Overview of Public Pension Plan Amortization Policies

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March 24, 2022

Overview

- Amortization policy: the length of time and structure of payments required to systematically eliminate a UAAL or to recognize a surplus
- The source of a plan’s employer contributions is key to understanding its amortization policy
  - Actuarially determined contributions are comprised of two components: the normal cost and the amortization rate
  - For plans with variable employer contributions, the amortization period is an input, or driving factor
  - For plans with fixed statutory contributions, the amortization period is an outcome

About the data

- 124 statewide and locally administered plans
- ~$4.0 trillion in assets
- ~$1.5 trillion in unfunded liabilities
- Data as of FY 2020

- 73 percent of plans funded by variable employer contributions
- 27 percent of plans funded by fixed employer contributions

Variable rate plans

- Plans with variable contribution rates – such as those tied to the Actuarially Determined Contribution (ADC) – can amortize their unfunded liability over a fixed timeframe
- The amortization period may be open, closed, or layered
- The length of the amortization period, or periods, if layered amortization is used, is another important factor
- Amortization payments may be level as a percentage of payroll, or level dollar

Amortization Period Type: Open

- An open amortization period resets each year to match the period specified in the amortization policy
- Generally, use of an open amortization period will result in very slow progress, if any, in reducing a plan’s UAAL
- Use of open amortization is declining: 25 plans in our sample used open amortization in 2010; just one did so in 2020

Amortization Period Type: Closed single-layer

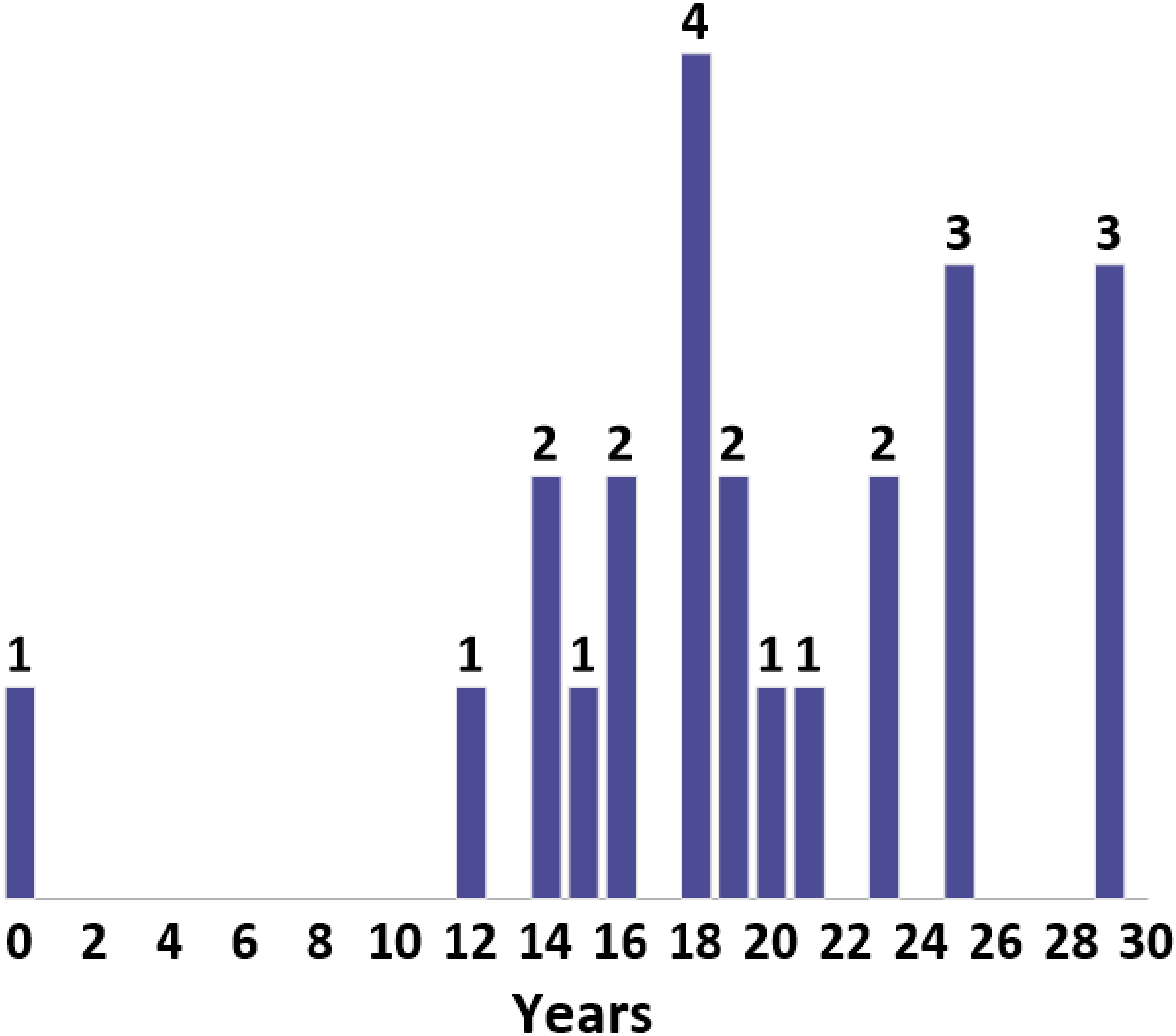
- A closed, single-layer amortization period aims to eliminate the entire unfunded liability over a specified timeframe that declines annually by one year
- Contribution rate volatility is possible, particularly toward the end of the single-layer period

