



Update and Discussion with the PSPRS Board

GFOAZ BUDGET FORUM
OCTOBER 10, 2019



SERVING THOSE WHO SERVE OTHERS

BOARD REPRESENTATIVE

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“Nine New Board Members”

Board of Trustees

William T Buividas
Chairman



Mike Scheidt
Vice Chairman



Chris Hemmen
Trustee



Brian Moore
Trustee



Jim Ameduri
Trustee

Scott McCarty
Trustee

Dean M. Scheinert
Trustee

Donald A. Smith, Jr.
Trustee

Harry Papp
Trustee

SYSTEM OVERVIEW

- Statewide Defined Benefit Pension Plan for All Public Safety Employees
 - State Agencies, Cities/Towns, Counties, Fire Districts, Tribal Communities
- ~36K Members
 - 20K Actives
 - 14K Retirees
 - 2K Inactive / Vested
- Three Benefits Tiers Based on Hire Date

REFORMS TO THE SYSTEM

1. 2016 Reform (SB 1428) "Prospective"

- Created Tier 3 (Effective July 1, 2017)
- Increased Retiree Eligibility Requirements
- 50 / 50 Employer / Employee Cost Sharing
 - Reduced Employer Costs
 - Increased Employee Costs
- Improved Governance Structure

2. Prop 124 and 125 (Tier 1 and 2) "Legacy"

- Reduced Employer Costs
- Eliminated Harmful Pension Benefit Increase (PBI)
- Created COLA

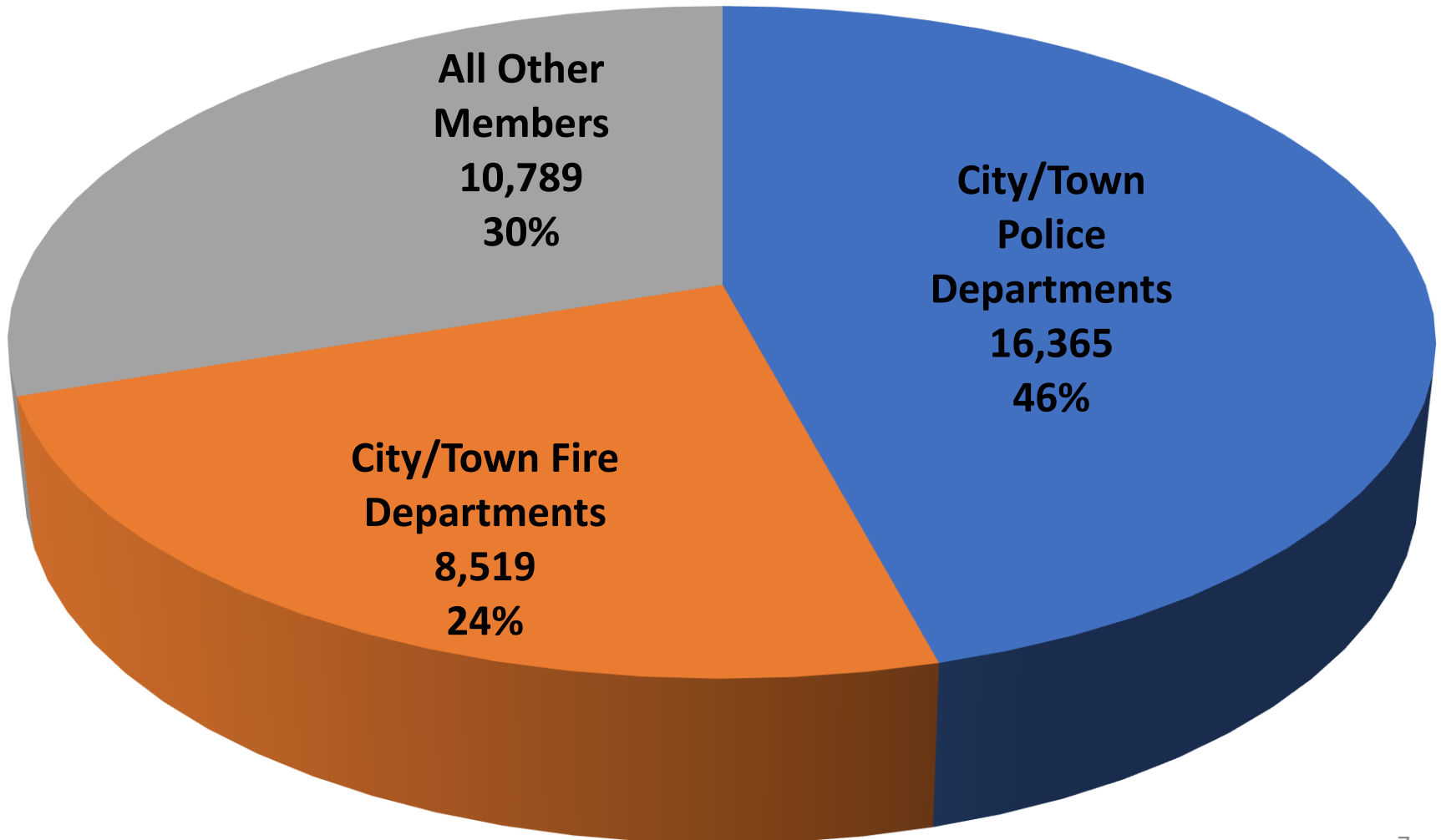
DEPARTMENT OF PUBLIC SAFETY

	Tiers 1 & 2 “Legacy Tiers”	Tier 3 New
Normal Cost	15%	10%
Unfunded Liability	<u>83%</u>	<u>0%</u>
Total	<u>98%</u>	<u>10%</u>
Employer Cost (on \$75K Salary)	<u>\$73.5K</u>	<u>\$7.5K</u>
Employer Savings		<u>\$66K</u>

