

# A PSPRS Update

**Chairman Scott McCarty**

**Vice Chairman Harry Papp**

League of Arizona Cities and Towns

Annual Conference

September 2, 2021



# PSPRS: An Overview



- **60K Members and Retirees**
- **3 Defined Benefit Plans**
  1. Public Safety
  2. Corrections Officers
  3. Elected Officials
- **Financial Summary at June 30, 2020**
  - Assets: \$11B
  - Liabilities: \$23B
  - Unfunded Liabilities: \$12B
- **Financial Condition Varies Amongst Employer Plans**
- **Improved Finances Expected at June 30, 2021**

# 9-Member Board of Trustees

Scott McCarty  
Chair

Cities and Towns

Harry A. Papp  
Vice Chair

Board of Trustees

Randi Stein

Cities and Towns

Chris Hemmen

Law Enforcement

Brian Moore

Firefighter

Dean M. Scheinert

Counties

Alan Maguire

Cities and Towns

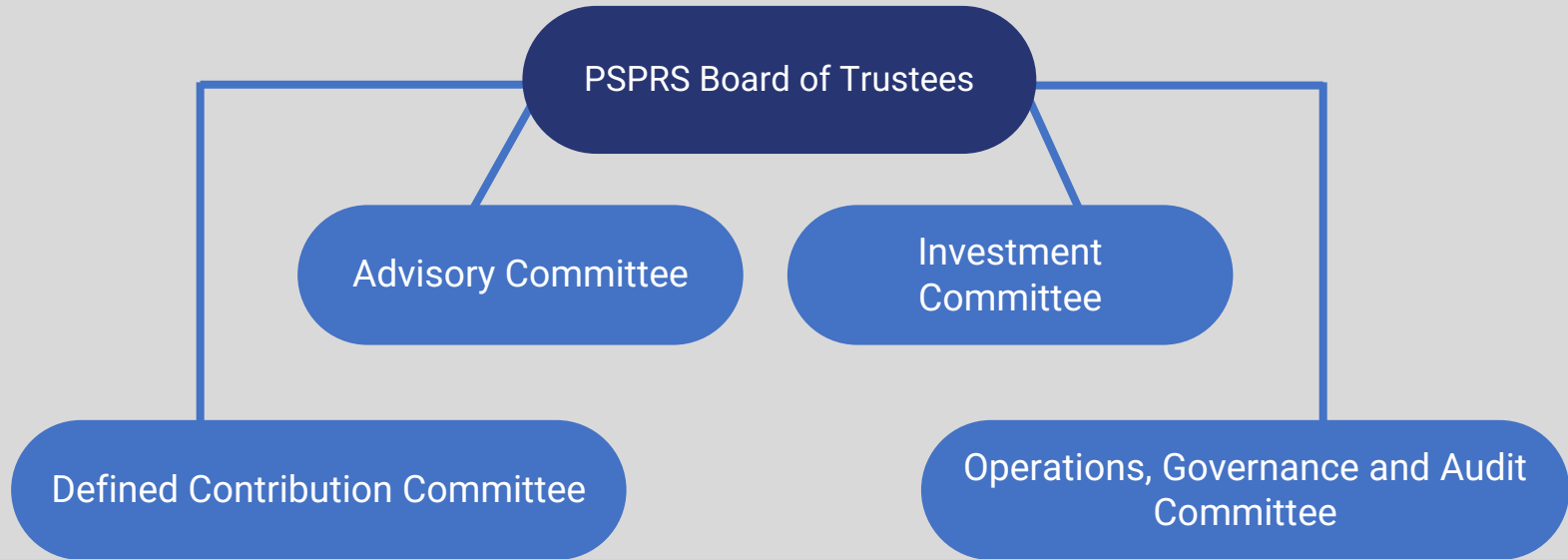
Nate Weber

Firefighter

Daren Wunderle

Law Enforcement

# Board / Committee Structure



## Board Accomplishments



- **Successful Investment Management**
- **Reduced Investment Consultant Fees**
- **Improved Understanding of Financial Condition**
- **\$1B+ Savings by Accelerating Reduction of Unfunded Liabilities as a Result of Changing Select Actuary Assumptions**
- **Improved Stakeholder Relationships**
- **Created Arizona Employers Pension Prefunding Trust**
- **Improved System Culture / Environment**
- **Aggressive Communication Strategies**

# \$1B+ Reduction of Unfunded Liabilities as a Result of Board Actions



- **Hired a New Audit Firm**
- **Hired a New Actuary Firm**
- **Created a New Employer Modeler**
- **Updating Pension Funding Policy**
  - Eliminating Negative Amortization
  - Reducing Payroll Growth Assumption
  - Implemented Closed, 15-Year Amortization Periods

# 2021 Board Priorities



- **Investment Management**
- **Create Metrics to Measure Affordability**
- **Stable and Sustainable Employer Contributions**
- **Legislative Agenda**
- **Continue to Support System Staff**
  - New Pension Administration Software System
- **Reliance on Advisory Committee**
- **Monitor Tier 3 Performance**
- **Stakeholder Relationships**
  - SB 1649

## SB 1649



- **Legislation Intended to Improve Understanding of System's Operations, Investments, and Financial Condition of Three Defined Benefit Plans**
- **Signed April 16, 2021**
- **Requirements**
  - Alternative Investment Expense Reporting
  - Popular Annual Financial Report
  - Annual Plan Financial Stress Testing
  - Added 2 Members to Advisory Committee (House Speaker and Senate President Appointees)



# Employer Tools to Manage Your Plan



1. **Prepay Your Contribution**
  - 2021: \$629M
2. **Arizona Employer Pension Prefunding Trust (IRS Section 115)**
3. **Make Additional Contributions to Reduce Your Unfunded Liability**



# History of Prepaid Contributions

Year	Prepaid Employer Only	Prepaid Employer and Employee	Amount Prepaid	% of Total Payments
<b>2015</b>	<b>3</b>	<b>0</b>	<b>\$2.3 million</b>	<b>0%</b> <b>(\$787 million)</b>
2016	38	0	\$420 million	45% (\$895 million)
2017	43	0	\$475 million	50% (\$959 million)
2018	15*	8*	\$154 million*	17%* (\$969 million)
2019	30	11	\$562 million	45% (\$1.25 billion)
2020	46	15	\$608.8 million	45% (\$1.35 billion)
<b>2021**</b>	<b>51</b>	<b>14</b>	<b>\$629 million</b>	<b>33%</b> <b>(\$1.9 billion)</b>

