.1</u>		<u>2,116.8</u>		<u>2,106.8</u>		<u>2,089.0</u>		<u>2,062.9</u>
Total	\$	3,590.4	\$	3,576.2	\$	3,541.7	\$	3,505.3	\$	3,450.3	\$	3,380.3
Change from 2019	\$	158.1	\$	212.9	\$	271.1	\$	331.1	\$	391.8	\$	452.4
<u>2% Returns</u>												
Police & Fire	\$	1,475.0	\$	1,603.9	\$	1,731.6	\$	1,872.6	\$	2,007.8	\$	2,137.8
Federated		<u>2,115.4</u>		<u>2,208.1</u>		<u>2,299.0</u>		<u>2,388.4</u>		<u>2,473.6</u>		<u>2,552.5</u>
Total	\$	3,590.4	\$	3,812.0	\$	4,030.6	\$	4,261.0	\$	4,481.4	\$	4,690.3
Change from 2019	\$	158.1	\$	448.7	\$	760.0	\$	1,086.8	\$	1,422.9	\$	1,762.4

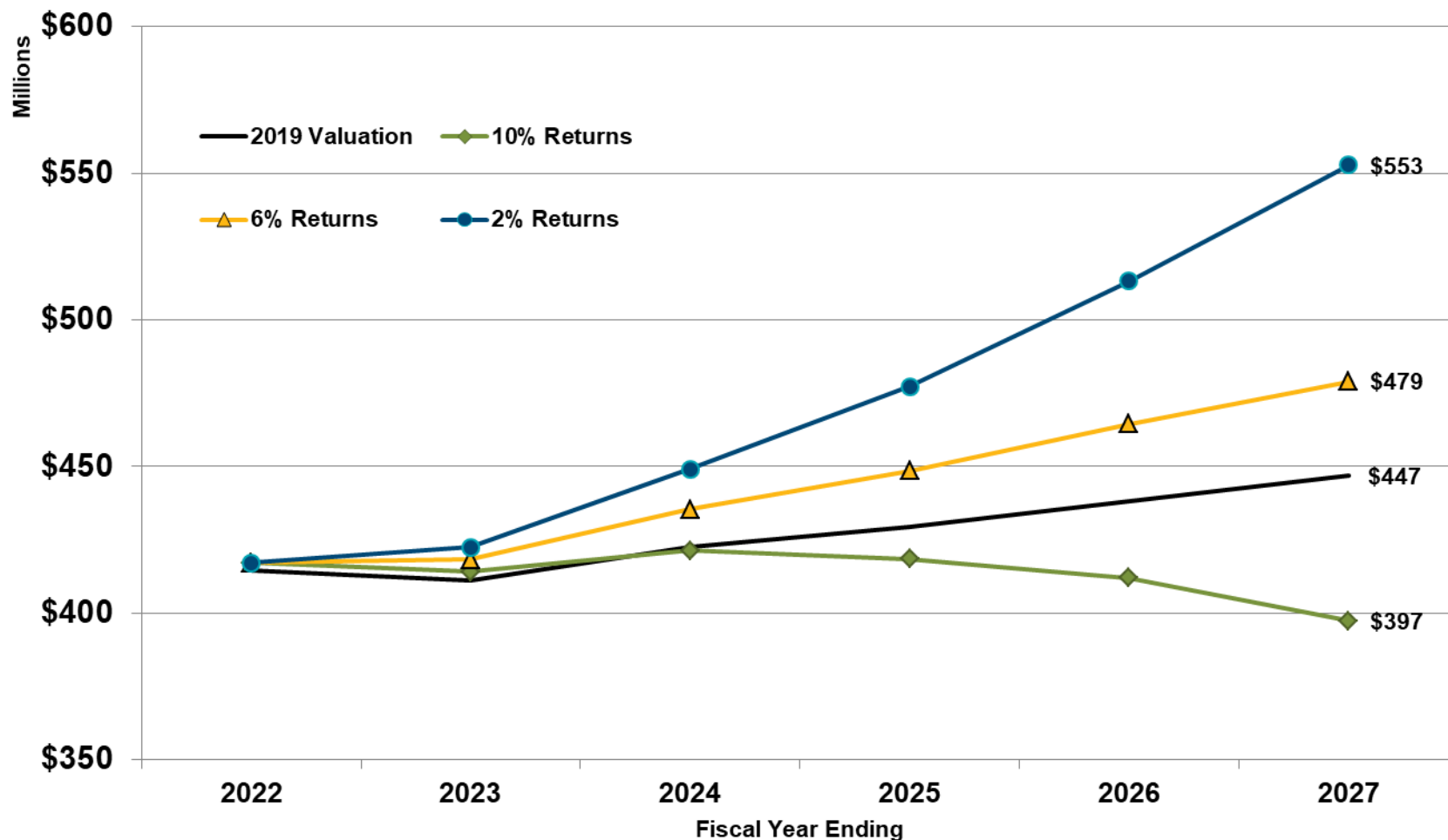
UAL = Actuarial Liability - Market Value of Assets

