



Public Pension Trends

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Public Pensions in the U.S.

- ▲ ~\$4.2 trillion in assets as of Q3 2017
- ▲ ~14.5 million active (working) members
- ▲ ~10 million retirees and their survivors receive \$280+ billion annually in benefits
- ▲ Annual contributions = \$190 billion
 - ▲ \$140 billion from employers
 - ▲ \$50 billion from employees
 - ▲ In FY 15 approximately 4.6 percent of all state and local government spending went to pensions
- ▲ Median benefit multiplier for Social Security eligible plans = 1.8 percent
- ▲ Median age required for age-based normal retirement = 63

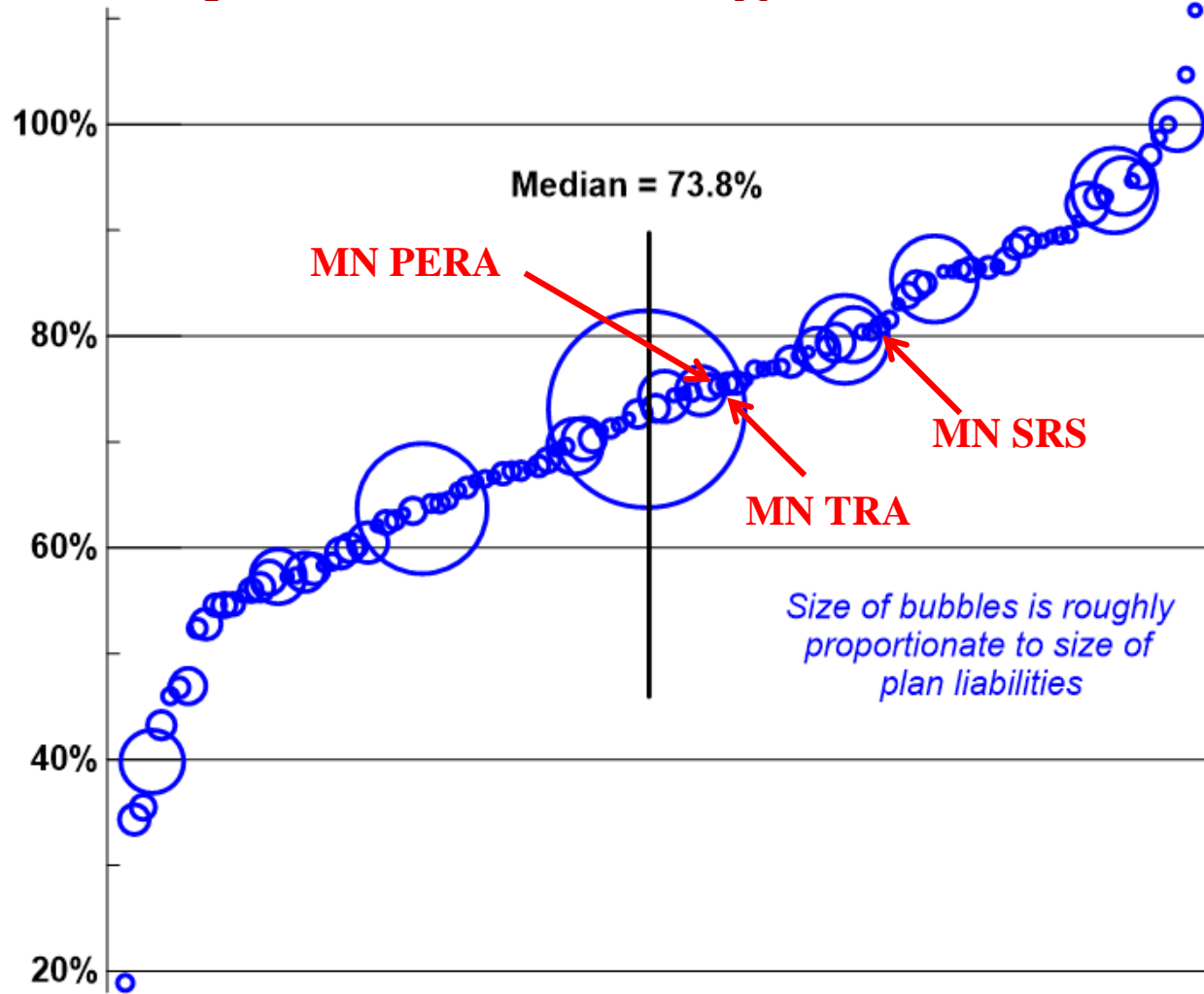
Public Pensions in Minnesota

- ▲ ~\$59 billion in assets
- ▲ ~316,000 active (working) members
- ▲ ~217,000 retirees and their survivors receive \$4.6 billion annually in benefits