	Tier 1 “Legacy”	Tier 3 New
Employee Contribution Rate	7.65%	10%
Contribution Amount (on \$75K)	\$5,738	\$7,500
Employee Increase		<u>\$1,763</u>

Employees & Retirees at 6/30/18

~25,000 (70%) are in City and Town Plans



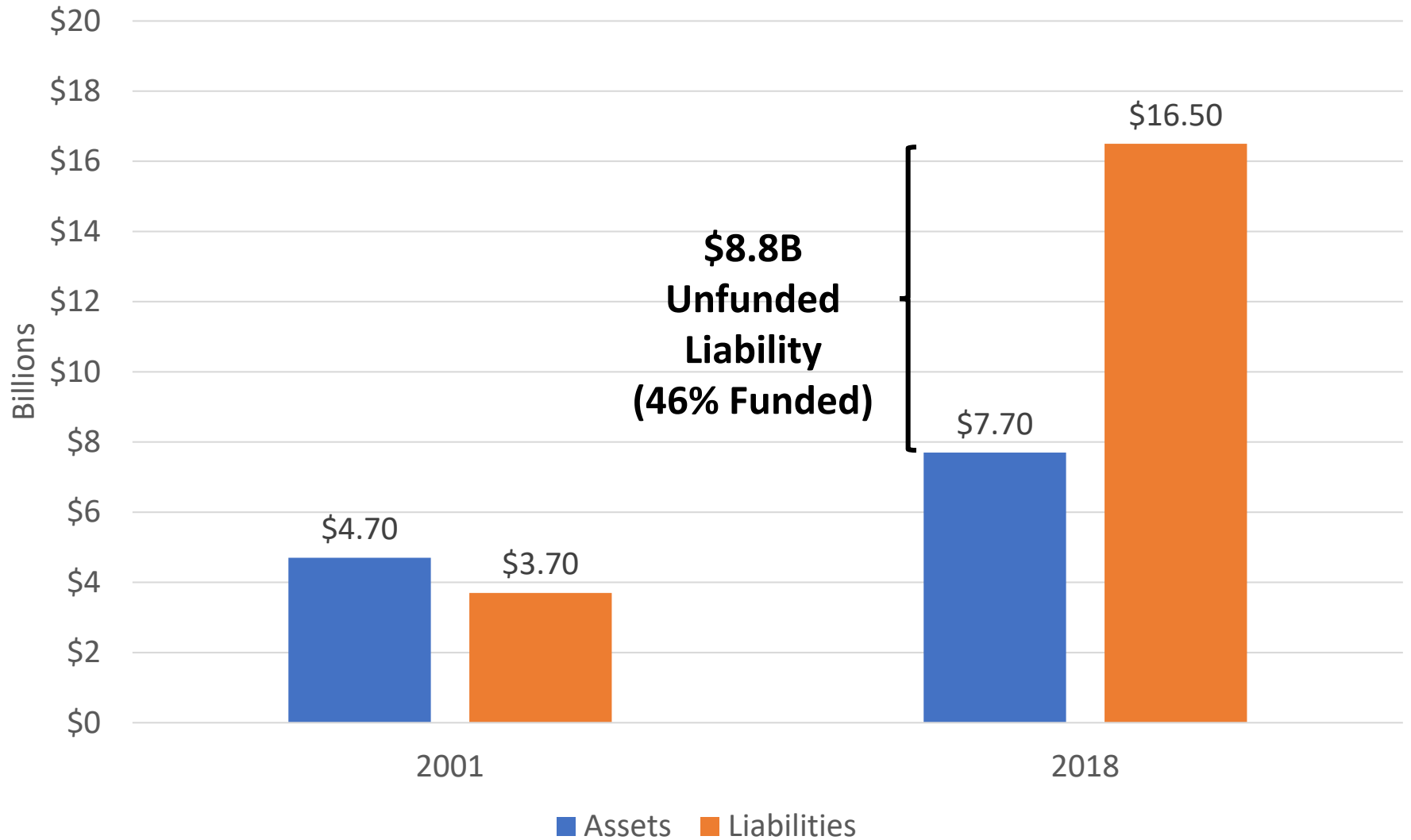
MORE NEEDS TO BE DONE

- Critical Issue Facing Employers and Taxpayers
 - June 30, 2018 Unfunded Liability = \$8.8 Billion
 - 46% Funded
 - Results Vary by Individual Plan