\* Reduction from prior years due to *Hall-Parker* lawsuit contribution credits

\*\* FY 2021 statistics unaudited; prepayment amounts do not include additional unfunded liability contributions from employers; total payments does not include \$1 billion state appropriation

# Ways to Make Additional Contributions



1. **Direct Payments (One-Time or Ongoing)**
  - Direct Appropriation (\$1B from State of Arizona for DPS and Corrections)
  - Use Remaining Budgeted Funds at End of Year
2. **Use CIP Pay-As-You-Go Resources, Finance Capital Projects Instead**
  - City of Eloy
3. **Dedicated Sales Taxes**
  - Cities of Prescott, Payson, and Globe
4. **Debt Instruments**
  - **Pledged Revenues** (Cities of Kingman, Oro Valley, and Yuma)
  - **Certificates of Participation** (Cities of Flagstaff, Tucson, and Tempe)

# Employer Results from Managing Your Plan



- **Additional Payments**
  - FY 2020-21: \$1.6B
  - FY 2021-22: \$1.1B
  - ~50 Employers Made Payments Greater Than \$1M
  - ~40 Employers Issued Debt
- **Estimated Savings: \$4B over 16 Years**



# Additional Employer Contributions

(in excess of \$1 million) (1 of 2)

APACHE COUNTY SHERIFF'S DEPT.

ELOY POLICE DEPT.

GOODYEAR FIRE DEPT.

BUCKEYE FIRE DEPT.

FLAGSTAFF FIRE DEPT.

GOODYEAR POLICE DEPT.

CHANDLER FIRE DEPT.

FLAGSTAFF POLICE DEPT.

GRAHAM COUNTY SHERIFF'S DEPT.

CHANDLER POLICE DEPT.

FLORENCE POLICE DEPT.

GREENLEE COUNTY SHERIFF'S DEPT.

COCONINO COUNTY SHERIFF'S DEPT

GAME AND FISH DEPT.

HIGHLANDS FIRE DISTRICT

COOLIDGE POLICE DEPT.

GILA COUNTY SHERIFF'S DEPT.

KINGMAN FIRE DEPT.

COTTONWOOD FIRE DEPT.

GILBERT FIRE DEPT.

KINGMAN POLICE DEPT.

COTTONWOOD POLICE DEPT.

GILBERT POLICE DEPT.

MESA FIRE DEPT.

DEPT. OF PUBLIC SAFETY

GLENDALE FIRE DEPT.

MESA POLICE DEPT.

DOUGLAS FIRE DEPT.

GLENDALE POLICE DEPT.

ORO VALLEY POLICE DEPT.

DOUGLAS POLICE DEPT.

GOLDER RANCH FIRE DISTRICT



# Additional Employer Contributions

(in excess of \$1 million) (2 of 2)

PARADISE VALLEY POLICE DEPT.	SAN LUIS POLICE DEPT.	YUMA COUNTY SHERIFF'S DEPT.
PHOENIX FIRE DEPT.	SUPERSTITION FIRE/MEDICAL DIST	YUMA FIRE DEPT.
PHOENIX POLICE DEPT.	TEMPE FIRE DEPT.	YUMA POLICE DEPT.
PIMA COUNTY SHERIFF'S DEPT.	TEMPE POLICE DEPT.	APACHE COUNTY - CORP
PINETOP-LAKESIDE POLICE DEPT.	TUCSON AIRPORT AUTH. FIRE DPT	DEPT. OF CORRECTIONS - CORP
PRESCOTT FIRE DEPT.	TUCSON AIRPORT AUTH. POLICE	GILA COUNTY - CORP
PRESCOTT POLICE DEPT.	TUCSON FIRE	PIMA COUNTY - CORP
PRESCOTT VALLEY POLICE DEPT.	VERDE VALLEY FIRE DISTRICT	PINAL COUNTY - CORP
QUEEN CREEK FIRE DEPT.	WELLTON POLICE	PINAL COUNTY - DISPATCHERS
SAHUARITA POLICE DEPT.	WICKENBURG POLICE DEPT.	YUMA COUNTY - CORP
SAN LUIS FIRE DEPT.	YAVAPAI COUNTY SHERIFF'S DEPT.	

# PSPRS Investments



## FY 2020-21 Investment Performance

- ~27% (estimated) return as of June 30, 2021
- \$3.4 billion increase since June 30, 2020
- Portfolio value reaches \$14.3 billion
- Aided by stock purchases during market lows
- Aided by portfolio changes from fixed income to private sector investments

## Capital Appreciation

Translates growth in the economy into growth in the trust's assets and includes:

- U.S. and international public equities
- Private equity – U.S. and global
- Opportunistic real estate
- High yield bonds

## Contractual Income

Refers to investments where a contractual return is driving returns and includes:

- U.S. treasuries
- IG bonds
- Private lending
- Leasing and royalties

## Diversifying Strategies

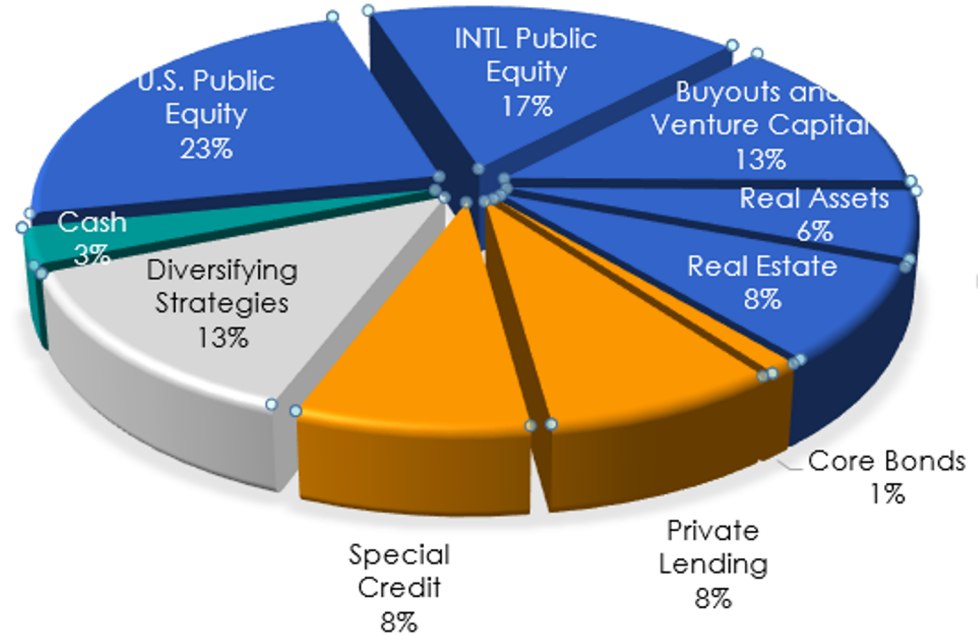
Investments for positive returns over time, with little to no correlation to traditional asset classes. Examples include:

- Global tactical asset allocation
- Long/short equity
- Merger arbitrage

# PSPRS Investments

(Three major categories)

Asset Allocation as of June 30, 2020



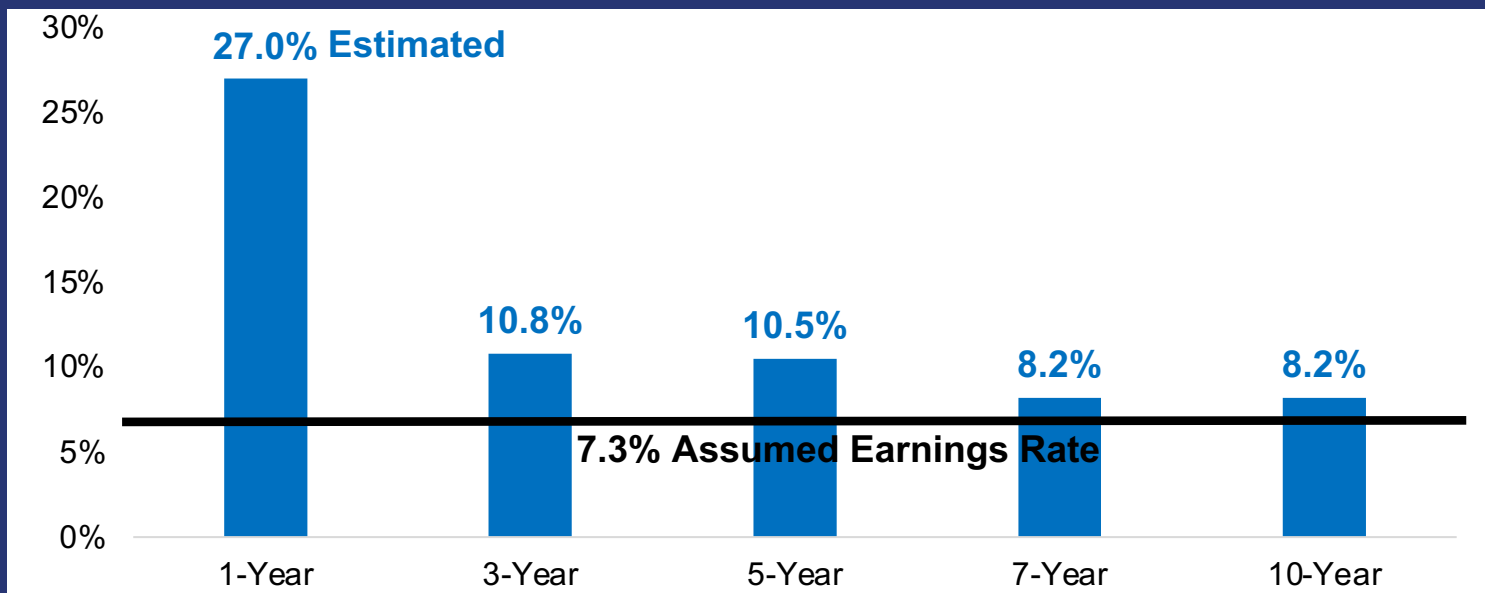




# PSPRS Investments Overview

## Investment returns over longer horizons

Exceeds 7.3 % assumed earnings rate over 1, 3, 5, 7 and 10-year periods





# Investment allocation & market value

(Information yet to be audited)

## Actual Market Value as of 08/24/2021

Asset Class	\$	%
Capital Appreciation	10,401,813,450	61.99%
U.S. Equity	3,947,366,701	23.52%
Non-U.S. Equity	2,575,149,307	15.35%
Global Private Equity	3,797,393,113	22.63%
Other Assets	81,904,329	0.49%
Contractual Income	2,679,434,109	15.97%
Core bonds	624,841,352	3.72%
Private Credit	1,550,795,057	9.24%
Other Assets	503,797,700	3.00%
Diversifying Strategies	1,602,340,640	9.55%
Cash	2,096,259,344	12.49%
<b>Arizona PSPRS Trust -Total</b>	<b>\$16,779,847,543</b>	<b>100.00%</b>

A desert landscape at sunset or sunrise, featuring numerous saguaro cacti in the foreground and middle ground. The sky is filled with soft, colorful clouds in shades of orange, pink, and blue. In the distance, low mountains are visible under the twilight sky.

**AZ League of Cities & Towns Annual Conference**

# **PSPRS: Update and Programs to Aid Employers**

**PRESENTERS**

**Maureen Toal, Public Agency Retirement Services (PARS)**

**SEPTEMBER 2, 2021**

# Options for Funding PSPRS

- 01 Make Additional Discretionary Payments
- 02 Prefund into a Contingency Reserve Fund
- 03 Issue Pension Obligation Bonds/Certificates of Participation
- 04 Prefund into an IRS Section 115 Pension Prefunding Trust
- 05 Use Above In Combination with Each Other