- ▲ Annual contributions = \$2.3 billion
 - ▲ \$1.3 billion from employers
 - ▲ \$1.0 billion from employees
 - ▲ In FY 15 approximately 2.3 percent of all state and local government spending in Minnesota went to pensions
- ▲ Multiplier of 1.7% for SRS, PERA, TRA for service prior to 7/1/06; 1.9% for TRA service after 6/30/06
- ▲ Normal retirement age tied to Social Security normal retirement age (age 66 max)

Notable public pension trends

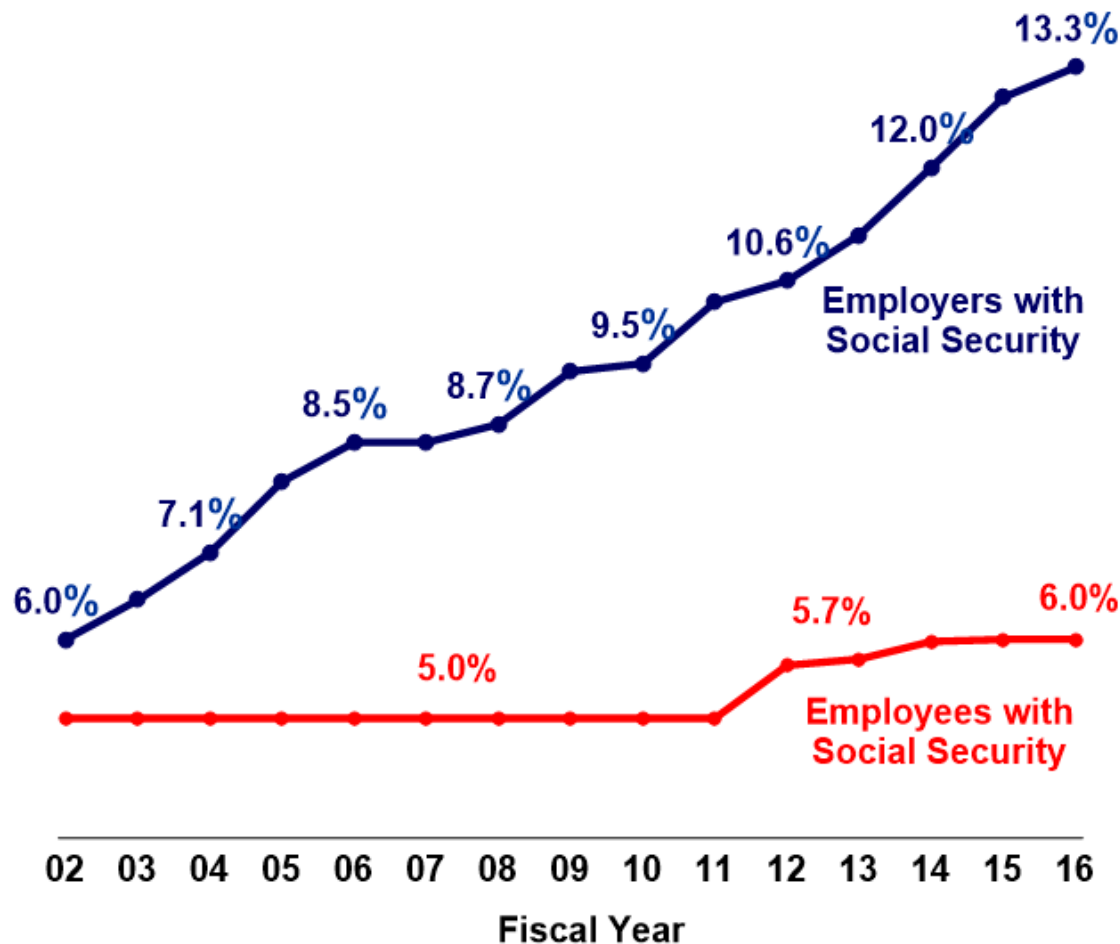
-  Wide disparity in funding levels and costs
-  Increased effort on the part of employers' to fund their pension plans
-  Employees bear more risk for funding and managing their retirement income as a result of recent pension reforms
-  Investment return assumptions are being reduced