Sample Public Pension Plan
Amortization Schedule: Closed Single-Layer

Projection of Unfunded Accrued Liability and Annual Payments (000's omitted)
Primary Unfunded Liability Established July 1, 2005

Fiscal Year Ending 6/30	Unfunded Liability at Beg. of Year	Projected Total Payroll	Amortization Payments	
			% of Payroll	Amount
2021	$ 375,358	$ 1,577,290	2.60%	$ 41,013
2022	360,987	1,640,382	2.50%	41,013
2023	345,537	1,705,997	2.40%	41,013
2024	328,930	1,774,237	2.31%	41,013
2025	311,076	1,845,206	2.22%	41,013
2026	291,884	1,919,014	2.14%	41,013
2027	271,252	1,995,775	2.05%	41,013
2028	249,072	2,075,606	1.98%	41,013
2029	225,230	2,158,630	1.90%	41,013
2030	199,599	2,244,975	1.83%	41,013
2031	172,045	2,334,775	1.76%	41,013
2032	142,426	2,428,165	1.69%	41,013
2033	110,584	2,525,292	1.62%	41,013
2034	76,355	2,626,304	1.56%	41,013
2035	39,559	2,731,356	1.50%	41,013

Distribution of remaining amortization periods, closed non-layered plans, FY 2020