# What is AEPPP Trust?



**General  
Fund**



**Local Government's  
AEPPP Trust Account**



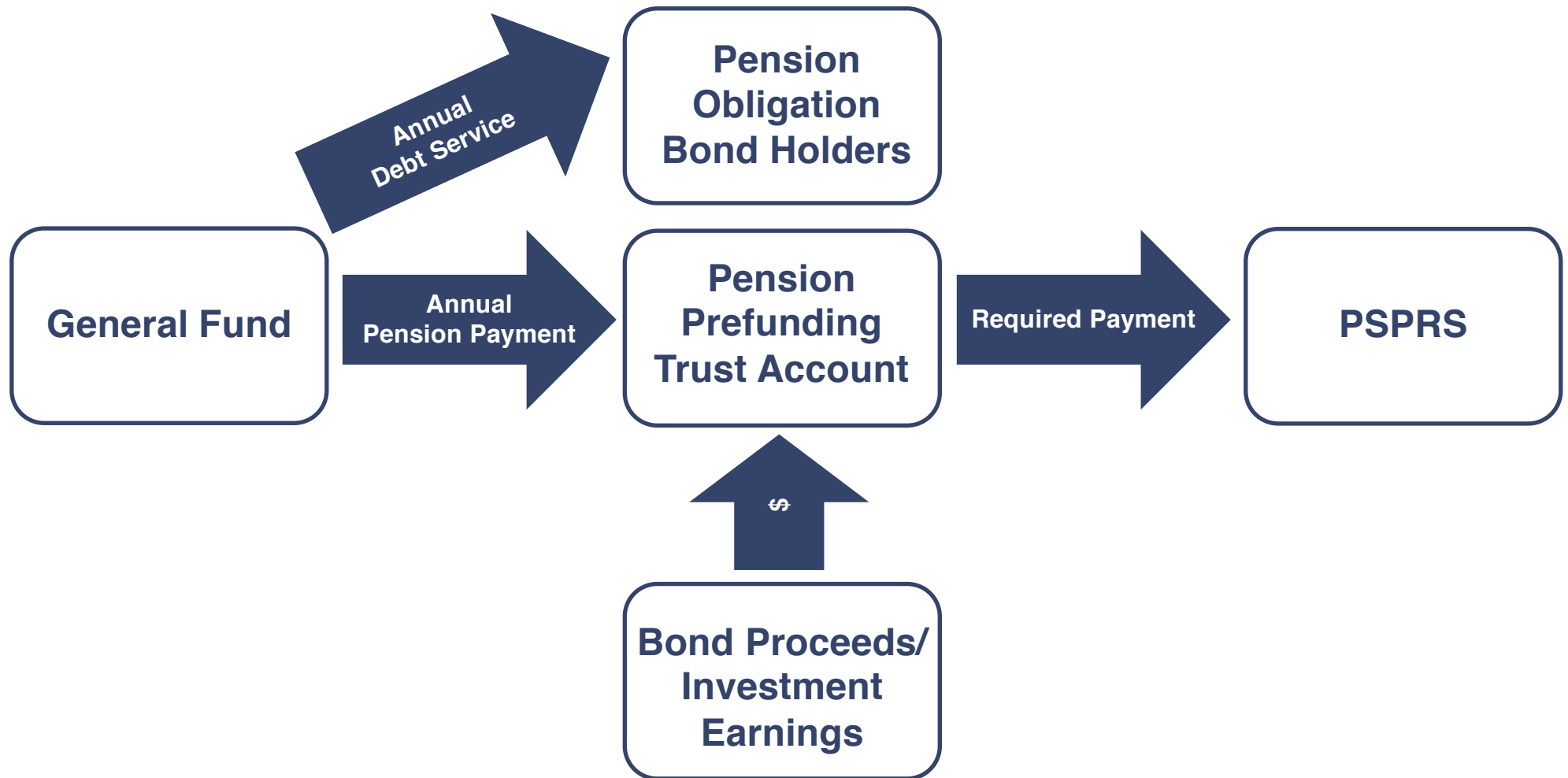
**PSPRS,  
CORP, EORP**

- Locally controlled and owned by participating employer, operating separately from PSPRS
- Distributions can be made to PSPRS only (no reimbursements)
- Any employer who participates in PSPRS, CORP or EORP can invest in AEPPP
- Employers maintain control of investments, contributions and disbursements
- Investment providers and options are different than PSPRS Funds

# Trust vs. Reserve Account

Contingency Reserve Account	Trust
Fixed income investing only	Fixed Income or diversified investing available
Investments not tailored for long term use	Can be tailored for short- or long-term use
Revocable	Irrevocable (for non-pension expenses)
Can be accessed for other uses	Dedicated solely for pension costs
Unprotected from creditors	Exclusive benefit/protected from creditors
No corporate trustee	Corporate trustee to mitigate fiduciary risk

# Using Trust with POBS or COPS



# Why Use AEPPP?

01

## **Stabilize Pension Costs**

When contribution rates rise, assets can be transferred to PSPRS to mitigate rate volatility

02

## **Diversified Investing**

May result in greater longer term returns than investing in a pension reserve account

03

## **Local Flexibility and Control**

Over investments, contributions, and disbursements



# Why Use AEPPP?

04

## **Improve Credit Rating**

Credit rating agencies may look favorably upon agencies who take prudent steps to reduce liabilities with a trust

05

## **Protect From Diversion**

Secure in irrevocable trust to protect from diversion for other uses more than a budget account

06

## **Use with Bond Funded Strategy**

Trusts can be used in conjunction with proceeds from Pension Obligation Bonds

# AEPPP Provider Overview

## PSPRS

### Trust Administrator & Consultant



- Coordinates all AEPPP services
- Develops/manages documents

- Monitors state & federal compliance
- Handles recordkeeping & reporting

**37**

Years of Experience  
(1984-2021)

**2,000+**

Plans under  
Administration

**1,000+**

Public Agency  
Clients

**500K+**

Plan Participants

### Trustee & Investment Manager Option



- 5<sup>th</sup> largest commercial bank and one of the nation's largest trustees for Section 115 trusts
- Provides investment advisory/co-fiduciary services
- Manage investments including custom and active/passive options
- Safeguards plan assets as trustee/custodian

**158**

Years of Experience  
(1863-2021)

**\$9.0T**

Assets under  
Trust Custody

### Investment Manager Option



- One of the world's most respected investment management companies
- Designed investment strategies specifically for Trust
- Offers index based mutual funds with low expense ratios
- Fees decrease as assets across Vanguard strategies grow

**46**

Years of Experience  
(1975-2021)

**\$7 T**

Assets under  
Management

# Contacts

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[cpartridge@psprs.com](mailto:cpartridge@psprs.com)