Distribution of public pension funding levels, FY 16



Public Fund Survey
Nov-17

Median contribution rates, Social Security eligible general employees and teachers



ER

PERA: 7.50%

MSRS: 5.50%

TRA: 7.50%

EE

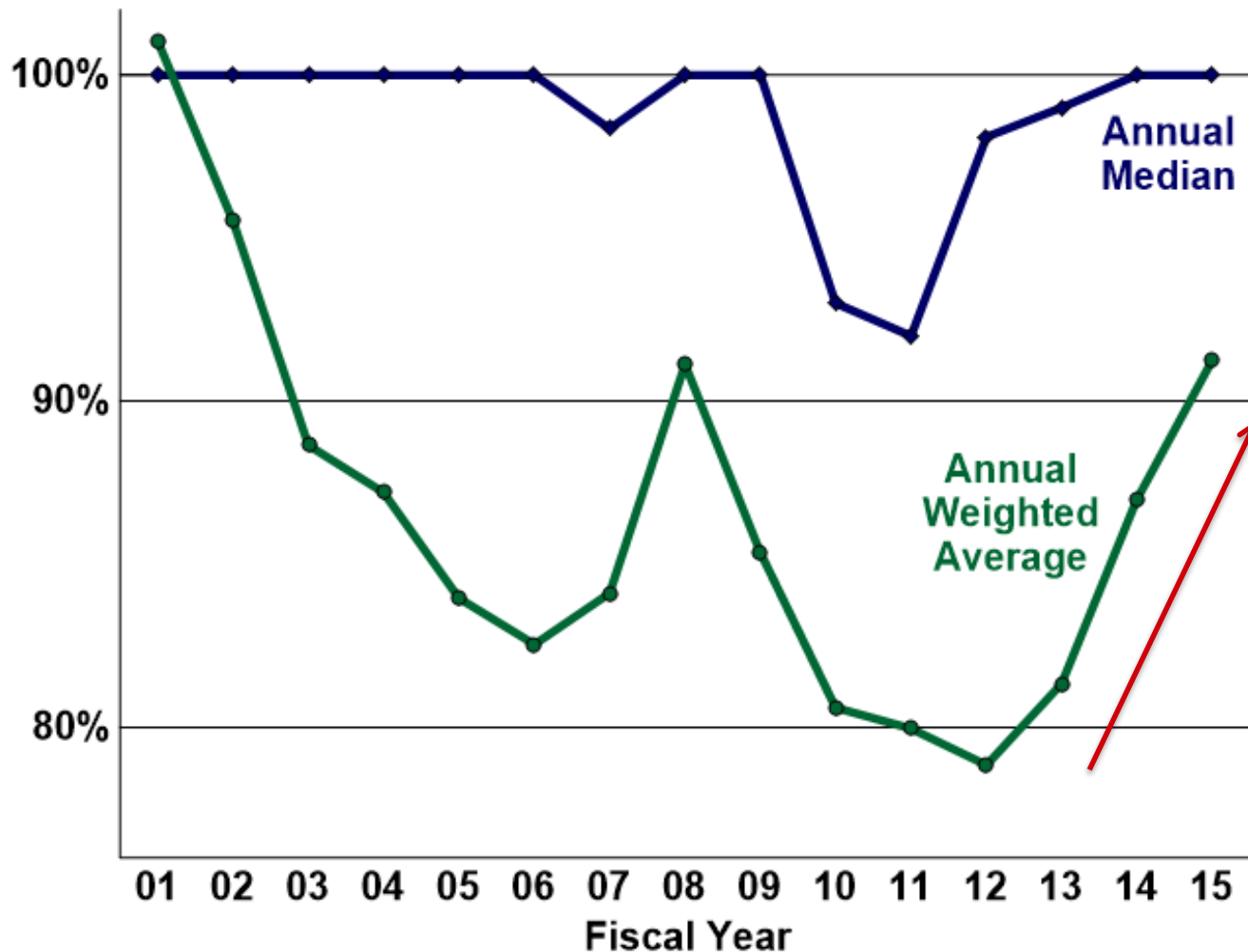
PERA: 6.50%

MSRS: 5.50%