- It's Debt

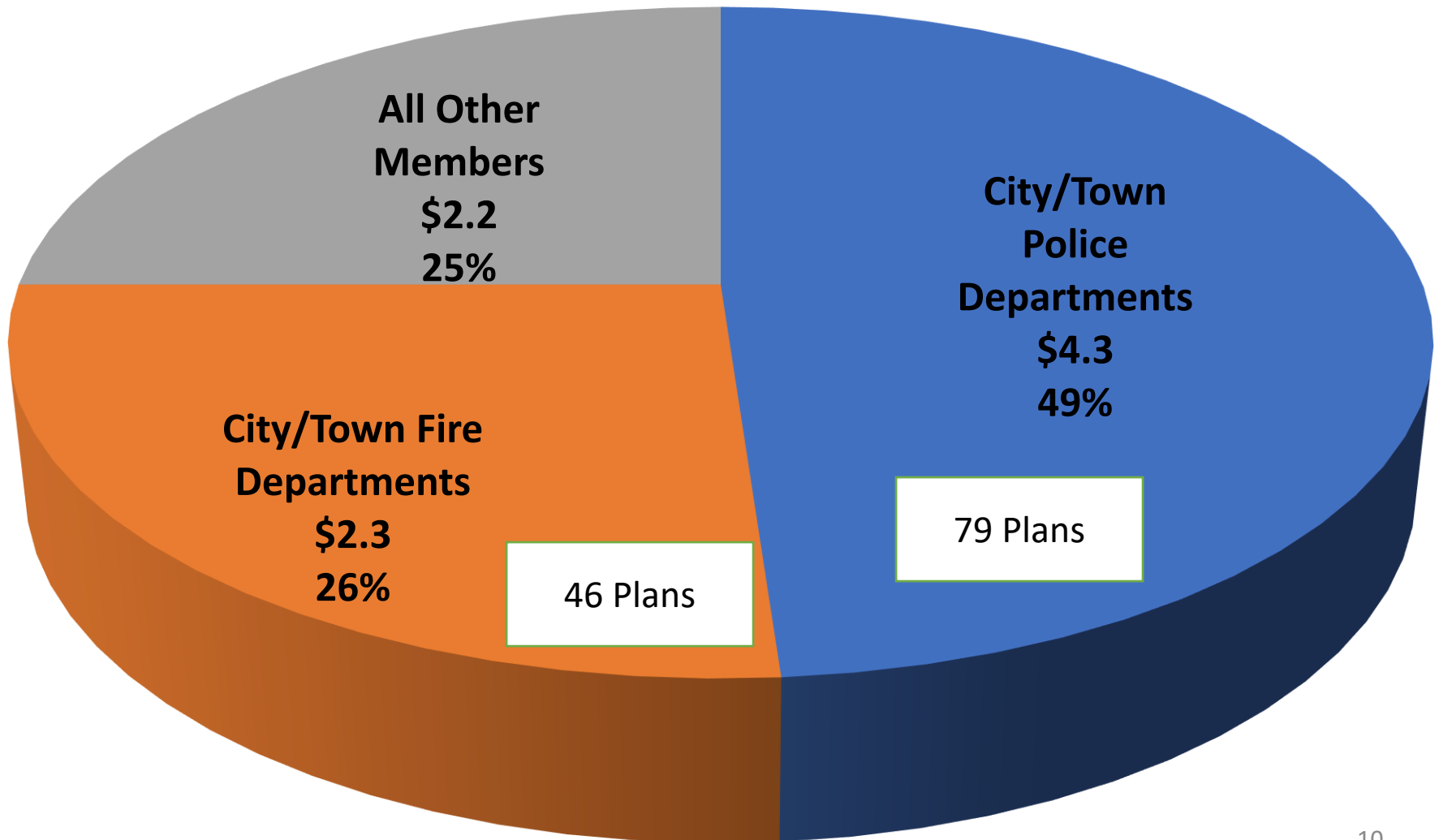
- It's Not **IF** the Unfunded Liability (Legacy Costs) Will be Paid Off, It Is **WHEN AND BY WHOM** (Intergenerational Equity)

LIABILITIES GREW FASTER THAN ASSETS (TIERS 1 & 2)



\$8.8B. Total Unfunded Liability at 6/30/18

\$6.6B. (75%) Relates to Cities and Towns



FUNDED STATUS OF INDIVIDUAL PLANS HAS DECREASED (TIERS & 2)