# Update on PSPRS and Tools to Help Cities Manage Their Plans

## “Chopping Down the Mountain”

*Addressing Legacy Pension Costs for Arizona Municipalities*



**2021 League Annual Conference**

**Arizona Biltmore**

*Thursday, September 2, 2021 at 10:30 a.m.*

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**Presenters:**

Mark Reader, *Managing Director, Arizona Office*

Omar Daghestani, *Managing Director, Chicago Office*

## Agenda Outline

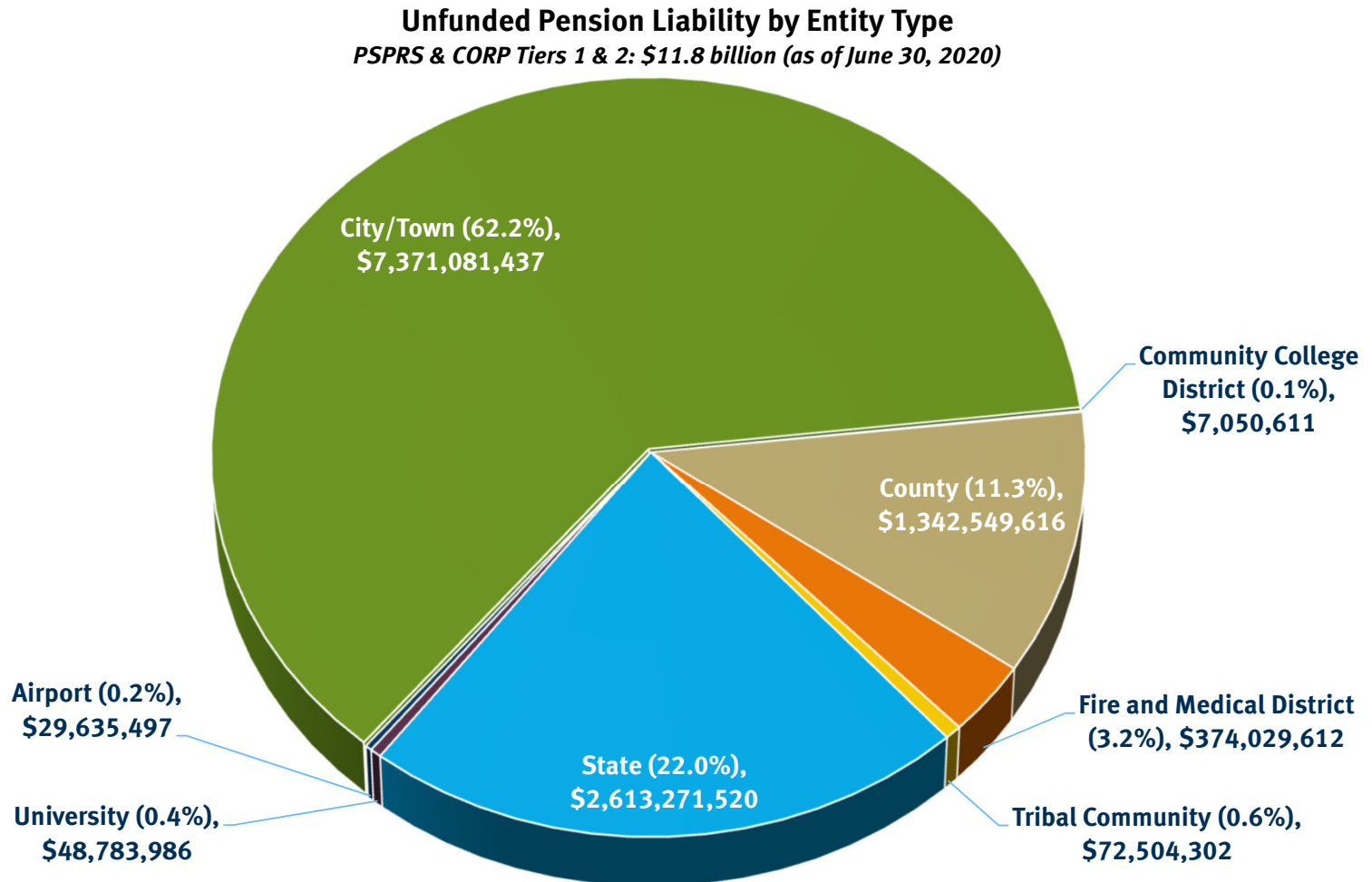
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### League of Arizona Cities and Towns – Update on PSPRS and Tools to Help Cities Manage Their Plans Thursday, September 2, 2021, 10:30 a.m.

Time	Topics	Speaker
10 Minutes	<b>History/Background of Arizona Pension Bonds</b> <ul style="list-style-type: none"><li>▪ Why have several Arizona cities and towns issued pension bonds?</li><li>▪ Tier 2 and Tier 2 Unfunded Liabilities</li><li>▪ Case Study</li></ul>	<b>Mark Reader</b> Managing Director – Stifel
10 Minutes	<b>National Trends and Policy Issues to Consider in the Future</b>	<b>Omar Daghestani</b> Managing Director – Stifel
5 Minutes	<b>Questions</b>	

## **History/Background of Arizona Pension Bonds**

## Total Tier 1 and Tier 2 PSPRS Employee Legacy Costs (Unfunded Liability)



*Note: Does not include 27 Arizona pension financings totaling \$2.4 billion.*

*Source: Arizona Public Safety Personnel Retirement System Actuarial Valuation as of June 30, 2020 and Arizona Corrections Officer Retirement Plan Actuarial Valuation as of June 30, 2020, Foster & Foster Actuaries and Consultants.*

## **Arizona Public Safety Personnel Retirement System (PSPRS) Pension Discussion**

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1. PSPRS (Tier 1 and Tier 2) Unfunded Liability – often largest and increasing debt on the balance sheet accruing at 7.2%
2. Arizona State Average: 47% Funded – Ranging from 5% to 100% Funded
3. Increasing liability & amortization payments to PSPRS – budget challenges
4. Rating agencies and investors asking more questions in recent years
5. Arizona Pension Reforms and Related Constitutional Amendments (Prop. 124 & 125)
6. COVID resulted in bond market historical low interest rates – 2% range (taxable)
7. May 2020 – City of Flagstaff leadership to discuss pension bonds
8. Stifel Arizona and Chicago Office – Engaged by the City of Flagstaff



