

Overview of Public Pension Asset Valuation Methods

OVERVIEW

Although public pension plans are long-term investors, capital markets can produce significant **short-term volatility**. To help manage the impact of this volatility on the assets used to determine plans' financial condition and required cost, most public pension plans use an actuarial asset valuation method that spreads the recognition of investment gains and losses over a specified timeframe rather than immediately recognizing these market fluctuations. For example, a five-year smoothing policy generally will recognize 20 percent of a given year's investment gains or losses in the determination of the actuarial value of assets, and another 20 percent in each of the next four years, after which the gain or loss is considered to be fully recognized.

Asset smoothing promotes stability of the plan's funding level, improves budget predictability for employers, and aligns with the long-term nature of pension liabilities and investment strategies. The duration of the smoothing period can affect how quickly market gains and losses are reflected in the plan's condition and how closely the plan's funding value of assets aligns with the market value of assets.

Actuarial guidance for selection and application of an asset valuation method is provided by **Actuarial Standards of Practice (ASOP) No. 44**, issued by the Actuarial Standards Board. The standard recognizes the appropriateness of asset smoothing while emphasizing that actuarial asset values should maintain a reasonable relationship to the market value and should not systematically bias measurement of funded status or contribution requirements. In practice, this means that investment gains and losses may be recognized over a period of time to reduce contribution volatility, but the resulting actuarial value of assets should ultimately converge toward market value and should not consistently overstate or understate the plan's funding level. Several plans address

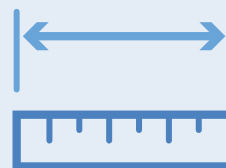
Key Findings



Most plans phase-in, or smooth, the recognition of investment gains and losses over years.



Five years is the most common smoothing period.



Many plans use a corridor arrangement to specify how far the actuarial value of assets can diverge from market value.

this objective by establishing a corridor (i.e., a restriction, usually expressed as an acceptable percentage that the actuarial value of assets is permitted to deviate from the market value of assets).

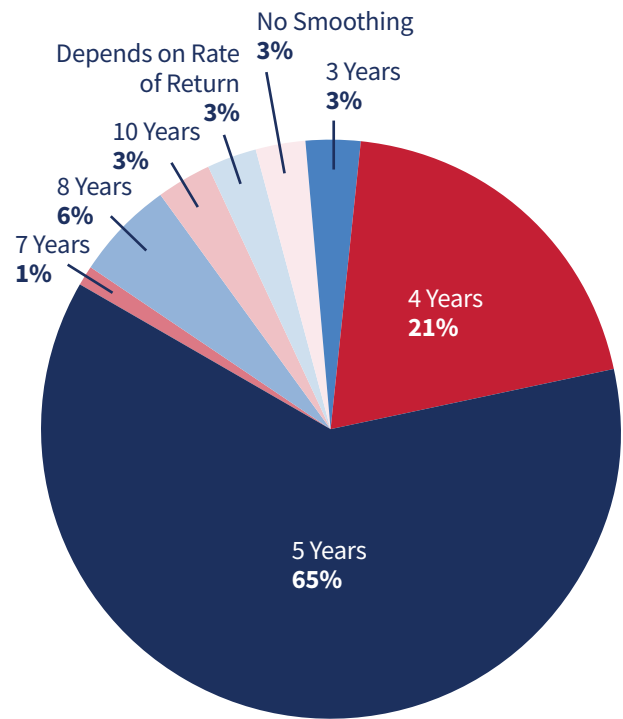
A new NASRA dataset provides insights into the asset valuation methods used by a representative sample of 129 of the largest U.S. state and local pension plans. Figure 1 identifies the range of smoothing periods used by the sample. A majority of the sample – 88 plans, or 65 percent – uses a five-year smoothing period. The next largest group of 21 plans, equal to 15 percent of the sample, uses a four-year smoothing period. The remaining 27 plans use smoothing periods as short as three years or as long as ten years, and four plans do not smooth assets, instead electing to use the market value of assets to determine their funding condition and actuarially determined cost.¹

Figure 2 identifies the distribution of corridor arrangements in the sample, identified as the percentage deviation (below or above) that the actuarial value of assets may vary from the market value of assets after the application of the smoothing period. For a majority of the sample – 52 percent, or 67 plans – no corridor arrangement was identified. Among plans in the sample that utilize a corridor arrangement, a 20 percent deviation (i.e., the actuarial value of assets must remain within 80 percent to 120 percent of the market value of assets) is by far the most common. Other smoothed asset corridors in use vary from as little as nine percent to as much as 40 percent.