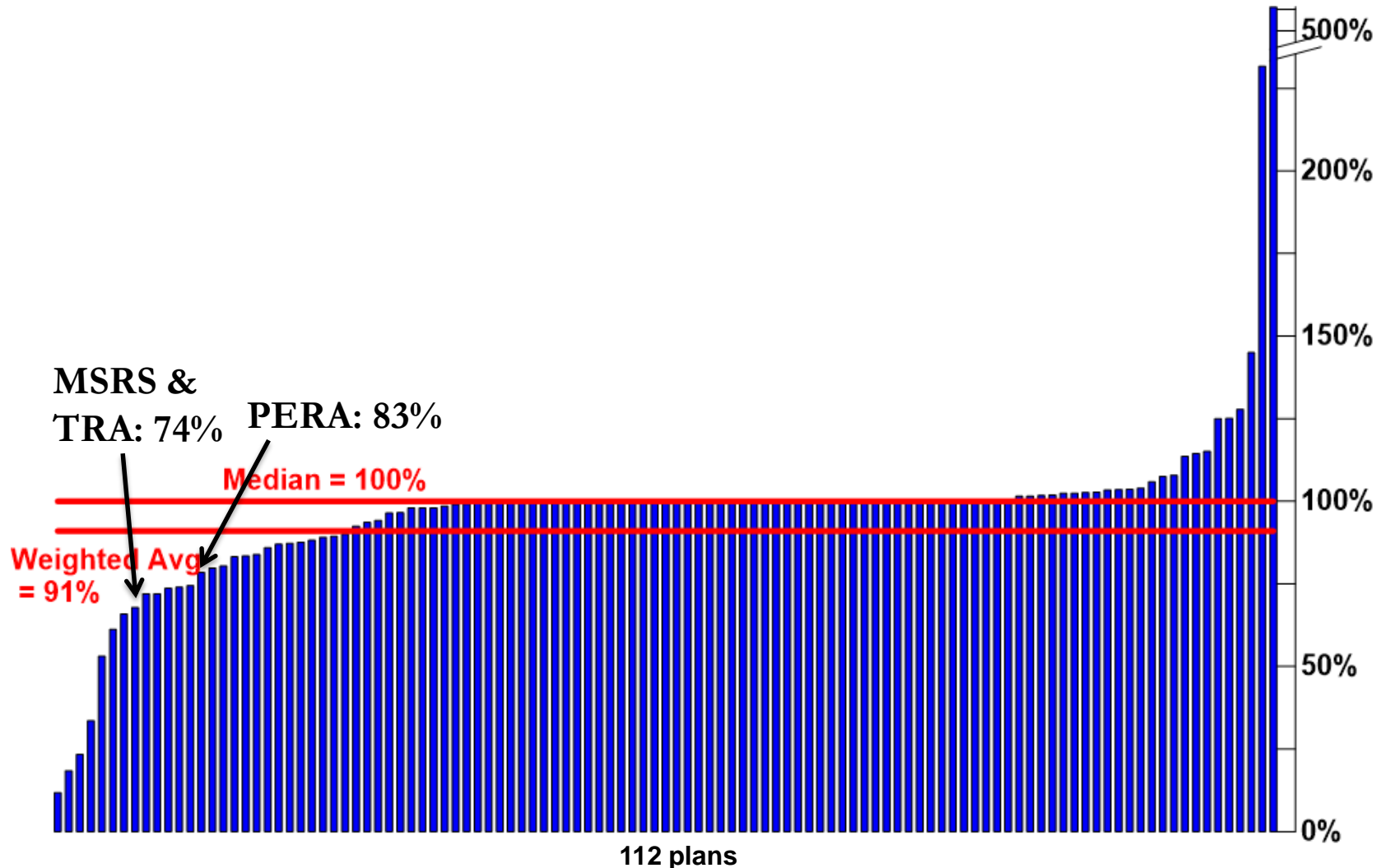
TRA: 7.50%

Public Fund Survey
Nov-17

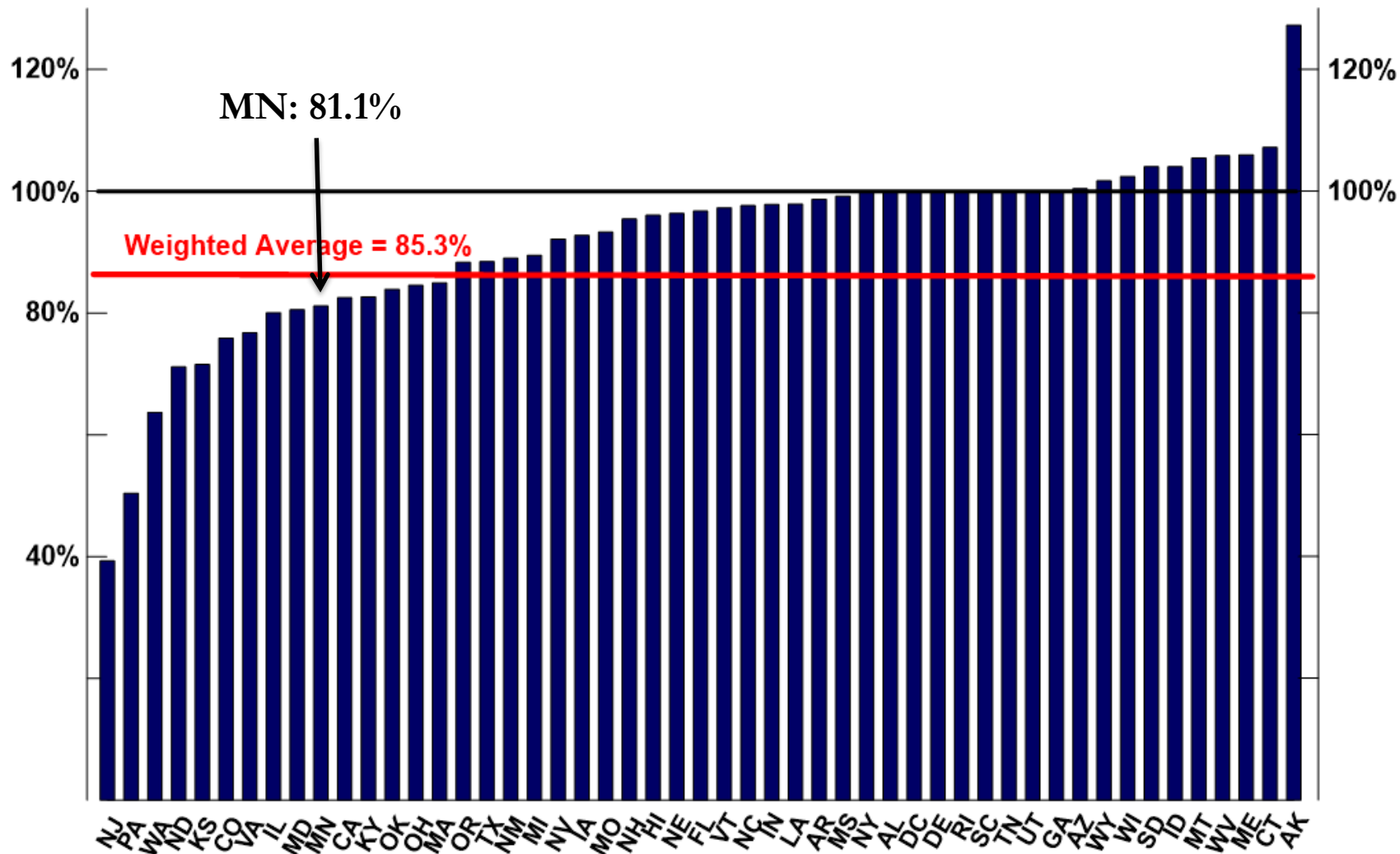
ARC/ADC Experience, FY 01 to FY 15



ADC Experience, FY 15



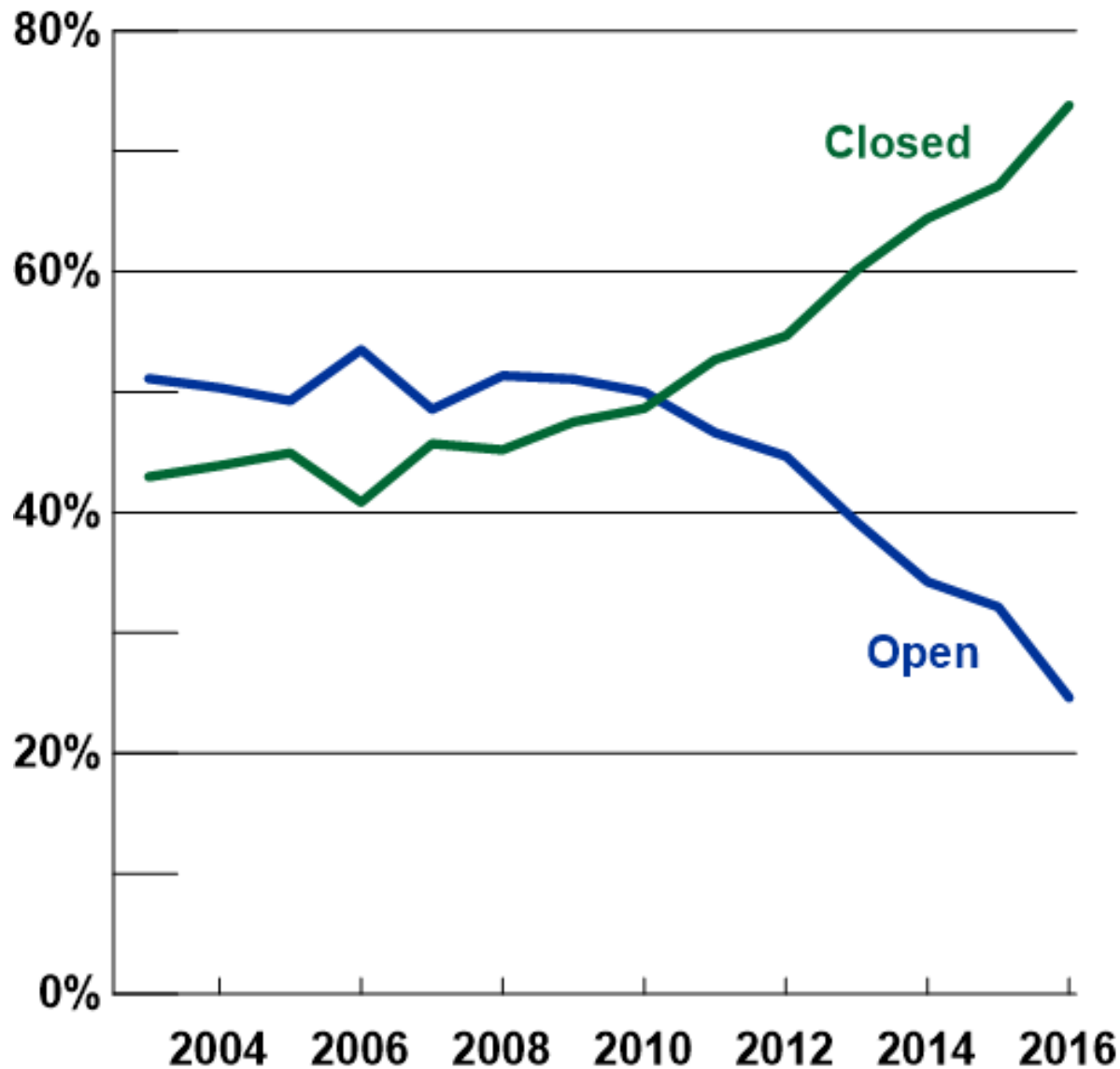
Weighted average required contribution paid, by state, FY 01 to FY 15



Methods states are using to amortize unfunded pension liabilities

- ▲ Pay the actuarially determined contribution
- ▲ Commit a portion of the budget surplus to the unfunded liability, either ad hoc or in statute (AK, HI, RI)
- ▲ Issue pension obligation bonds
- ▲ Establish a dedicated funding stream, such as revenue from tobacco, liquor, gambling, or severance taxes (KS, MT, OK)
- ▲ Dedicate a portion of sales, use, and/or corporate income tax revenues (OK)
- ▲ Reduce the funding amortization period/change the method