## Options

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- 1 Sales tax increase – restricted with sunset provision
- 2 Sales / Use tax implementation
- 3 Additional general fund contribution (budget capacity)
- 4 Voter approved property tax (general obligation bonds)
- 5 Do nothing
- 6 Pension bonds / debt restructuring

## Arizona PSPRS Pension Revenue Bond and COP Transactions – July 2020 to Date

Sale Date	Jurisdiction	Par Amount	Security	Maturity Range	All-in TIC
07/23/20	City of Flagstaff, Arizona	\$131,000,000	COP	2021 - 2040	2.696%
10/21/20	Pinal County, Arizona	89,055,000	REV	2021 - 2037	2.612%
10/22/20	Gila County, Arizona	16,855,000	REV	2021 - 2039	2.980%
12/09/20	Yuma County, Arizona	35,070,000	REV	2021 - 2035	2.383%
01/12/21	City of Yuma, Arizona	159,475,000	REV	2021 - 2038	2.381%
02/16/21	City of Tucson, Arizona	658,055,000	COP	2022 - 2047	2.700%
03/09/21	Apache County, Arizona	15,190,000	REV	2022 - 2038	2.890%
03/25/21	City of San Luis, Arizona	9,215,000	REV	2021 - 2037	2.994%
03/30/21	Coconino County, Arizona	18,160,000	REV	2022 - 2038	2.794%
04/21/21	Pima County, Arizona	300,000,000	REV	2022 - 2036	2.045%
05/06/21	Golder Ranch Fire District	27,980,000	COP	2022 - 2037	2.565%
05/11/21	Town of Wellton, Arizona	2,250,000	REV	2021 - 2036	3.800%
05/21/21	Town of Pinetop-Lakeside, Arizona**	9,645,000	REV	2022 - 2047	3.086%
05/26/21	Verde Valley Fire District	9,495,000	COP	2022 - 2037	2.929%
06/02/21	City of Kingman, Arizona	38,755,000	REV	2022 - 2037	2.458%
06/03/21	City of Cottonwood, Arizona	20,380,000	REV	2022 - 2038	2.549%
06/10/21	City of Douglas, Arizona	38,885,000	REV	2022 - 2039	2.541%
06/15/21	Town of Oro Valley, Arizona	17,975,000	REV	2022 - 2038	2.385%
06/23/21	City of Glendale, Arizona**	252,800,000	COP	2024 - 2037	2.508%
06/24/21	Highlands Fire District	8,510,000	COP	2022 - 2046	3.238%
07/07/21	City of Tempe, Arizona**	343,000,000	COP	2023 - 2037	2.148%
07/08/21	Superstition Fire and Medical District	29,360,000	COP	2023 - 2045	3.079%
07/20/21	Copper Canyon Fire and Medical District	6,840,000	COP	2022 - 2035	3.562%
07/21/21	Bullhead City Fire District	34,980,000	COP	2022 - 2038	2.790%
08/11/21	City of Casa Grande, Arizona	63,260,000	REV	2022 - 2036	2.170%
08/24/21	Arizona Fire and Medical Authority	38,145,000	COP	2022 - 2044	3.023%
08/26/21	Central Arizona Fire and Medical Authority	53,365,000	COP	2022 - 2038	2.919%
<b>Total</b>	<b>27 Transactions</b>	<b>\$2,427,700,000</b>			

## Taxable Interest Rate Environment

### 10-Year U.S. Treasury Note Yields: Past 10 Years

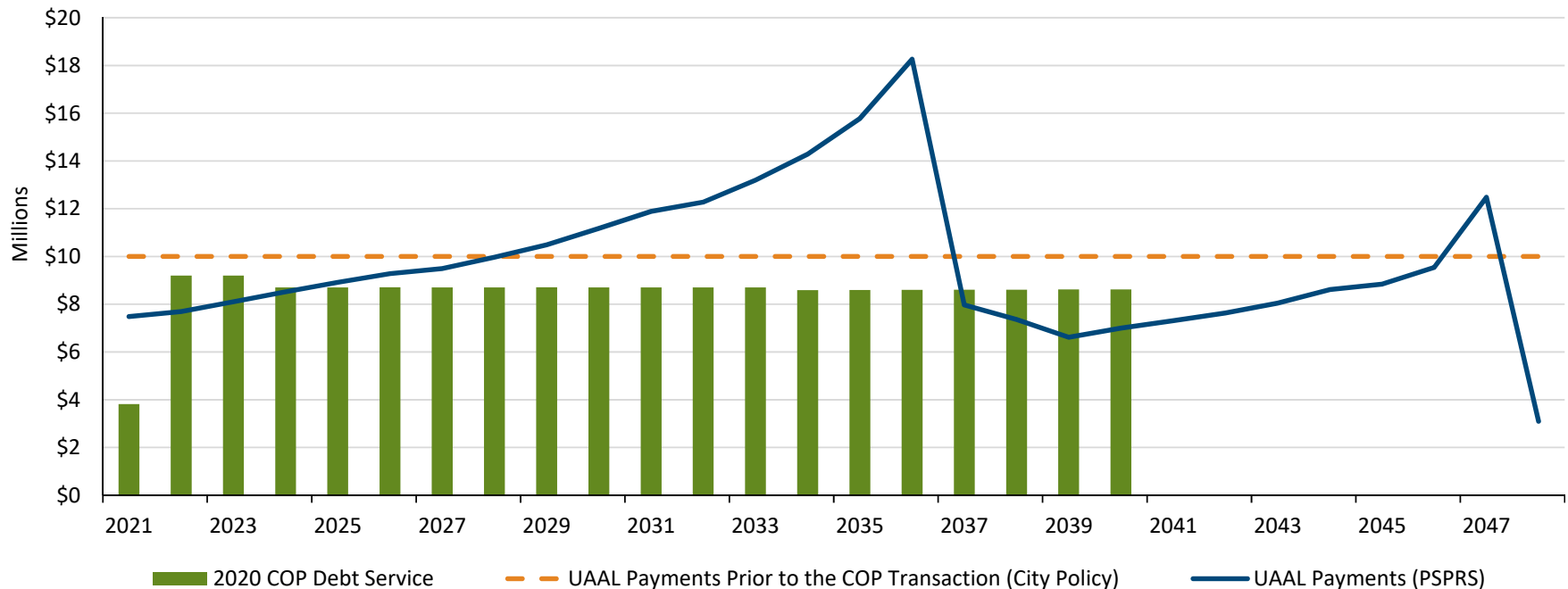
(Data through August 30, 2021)



## Case Study: City of Flagstaff, Arizona – Certificates of Participation, Series A 2020 (Taxable)

- Targeting annual level debt service of less than \$9 million and a shortened PSPRS unfunded actuarial accrued liability (“UAAL”) amortization period (from 2048 to 2040), the City refinanced its UAAL by issuing “AA-” Rated COPs.
- The City was able to lock in a borrowing rate of **2.69%**, which is expected to generate **\$76.3 million** of expected net present value benefit (compared to the PSPRS payment structure), and fund a contingency reserve as a hedge against future risks.