186

228

175 94%

163 71%

65 29%

11 6%

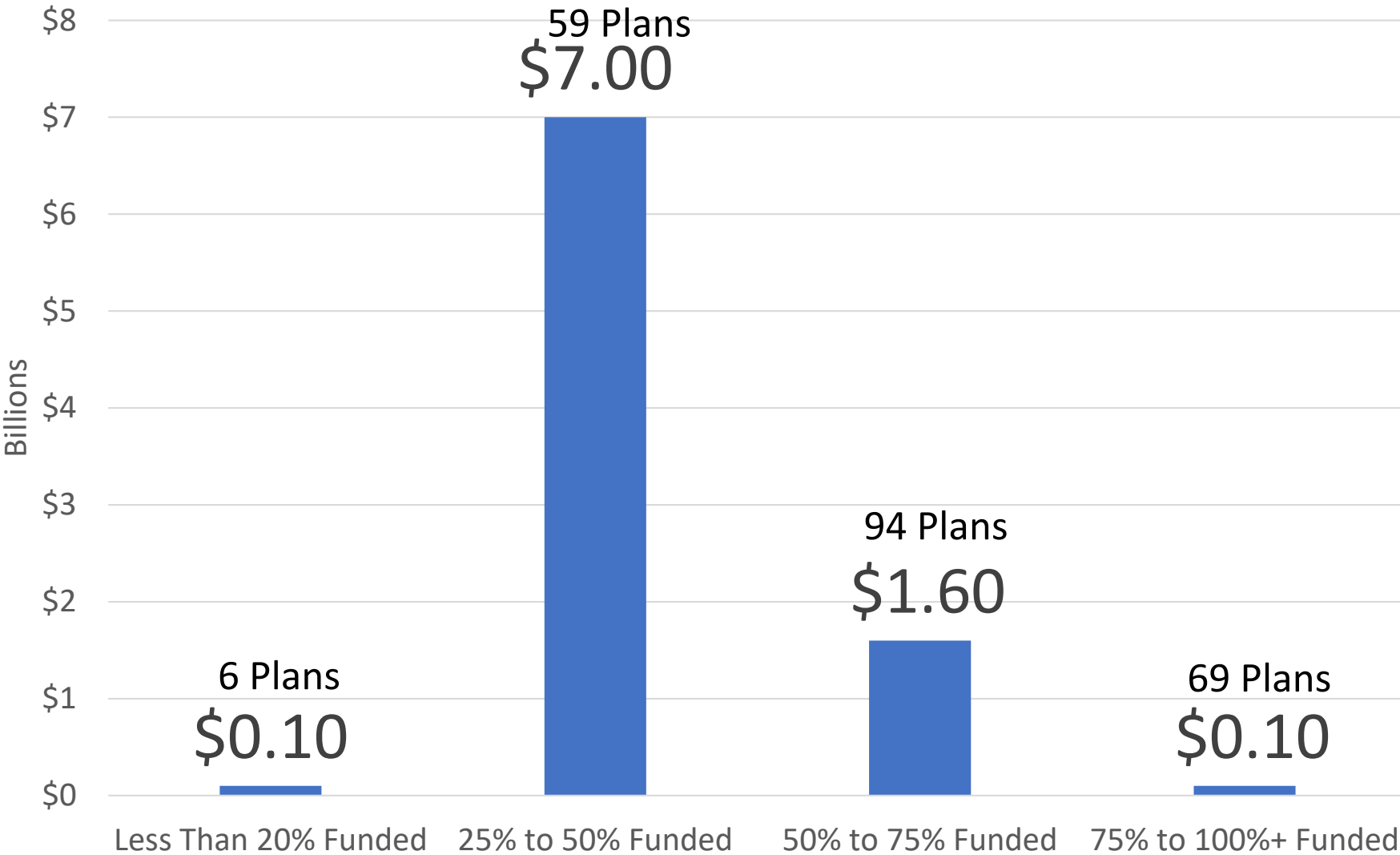
2001

2018

■ Less Than 50% Funded

■ Greater Than 50% Funded

DISBURSEMENT OF \$8.8B UNFUNDED LIABILITIES (TIERS 1 & 2)



DEPARTMENT OF PUBLIC SAFETY

	June 30, 2018
Assets	\$379M
Liabilities	<u>\$1.2B</u>
Unfunded Liability	<u>\$827M</u>
Percent Funded	<u>31%</u>

		Annual Payment
Normal Cost	15%	\$11M
Unfunded Liability	<u>83%</u>	<u>\$63M</u>
Total	<u>98%</u>	<u>\$73M</u>

TIER 3 RESULTS: \$200K UNFUNDED LIABILITY (89% FUNDED)



THE BOARD HAS BEEN BUSY

1. Hired New Actuary Firm
2. Hired New Legal Counsel to the Board
3. Terminated Administrator (HR Related)
4. Completed Outside IT Assessments
5. Approved New Asset Allocation

KEY BOARD GOALS AND INITIATIVES

1. Increase Stakeholder Involvement
2. Stabilize Contribution Amounts
 - Set Appropriate Actuary Assumptions
 - Eliminate Negative Amortization
 - Reduce Investment Fees
3. Improve Reporting
 - Report Dollar Investment Returns (in addition to Percent Returns)
 - Shift Emphasis to Contribution Amount, Not Percent of Payroll

KEY BOARD GOALS AND INITIATIVES (CONCLUDED)

4. Create Actuary Modeler for Employers
 - Plan Specific “What If” Analysis
5. Closely Monitor Tier 3 Performance
 - Possible Consolidation of All Tier 3 Plans
6. Legislative Agenda
 - Local Board Structure / Requirements
 - Create Section 115 Trust
 - Potential Sales Tax Revenue from Medical Marijuana

FY 20-21 ACTUARY VALUATIONS

- Two Rate Assumption Changes
 1. Decreased Interest Rate Assumption to 7.3% (from 7.4%)
 2. Adopted New Public Safety Mortality Tables
- Estimated Financial Impact on Following Slides

INVESTMENT RETURN – IMPACT

- “Scheduled” to lower assumed rate of return from 7.4% to 7.3%
- Estimate of impact:
 - Increase in Normal Cost: 0.6% of Payroll
 - Increase in Unfunded Liability: 0.5% of Payroll
 - Total Increase: 1.1% of Payroll
- Also calculated impact of moving to different assumed rates:

Assumed Rate of Return	Total Increase
7.0%	4.5%
6.5%	10.8%
6.0%	17.8%
5.5%	25.5%
5.0%	34.0%

MORTALITY – IMPACT

- We predict that most public safety plans nationwide will migrate towards a version of this table with some projection in the next 12 months
- Performed a preliminary estimate of the impact on funding requirements of a change to the PubS-2010(A) table
 - Increase to Normal Cost: 0.3% of Payroll
 - Increase to Unfunded Accrued Liability: 0.5% of Payroll
 - Total Estimated Increase: 0.8% of Payroll

ACTUARY ASSUMPTIONS

- The Board Will be Addressing the Following Assumptions
 1. Interest Rate Assumption
 2. Payroll Growth Assumption
 3. Type of Amortization
- Stakeholder Process and Input Important
- Earliest Possible Effective Date: FY 21-22
- Multi-Year Phasing Expected

ACTUARY ASSUMPTIONS (CONTINUED)

1. Interest Rate

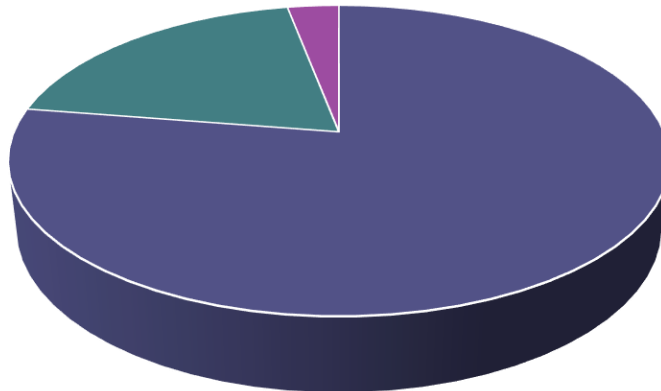
- Current Assumption: 7.3%
- Possible Option

1. Lower Assumption Rate

- Invest Assets Based on Plan Funded Status (Grouping)
- Set Assumption per Grouping

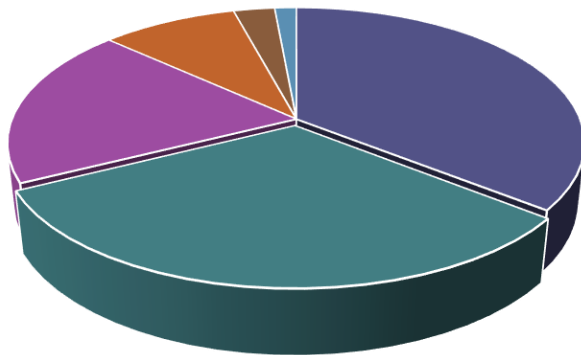
THE ASSET ALLOCATION HAS CHANGED !