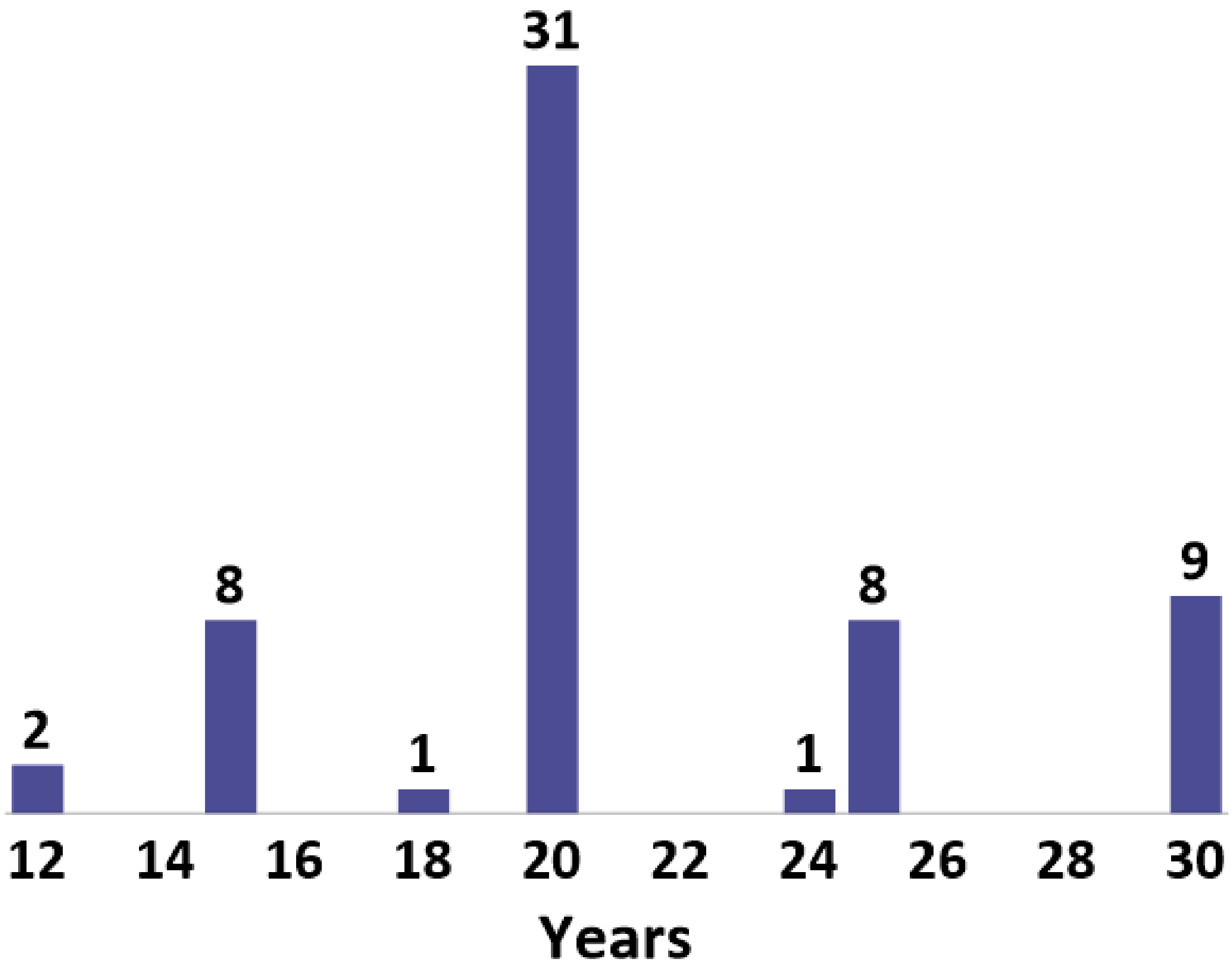
Amortization Period Type: Closed multi-layer (aka layered)

- A closed, multi-layered amortization policy blends elements of both open and closed amortization policies
  - The “initial” unfunded liability is amortized over a closed, single-layer period
  - New closed periods are established for each year’s actuarial experience, assumption or benefits changes
- Contribution rate volatility may be experienced as layers drop off once fully eliminated

Sample Public Pension Plan
Amortization Schedule: Closed Layered

	UAAL	REMAINING AMORTIZATION PERIOD (YEARS)	AMORTIZATION PAYMENT
Transitional	$14,708,322	23	$1,032,486
New Incremental 6/30/2014	(168,768)	24	(11,549)
New Incremental 6/30/2015	3,528,222	25	235,737
New Incremental 6/30/2016	6,349,587	26	414,841
New Incremental 6/30/2017	954,003	27	61,029
New Incremental 6/30/2018	(3,234,313)	28	(202,843)
New Incremental 6/30/2019	1,707,391	29	105,100
New Incremental 6/30/2020	1,711,760	30	103,529
Total UAAL	$25,556,204		$1,738,330
Amortization payment adjusted for timing			$1,677,521
Blended amortization period (years)			24.2
Estimated payroll			$13,283,962
UAAL contribution rate			12.63%

Distribution of policy amortization periods for actuarial gains and losses, closed layered plans, FY 2020