Summary Statistics	
Funded Ratio before COPs	38%
<b>Funded Ratio after COPs</b>	<b>100%</b>
All-In True Interest Cost	2.696%
Average Life	11.172 years
Debt Amortization	2021 - 2040
Certificate Par Amount	\$131,000,000
<b>Pension Fund Deposit</b>	<b>\$115,560,361</b>
<b>Contingency Reserve Funds</b>	<b>\$14,239,000</b>
<b>Expected Net PV Savings \$/%</b>	<b>\$76,253,833/58.21%</b>



## Case Study: City of Flagstaff, Arizona – Public Policy Goals and Objectives

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- At time of issuance, COPs issuance would allow for 100% funded PSPRS liability
- PSPRS amortization schedule have over the years become a budget challenge due to actuarial swings
- Incorporate Contingency Reserve Funds into the transaction as a Liability Management tool to address annual actuarial budget challenges
- COPs amortization structured to achieve level debt service with reduced amortization period
- Amortization and average life shortened:
  - PSPRS Police Amortization: 2048 (28-years currently)
  - PSPRS Fire Amortization: 2038 (18-years currently)
- Achieve Net Cash Flow Savings – currently estimated at \$102.4 million
- Achieve Net Present Value Savings – currently estimated at \$64.2 million (48.32%)

## Contingency Reserve and Liability Management

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- **Contingency Reserve Funds (“CRFs”) can allow the City to manage the budgetary impact of market and actuarial risks**
- **What?**
  - Helps mitigate risks associated with year-over-year volatility in investment earnings as well as changes in actuarial assumptions, such as assumed rate of return, COLA, mortality
- **How?**
  - Use a portion of bond proceeds to establish an initial balance in CRFs for Police and Fire, respectively
  - Apply a defined portion of ongoing year-over-year budgetary savings from the pension bond (difference between what UAAL payments would have been versus debt service costs) to continue funding CRF
- **Why?**
  - In years where investment returns do not meet defined/established benchmarks, and/or changes in actuarial assumptions cause a significant change in projected annual payments, the City can draw on the CRF to smooth the budgetary impact of funding additional contributions for the newly created UAAL

## **N** National Trends and Policy Issues to Consider in the Future

## Pension Crystal Ball – National Pension Liability

- Over the past 18 years, Liability growth has outpaced Asset growth
- 
- Nationally, average funded ratio 70.7%, with some plans much lower



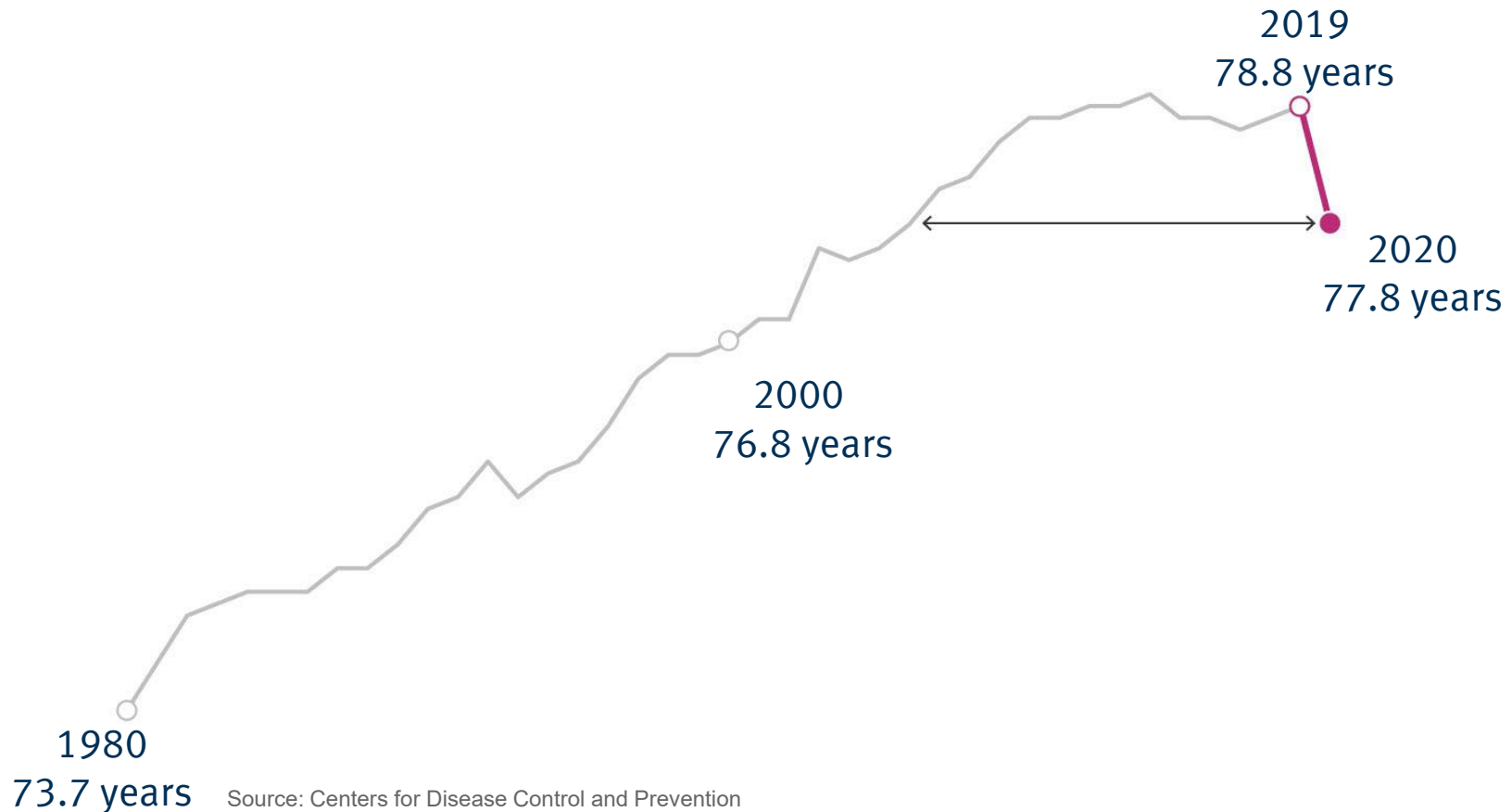
PEW Charitable Trust, June 11, 2020, State Pension Funding Gap, 210 public pension plan survey.