2001 Portfolio Allocation



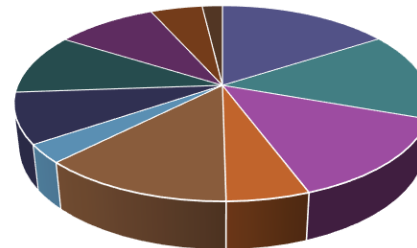
- U.S. Equity (domestic stock)
- Fixed Income
- Other

2009 Allocation



- U.S. Equity (domestic stock)
- Fixed Income (domestic)
- International Equity
- Private Equity
- Real Estate
- Cash

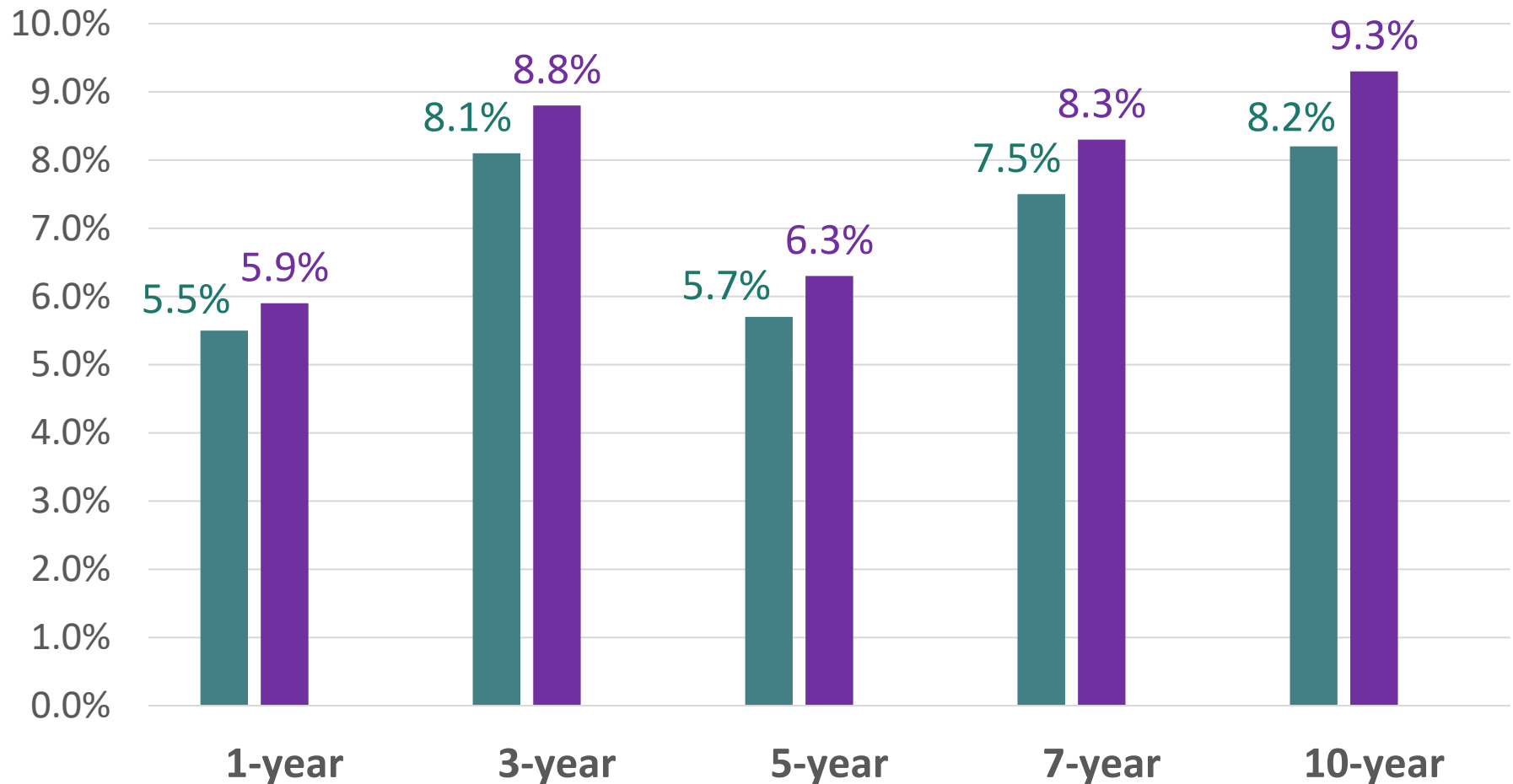
2019 Allocation



- U.S. Equity (domestic stock)
- Non-U.S. Equity
- Private Equity
- Fixed Income
- Credit Opportunities
- Absolute Return
- GTAA
- Real Assets
- Real Estate
- Risk Parity
- Short Term Investments