The data in these figures is included in an appendix at the end of this brief.

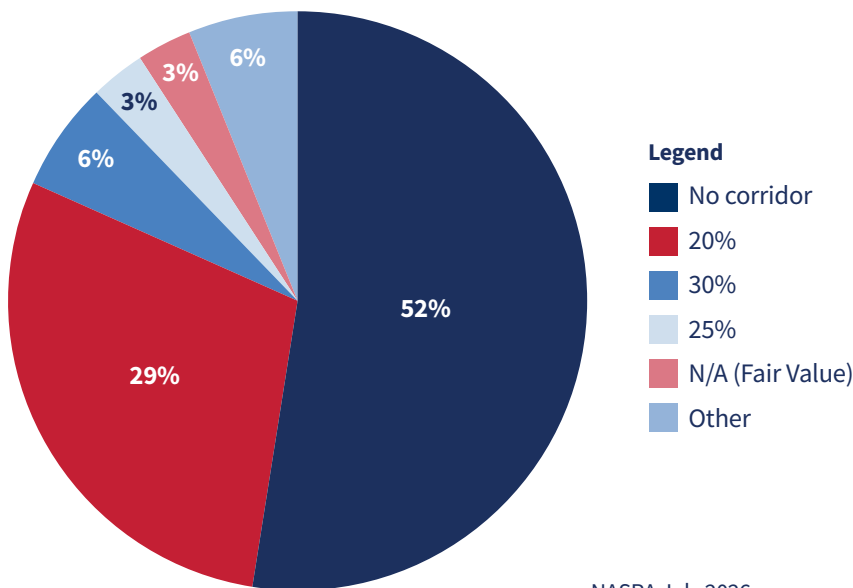
The dataset illustrates the widespread use of asset smoothing among public pension plans and the significant degree of consistency in prevailing practices.

FIGURE 1: Distribution of smoothing periods



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FIGURE 2: Permitted Divergence Between Actuarial and Market Value of Assets



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Although individual plan asset valuation methods vary, most plans seek to balance funding level and contribution stability with timely recognition of investment gains and losses through asset smoothing and, in many cases, corridor provisions designed to maintain a reasonable relationship between the actuarial value of assets and the market value of assets. As markets remain volatile and plan funding policies continue to receive attention, understanding these practices provides important context for evaluating factors that contribute to the determination of plans' funding conditions and required costs.

² Aside from one such plan that is funded by fixed, statutory employer contributions, the plans in this dataset that do not use asset smoothing utilize other policy tools to stabilize outputs (required contribution rates) while accepting the immediate recognition of market experience on the input (the funding value of assets).

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Appendix: Asset Valuation Methods as of FY 2025

See link to view, sort, and download the latest data: [Asset Valuation Methods search tool](#) (login required)

State	Plan	Asset Smoothing Period (years)	Notes on asset smoothing period (including use of corridors)
AK	Alaska PERS	5	
AK	Alaska Teachers	5	
AL	Alabama ERS	5	
AL	Alabama Teachers	5	
AR	Arkansas PERS	4	Subject to a corridor of 75% - 125% of the market value of assets
AR	Arkansas State Highway ERS	4	Subject to a corridor of 80% - 120% of the market value of assets
AR	Arkansas Teachers	4	Subject to a corridor of 80% - 120% of the market value of assets
AZ	Arizona SRS	10	Subject to a corridor of 70% - 130% of the market value of assets
AZ	Arizona Public Safety Personnel	7 for Tiers 1&2; 5 for Tier 3	Subject to a 20% corridor around the market value
AZ	Phoenix ERS	4	The actuarial value of assets must be between 80 and 120% of market value
CA	California PERF	0	The fair value of assets is used
CA	California Teachers	3	
CA	Contra Costa County	5	
CA	Los Angeles City ERS	7	The actuarial value of assets cannot be less than 60% or greater than 140% of the market value of assets.
CA	LA County ERA	5	
CA	Orange County ERS	5	
CA	San Diego County ERA	5	
CA	San Francisco City & County	5	
CA	University of California	5	
CO	Colorado State	4	
CO	Colorado School	4	
CO	Colorado Municipal	4	
CO	Denver Public Schools	4	
CO	Denver Employees	5	
CT	Connecticut SERS	5	The actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets

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State	Plan	Asset Smoothing Period (years)	Notes on asset smoothing period (including use of corridors)
CT	Connecticut Teachers	4	
DC	DC Police & Fire	5	The actuarial value of assets is constrained to an 80% to 120% corridor around market value of assets
	DC Teachers	5	
DE	Delaware State Employees	5	
FL	Florida RS	5	The asset method includes a corridor whereby the AVA must remain within 80% to 120% of MVA
GA	Georgia ERS	5	
GA	Georgia Teachers	5	The actuarial value of assets is limited to a range between 75% and 125% of the fair value of assets
HI	Hawaii ERS	4	
IA	Iowa PERS	4	Subject to a corridor of 80% - 120% of the market value of assets
IA	Iowa Municipal Fire & Police	5	
ID	Idaho PERS	0	All assets are valued at fair value as of the valuation date
IL	Illinois Municipal	5	Subject to a corridor of 80% - 120% of the market value of assets
IL	Illinois SERS	5	
IL	Illinois Teachers	5	
IL	Illinois Universities	5	
IL	Chicago Teachers	4	
IN	Indiana PERF	5	Subject to a corridor of 80% - 120% of the market value of assets
	Indiana Teachers	5	
KS	Kansas PERS	5	
KY	Kentucky ERS	5	
KY	Kentucky County	5	
KY	Kentucky Teachers	5	
LA	Louisiana SERS	5	The adjusted asset value is subject to Corridor Limits of 80% to 120% of the market value of assets
	Louisiana Teachers	5	
LA	Louisiana Parochial Employees	5	The resulting smoothed values are subject to a corridor of 85% to 115% of the market value of assets. If the smoothed value falls outside the corridor, the actuarial value is set equal to the average of the corridor limit and the smoothed value.

Appendix: Asset Valuation Methods as of FY 2025

State	Plan	Asset Smoothing Period (years)	Notes on asset smoothing period (including use of corridors)
MA	Massachusetts SERS	5	The actuarial value of assets will be adjusted, if necessary, in order to remain between 90% and 110% of market value
	Massachusetts Teachers	5	
MD	Maryland PERS	5	The resulting value is restricted to be not less than 80% of market value nor greater than 120% of market value.
	Maryland Teachers	5	
ME	Maine State and Teacher	3	
ME	Maine Local	3	
MI	Michigan Municipal	5	Subject to a corridor of 80% - 120% of the market value of assets
	Michigan Public Schools	5	
	Michigan SERS	5	
MN	Minnesota PERF	5	
MN	Minnesota State Employees	5	
MN	Minnesota Teachers	5	
MN	St. Paul Teachers	5	
MO	Missouri DoT & Highway Patrol	3	Subject to a corridor of 80% - 120% of the market value of assets
MO	Missouri PEERS	5	
MO	Missouri Local	5	Subject to a corridor of 80% - 120% of the market value of assets
MO	Missouri State Employees	5	
MO	Missouri Teachers	5	
MO	St. Louis School Employees	5	
MS	Mississippi PERS	5	
MT	Montana PERA	4	
MT	Montana Teachers	4	The actuarial value of assets is not allowed to be greater than 120% or less than 80% of the market assets
NC	North Carolina Local Government	5	Subject to a corridor of 80% - 120% of the market value of assets
	North Carolina Teachers and State Employees	5	
ND	North Dakota PERS	5	
ND	North Dakota Teachers	5	The actuarial value of assets must be between 80 and 120% of fair value
NE	Nebraska Schools	5	
NE	Nebraska State	5	