## Pension Crystal Ball – What Happened

### What Happened?

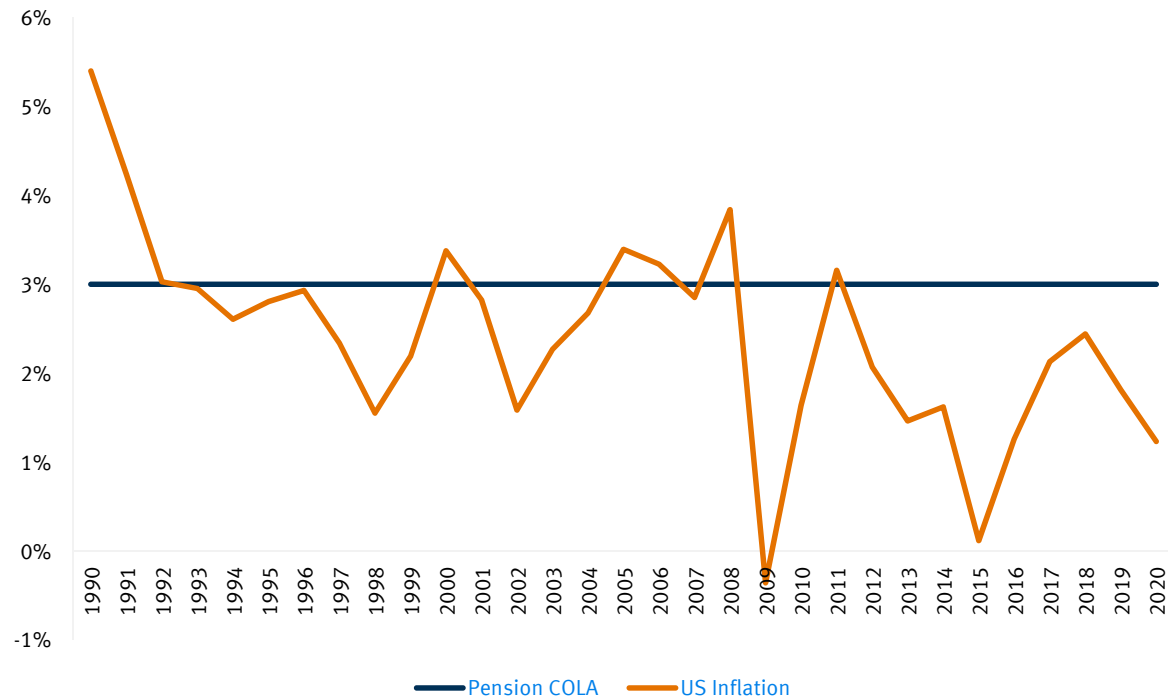
- **Mortality** – Until this past year, US life expectancy has improved every year.



## Pension Crystal Ball – What Happened

### What Happened?

- **Benefit Creep** – COLA formulas, 13<sup>th</sup> checks, DROP and BackDROP and other provisions nationally have added to the liabilities. Fixed COLA formulas perhaps most common



### What Happened?

- **Transparency** – Arcane accounting and lagged reporting



### What does the future hold for defined benefit pensions?

- **Mortality**
  - Static versus Generational
  - Reversion from upward climb
  - Hyper Segmentation
- **Benefits**
  - New tiers
- **Transparency**
  - Education
  - Media
  - Modeling tools (eg PSPRS Modeler)



## Questions

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Pension Obligation Bonds (“POBs”) are a source of financing for unfunded actuarial liabilities of pension funds and can serve a valuable function. However, the success of a POB financing is dependent on a number of assumptions proving to be accurate, and the failure of any of these assumptions is a risk that a government issuing POBs should consider.

Among the assumptions that are important to a POB financing, and the risks associated with those assumptions providing to be inaccurate, are the following:

- Assumption: The investment yield on the POB proceeds once deposited in the pension fund will equal or exceed the yield on the POBs. **Risk: If the investment yield on the POB proceeds is less than the yield on the POBs, and the decline is not offset by positive changes in other assumptions, the issuance of the POBs may actually increase the unfunded actuarial liability.**
- Assumption: Payroll increases during the term of the POBs will be as anticipated when the unfunded actuarial liability was estimated at POB issuance. **Risk: If payroll increases during the term of the POBs exceed expectations, and the increases are not offset by positive changes in other assumptions, the POB proceeds will not suffice to cover the unfunded actuarial liability.**
- Assumption: Cost of living adjustments (“COLAs”) will be as anticipated when the unfunded actuarial liability was estimated at POB issuance. **Risk: If COLAs exceed expectations during the term of the POBs, and the increases are not offset by positive changes in other assumptions, the POB proceeds will not suffice to cover the unfunded actuarial liability.**
- Assumption: Various assumptions used in calculating the unfunded actuarial liability -- such as mortality rates, early retirement incentives, types of payrolls covered by the pension fund -- will be as anticipated at the time of POB issuance. **Risk: If there are reductions in mortality rates, increases in early retirement incentives, expansions of the payrolls covered by the pension plan during the term of the POBs, and these changes are not offset by positive changes to other assumptions, the POB proceeds will not suffice to cover the unfunded actuarial liability.**

In addition to analyzing potential benefits that are based on achieving assumptions made in estimating the unfunded actuarial liability, we will also analyze potential budgetary benefits or losses based on various prospective levels of the pension systems’ earnings to assist you in gauging the likelihood of success of a POB transaction. It should be noted that potential budgetary benefits vary from year to year. Actual benefits or losses and the success of the POB financing cannot be known until the POBs have been paid in full.

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