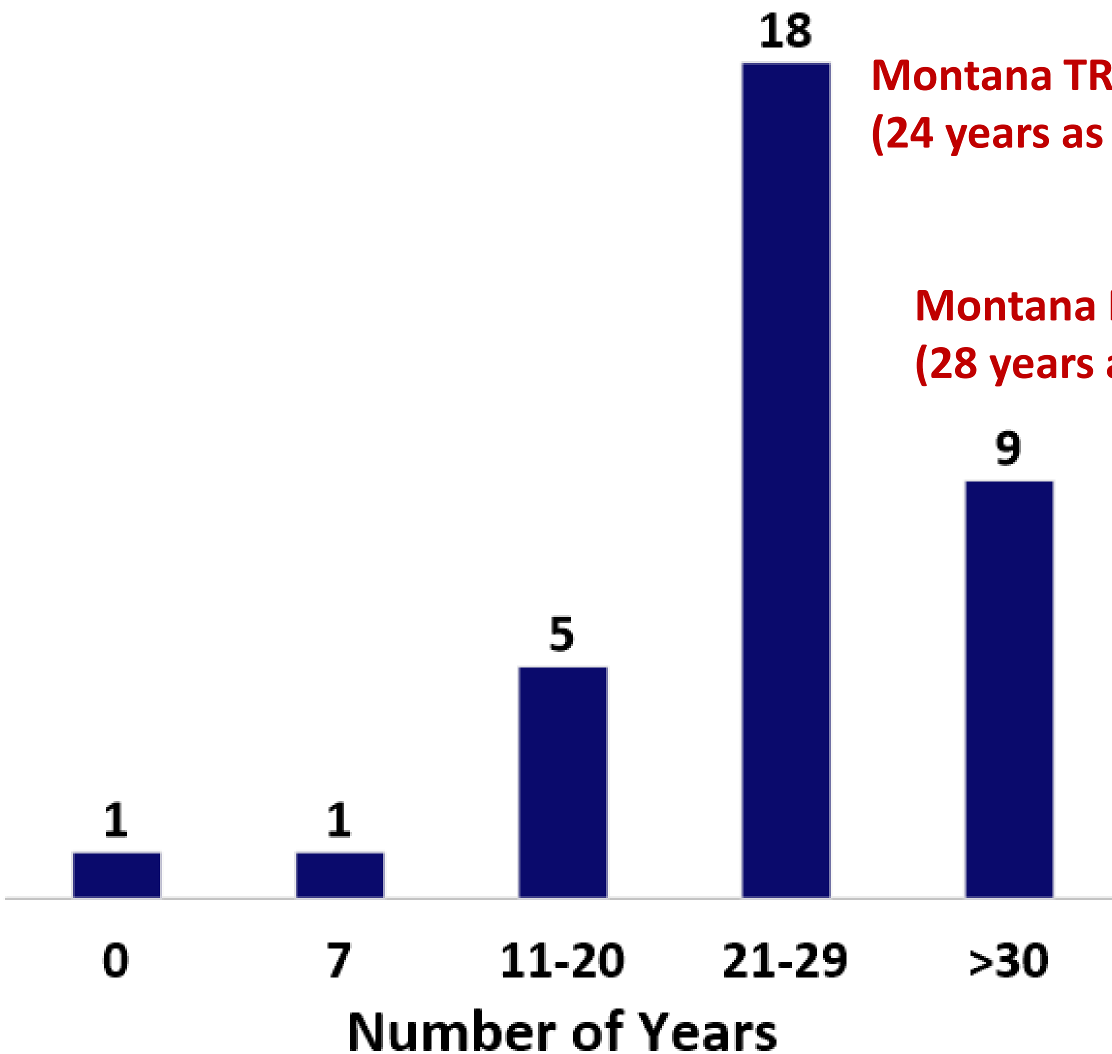
Fixed rate plans

- The funding period for plans with fixed contribution rates reflects the period by which the unfunded liability would be eliminated given the plan's benefit obligations and statutory contribution rate
- Some plans specify target amortization periods
- Some plans have date-specific amortization targets
- Exceeding these targets can lead to contribution increases and/or benefit reductions

Sample Public Pension Plan Attribution of Changes in Amortization Period

Previously Reported Period	36.2 years
Change due to:	
Normal amortization	(1.0)
Actuarial experience	1.7
Assumption/Method changes	0.0
Plan amendments	0.0
Contribution Shortfall/(Excess)	0.2
Computed Period	37.1 years

Funding period based on contribution type, fixed rate plans, FY 2020



Montana TRS: 29 years
(24 years as of FY 21)

Montana PERA: 35 years
(28 years as of FY 21)