LOSSES FROM REAL ESTATE HAVE BEEN SIGNIFICANT

Net Returns vs. Net Returns Without Legacy Real Estate



7-YEAR SMOOTHING RATE IS IMPORTANT

	2019	2018
Assumption	7.4%	
7-Year Smoothing	7.5%	6.5%

	2019	2018
Year 1	5.50% ADDED	7.10%
Year 2	7.10%	11.85%
Year 3	11.85%	0.06%
Year 4	0.06%	3.68%
Year 5	3.68%	13.28%
Year 6	13.28%	10.64%
Year 7	10.64%	-0.79% REMOVED

2. Payroll Growth Assumption

- Current Assumption: 3.5% Annually
- Aggregate 8-Year History = 1.3%
- Possible Options
 1. Reduce Assumption Rate
 2. Customize Assumption by Employer or Employer Group

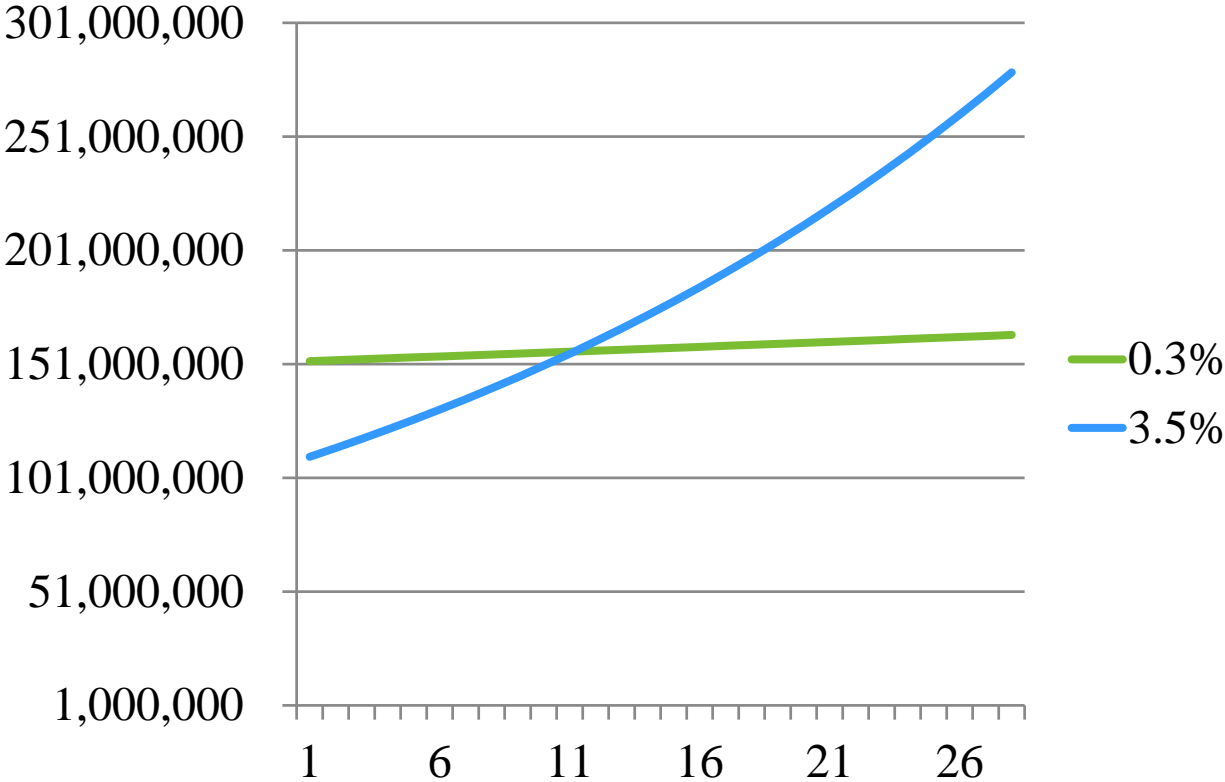
EMPLOYER EXAMPLE 1 – PHOENIX POLICE

- Example 1 – Phoenix Police
 - 2018 Unfunded Actuarial Liability = \$1.959 billion
 - 8-year average payroll increase = 0.3% per year
 - Impact of the payroll growth assumption on the current amortization payment is below:

Payroll Growth Rate	UAAL Payment
0.3%	\$152.3 million
3.5%	\$110.3 million

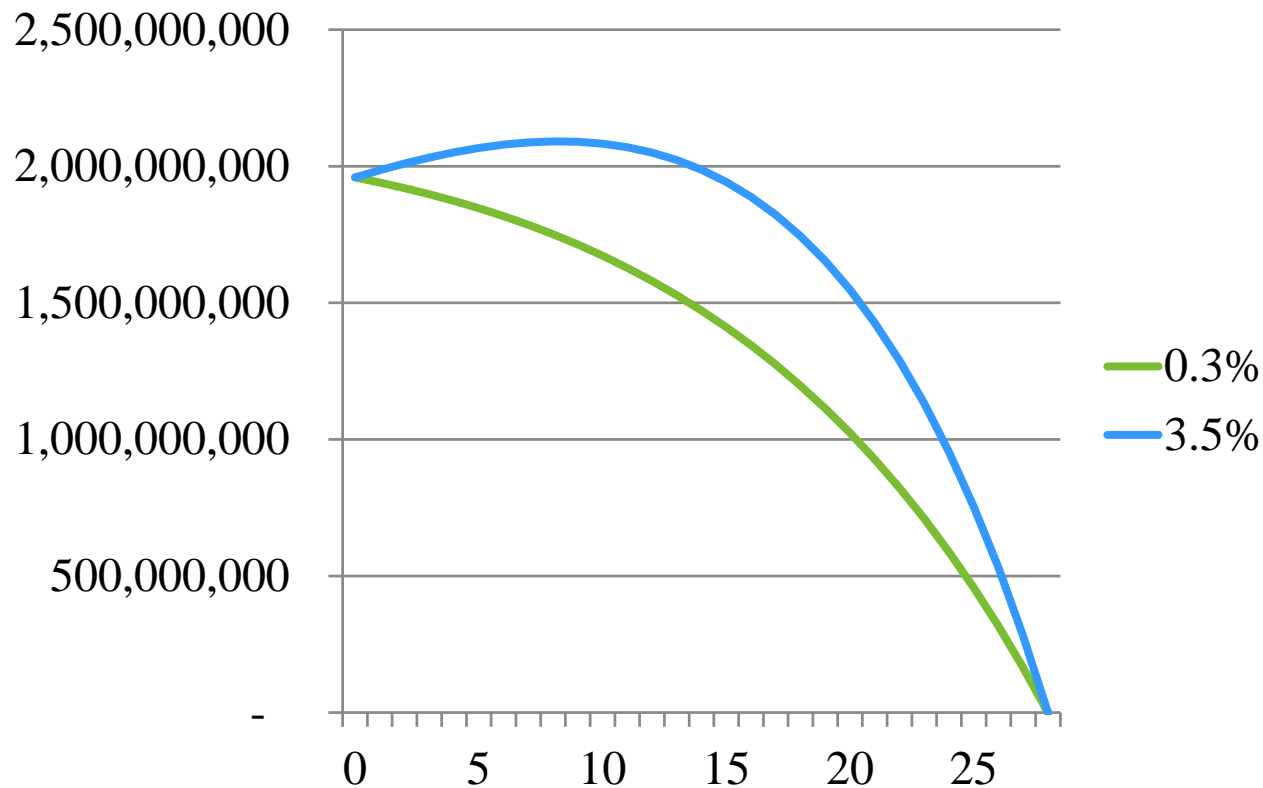
EMPLOYER EXAMPLE 1 – PHOENIX POLICE

- How do the amortization payments change over time?



EMPLOYER EXAMPLE 1 – PHOENIX POLICE

- What happens to the unfunded liabilities?



EMPLOYER EXAMPLE 1 – PHOENIX POLICE

- Sum of total amortization payments
 - 0.3% payroll growth assumption = \$4.4 billion
 - 3.5% payroll growth assumption = \$5.1 billion
- First year in which unfunded liability is less than 2018 UAAL
 - 0.3% payroll growth assumption = 2019
 - 3.5% payroll growth assumption = 2033

ACTUARY ASSUMPTIONS (CONTINUED)

3. Type of Amortization

- Current Assumption: 30-Year Closed
 - Employer Has One-Time Option to Re-Amortize to Closed 30 Years

Amortization Period	Number of Plans	Unfunded Liability
18 Years Remaining	201	\$4 billion
28 Years Remaining	19	\$4.7 billion
29 Years Remaining	<u>8</u>	<u>\$95.4 million</u>
TOTAL	228	\$8.8 billion

3. Type of Amortization (concluded)

- Possible Options

1. Layered Amortization

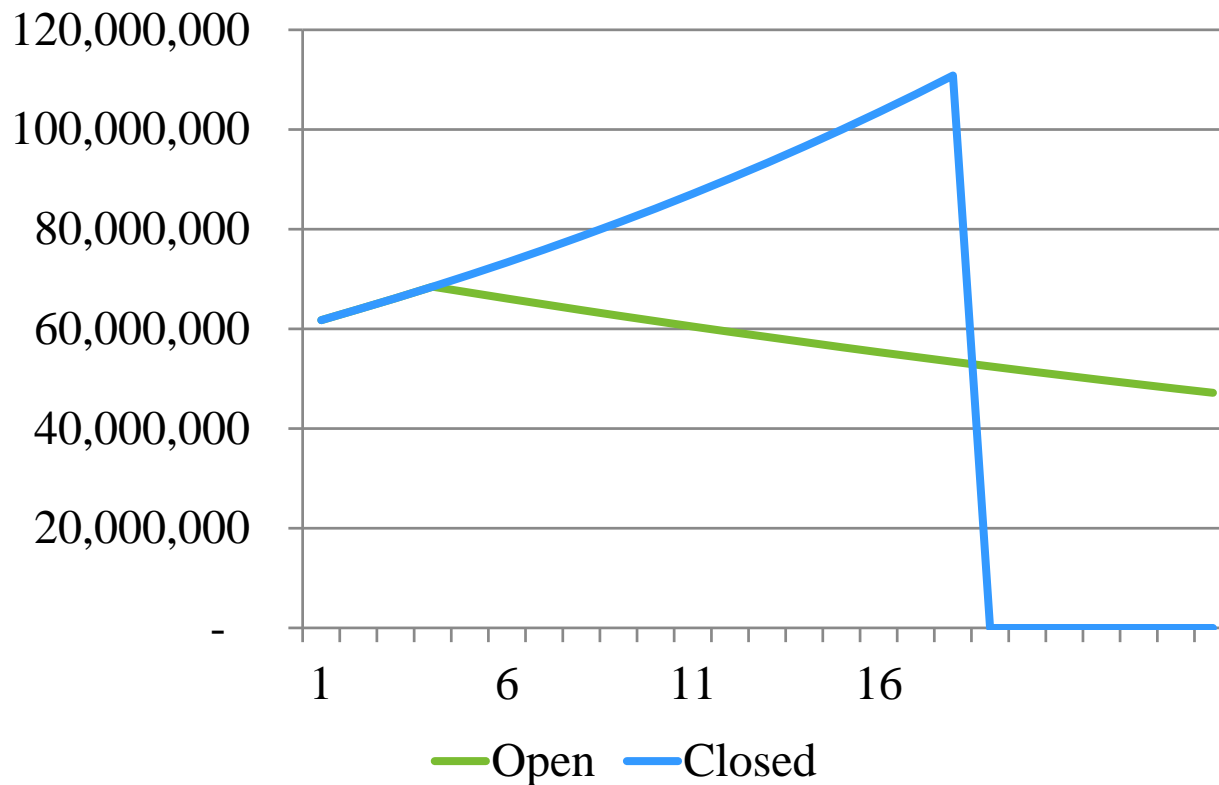
- Each Annual Unfunded Liability is Amortized Over a Different Closed 30-Year Period
- 30 Different Layers