Dollar amounts in millions

Pension Contribution Projections



Projected Contributions - Simple Scenarios



Pension Contribution Projections



5-Year Pension Contribution Projections - Simple Scenarios

Fiscal Year Ending	2022	2023	2024	2025	2026	2027
<u>2019 Valuation Projections</u>						
Police & Fire	\$ 215.7	\$ 206.9	\$ 212.8	\$ 213.8	\$ 217.7	\$ 221.6
Federated	<u>198.7</u>	<u>204.1</u>	<u>210.0</u>	<u>215.7</u>	<u>220.4</u>	<u>225.4</u>
Total	414.4	411.0	422.8	429.5	438.1	447.0
Updated 5-Year Projection Scenarios						
<u>10% Returns</u>						
Police & Fire	\$ 217.7	\$ 209.2	\$ 212.2	\$ 206.9	\$ 200.7	\$ 188.7
Federated	<u>199.5</u>	<u>204.9</u>	<u>209.1</u>	<u>211.5</u>	<u>211.3</u>	<u>208.6</u>
Total	\$ 417.2	\$ 414.1	\$ 421.3	\$ 418.4	\$ 412.0	\$ 397.3
Change from 2019	\$ 2.8	\$ 3.1	\$ (1.5)	\$ (11.1)	\$ (26.1)	\$ (49.7)
<u>6% Returns</u>						
Police & Fire	\$ 217.7	\$ 212.1	\$ 221.7	\$ 227.3	\$ 236.3	\$ 244.0
Federated	<u>199.5</u>	<u>206.2</u>	<u>213.7</u>	<u>221.3</u>	<u>228.3</u>	<u>235.1</u>
Total	\$ 417.2	\$ 418.3	\$ 435.4	\$ 448.6	\$ 464.6	\$ 479.1
Change from 2019	\$ 2.8	\$ 7.3	\$ 12.6	\$ 19.1	\$ 26.5	\$ 32.1
<u>2% Returns</u>						
Police & Fire	\$ 217.7	\$ 214.9	\$ 231.0	\$ 246.7	\$ 269.2	\$ 293.8
Federated	<u>199.5</u>	<u>207.6</u>	<u>218.1</u>	<u>230.5</u>	<u>244.1</u>	<u>259.0</u>
Total	\$ 417.2	\$ 422.5	\$ 449.1	\$ 477.2	\$ 513.3	\$ 552.8
Change from 2019	\$ 2.8	\$ 11.5	\$ 26.3	\$ 47.7	\$ 75.2	\$ 105.8

Dollar amounts in millions

Funded Status Projections



5-Year Pension Funded Ratio Projections - Simple Scenarios

June 30th	2020	2021	2022	2023	2024	2025
<u>2019 Valuation Projections</u>						
Police & Fire	73.5%	75.5%	77.5%	79.3%	81.2%	83.1%
Federated	<u>52.2%</u>	<u>53.8%</u>	<u>55.5%</u>	<u>57.3%</u>	<u>59.1%</u>	<u>61.1%</u>
Total	63.8%	65.7%	67.6%	69.4%	71.4%	73.3%
Updated 5-Year Projection Scenarios						
<u>10% Returns</u>						
Police & Fire	71.5%	75.6%	80.1%	84.5%	89.2%	94.1%
Federated	<u>51.1%</u>	<u>54.2%</u>	<u>57.7%</u>	<u>61.4%</u>	<u>65.3%</u>	<u>69.5%</u>
Total	62.2%	65.9%	70.0%	74.1%	78.5%	83.1%
Change from 2019	-1.6%	0.3%	2.4%	4.7%	7.2%	9.8%
<u>6% Returns</u>						
Police & Fire	71.5%	72.9%	74.3%	75.6%	77.0%	78.3%
Federated	<u>51.1%</u>	<u>52.3%</u>	<u>53.6%</u>	<u>54.9%</u>	<u>56.3%</u>	<u>57.8%</u>
Total	62.2%	63.5%	65.0%	66.3%	67.7%	69.2%
Change from 2019	-1.6%	-2.1%	-2.6%	-3.1%	-3.6%	-4.1%
<u>2% Returns</u>						
Police & Fire	71.5%	70.1%	68.8%	67.3%	66.0%	64.8%
Federated	<u>51.1%</u>	<u>50.3%</u>	<u>49.6%</u>	<u>48.9%</u>	<u>48.3%</u>	<u>47.8%</u>
Total	62.2%	61.1%	60.1%	59.0%	58.1%	57.3%
Change from 2019	-1.6%	-4.5%	-7.5%	-10.4%	-13.3%	-16.0%

Funded Ratio = Market Value of Assets ÷ Actuarial Liability