Sustainability provisions for fixed rate plans

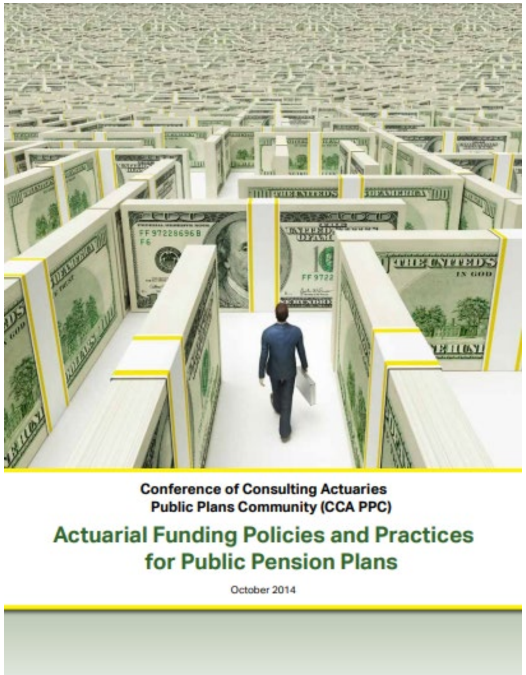
- Ohio state law requires each statewide plan to maintain a maximum amortization period of 30 years. Breeching this threshold in any given year triggers a requirement to submit a plan for a board-approved plan for reducing the amortization period
- Hawaii state law stipulates that employer contribution rates to the Hawaii ERS are subject to adjustment when the plan's funding period exceeds 30 years
- Montana state law requires employers and members to make supplemental contributions until the actuarial valuation identifies a funding period of 25 years or fewer

Sustainability provisions for fixed rate plans

- Retired participants of the ERS and TRS of Texas are not eligible to receive a COLA if the plan's amortization period exceeds 30 years by one or more years
- Arkansas state law grants the TRS board the authority to increase contribution rates or reduce benefits if the amortization period exceeds 18 years
- The Wyoming Retirement System calculates an actuarially determined contribution that includes an amortization payment calculated on the basis of a layered amortization policy

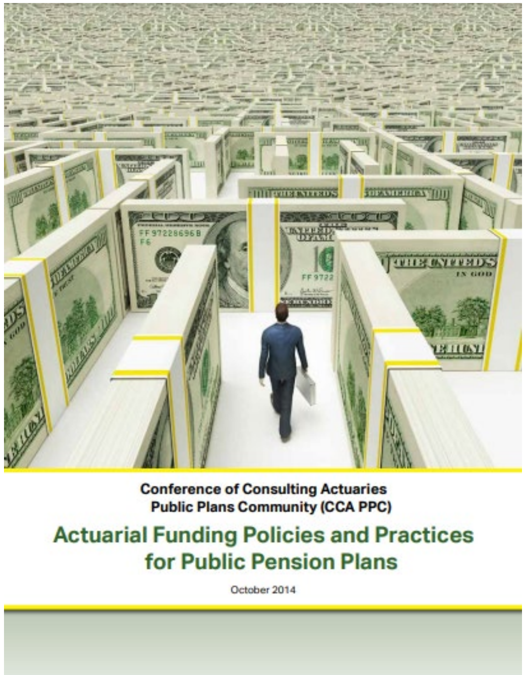
Amortization Policy Objectives

1. Need to balance between intergenerational equity and volatility management
2. Amortization payments should be calculated as a level percentage of employee compensation
3. Different sources of change in UAAL should be subject to different amortization policies
4. Negative amortization should be minimized
5. The amortization policy should be accountable and transparent
6. Amortization of a surplus requires special consideration as part of a broader discuss of surplus management techniques



CCA PPA Model Practices

- Level percent of pay amortization
- Closed layered amortization periods by source of UAAL
  - **Plan design changes for active participants:** lesser of demographic-based amortization period (i.e., average remaining future service of active population) or 15 years
  - **Plan design changes for retirees:** lesser of demographic-based amortization period (i.e., retiree life expectancy) or 10 years
  - **Experience gains and losses:** 15 to 20 years
  - **Assumptions or methods changes:** 15 to 25 years
  - **Early retirement incentives:** 5 years or less



Thank you

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