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State	Plan	Asset Smoothing Period (years)	Notes on asset smoothing period (including use of corridors)
NE	Nebraska County	5	
NH	New Hampshire RS	5	Subject to a corridor of 80% - 120% of the market value of assets
NJ	New Jersey PERS	5	
NJ	New Jersey Police & Fire	5	
NJ	New Jersey Teachers	5	
NM	New Mexico Educational	5	
NM	New Mexico PERF	4	
NV	Nevada Regular Employees	5	The actuarial value of assets is further limited to not less than 70% or greater than 130% of the fair value of assets
	Nevada Police Officer and Firefighter	5	
NY	New York State & Local ERS	8	
NY	New York State & Local Police & Fire	8	
NY	New York State Teachers	5	
NY	New York City ERS	5	The AVA is further constrained to be within a corridor of 80% to 120% of the Market Value of Assets
	New York City Teachers	5	
OH	Ohio PERS	4	The funding value is not permitted to deviate from market value by more than 12%
OH	Ohio Police & Fire	4	The actuarial value shall not be less than 80% or more than 120% of fair value
OH	Ohio School Employees	4	The actuarial value is further adjusted, if necessary, to be within 9% of the market value
OH	Ohio Teachers	4	The actuarial value of assets cannot be less than 80% or more than 120% of market value
OK	Oklahoma PERS	5	Subject to a corridor of 80% - 120% of the market value of assets
OK	Oklahoma Teachers	5	
OR	Oregon PERS	0	The actuarial value of assets equals the market value of assets, excluding the Contingency and Capital Preservation Reserves, and the Rate Guarantee Reserve when it is in positive surplus status
PA	Pennsylvania School Employees	10	The actuarial value of assets can be no less than 70% and no more than 130% of the market value of assets
PA	Pennsylvania State ERS	5	
RI	Rhode Island State and Teacher	5	
RI	Rhode Island Municipal	5	

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State	Plan	Asset Smoothing Period (years)	Notes on asset smoothing period (including use of corridors)
SC	South Carolina Police	5	
SC	South Carolina RS	5	
SD	South Dakota RS	0	The Actuarial Value of Assets is equal to the Fair Value of Assets
TN	TN State and Teachers	10	Subject to a corridor of 80% - 120% of the market value of assets
TN	TN Political Subdivisions	10	
TX	Texas County & District	5	
TX	Texas ERS	5	
TX	Texas Municipal	5	The actuarial value of assets is further adjusted by 33% of any difference between the initial value and a 12% corridor around the fair value of assets, if necessary
TX	Texas Teachers	5	
TX	City of Austin ERS	5	If the resulting preliminary asset value is less than 80% or more than 120% of the market value of assets, then 1/3 of the amount outside of the 80% to 120% corridor is recognized in the final actuarial value of assets. In extreme market conditions, this could result in an actuarial value of assets outside of the 80% to 120% market value of assets corridor
TX	Houston Firefighters	5	
TX	Texas LECOS	5	
UT	Utah Noncontributory	5	The actuarial value of assets is further adjusted, if necessary, so that it is not less than 75% of market value and not more than 125% of market value.
VA	Virginia RS	5	The resulting actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets
VA	Fairfax County Schools	5	Subject to a corridor of 75% - 125% of the market value of assets
VT	Vermont Teachers	5	Subject to a corridor of 80% - 120% of the market value of assets
	Vermont State Employees	5	
WA	Washington PERS Plan 2/3	1-8	Smoothing period ranges from 1-8 years depending on rate of return. See table for details: https://leg.wa.gov/studies-audits-and-reports/actuarial-reporting/pensions/supporting-information/actuarial-methods/ Additionally, the AVA may not exceed 130 percent nor drop below 70 percent of the MVA in any valuation.
	Washington School Employees Plan 2/3	1-8	
	Washington Teachers Plan 2/3	1-8	
	Washington LEOFF Plan 2	1-8	
WI	Wisconsin RS	5	
WV	West Virginia PERS	4	
WV	West Virginia Teachers	4	
WY	Wyoming Public Employees	5	Subject to a corridor of 80% - 120% of the market value of assets