2. Open Amortization at 15 Years

- Annual Payment Based on 15-Years
- Does Not Get Plan 100% Funded by a Specific Year

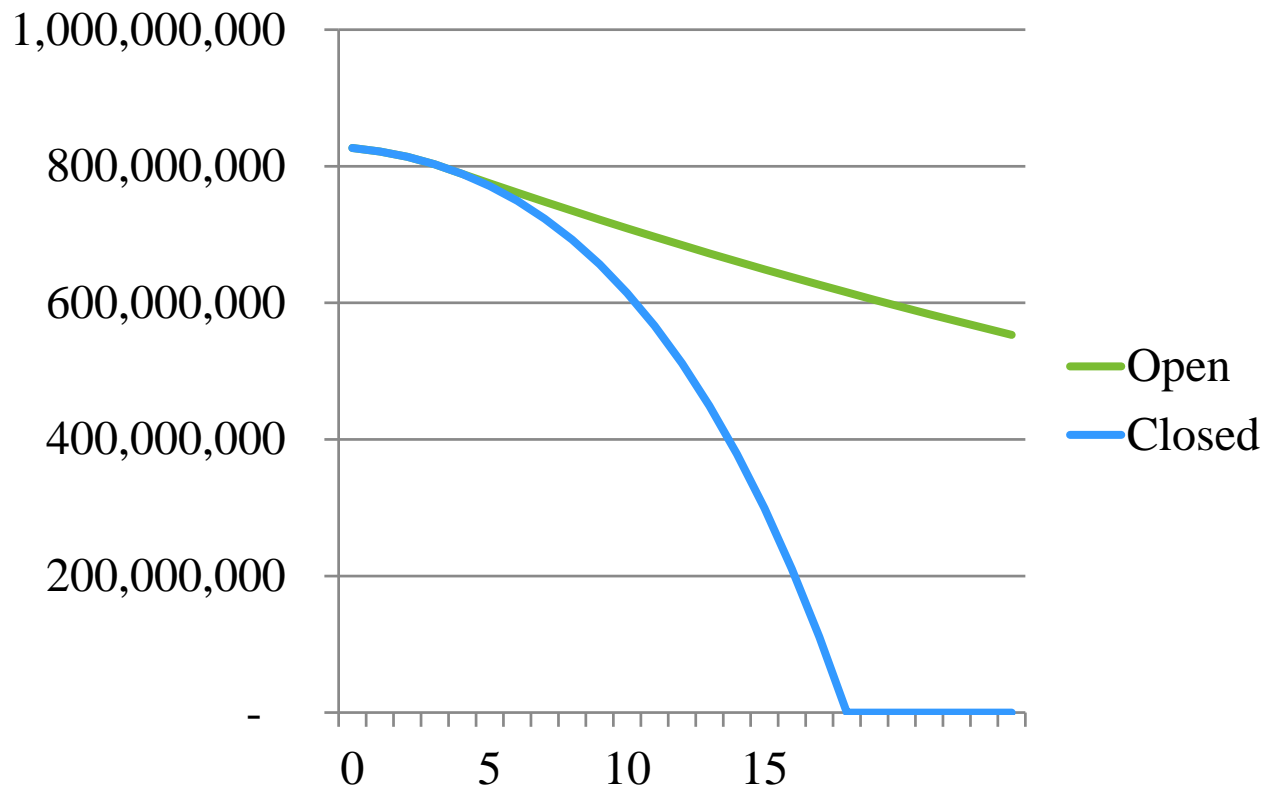
EMPLOYER EXAMPLE 2 – DEPT OF PUBLIC SAFETY

- How do the amortization payments change over time?



EMPLOYER EXAMPLE 2 – DEPT OF PUBLIC SAFETY

- What happens to the unfunded liabilities?



UPCOMING EVENTS

1. November 6, 2019 (2pm to 4pm): Manager Summit

- Brief Financial History
- Details re. Actuarial Assumptions
- PSPRS Board Approach

2. January 22, 2020: PSPRS Annual Training

- Multiple Tracks (Finance, HR, Local Board)
- Actuary Modeler

FINAL THOUGHTS

- Thank You for Your Increased Engagement and Increased Feedback
- Know Your PSPRS Plans
- Actuary Modeler Coming Soon
- Plan for Increased PSPRS Costs as Actuary Assumptions are Refined
- Update Your Pension Funding Policy
- Know Your ASRS Costs As Well...

ALL PENSION COSTS (PSPRS AND ASRS)

EXAMPLE: CITY OF SURPRISE

	PSPRS (Police)	PSPRS (Fire)	ASRS*	Total
Normal Cost	\$2.0M	\$2.2M	\$3.3M	\$7.5M
Unfunded Liability	<u>\$2.1M</u>	<u>\$1.0M</u>	<u>\$1.9M</u>	<u>\$5.0M</u>
Total FY 19-20 Payment	<u>\$4.1M</u>	<u>\$3.2M</u>	<u>\$5.2M</u>	<u>\$12.5M</u>

*ASRS: Normal Cost 7.45%, Unfunded Liability 4.49% of Payroll



QUESTIONS, COMMENTS, AND DISCUSSION