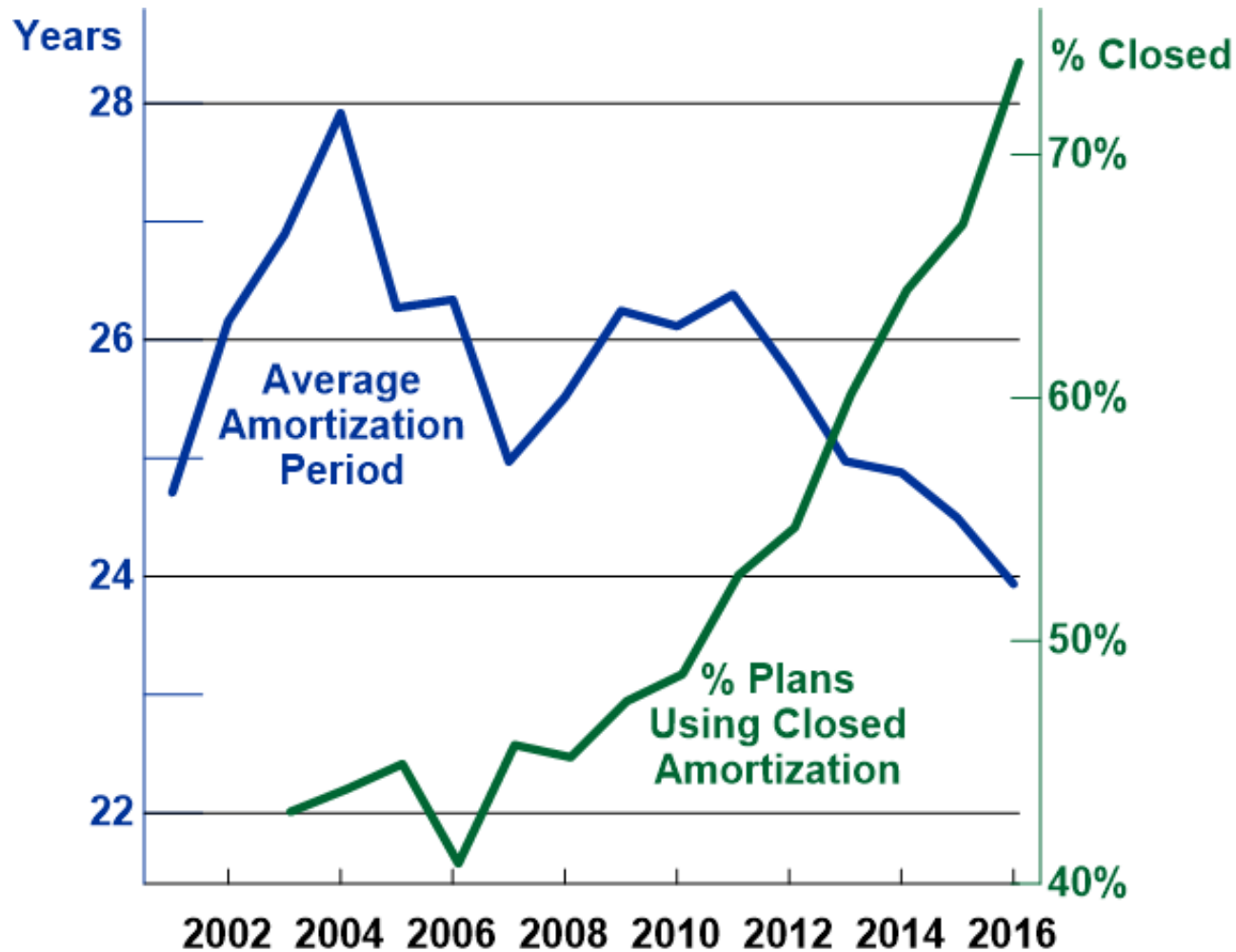
Funding Policies@NASRA.org <http://www.nasra.org/funding>



**Change in
use of
amortization
methods**

Change in average amortization period and plans using closed amortization

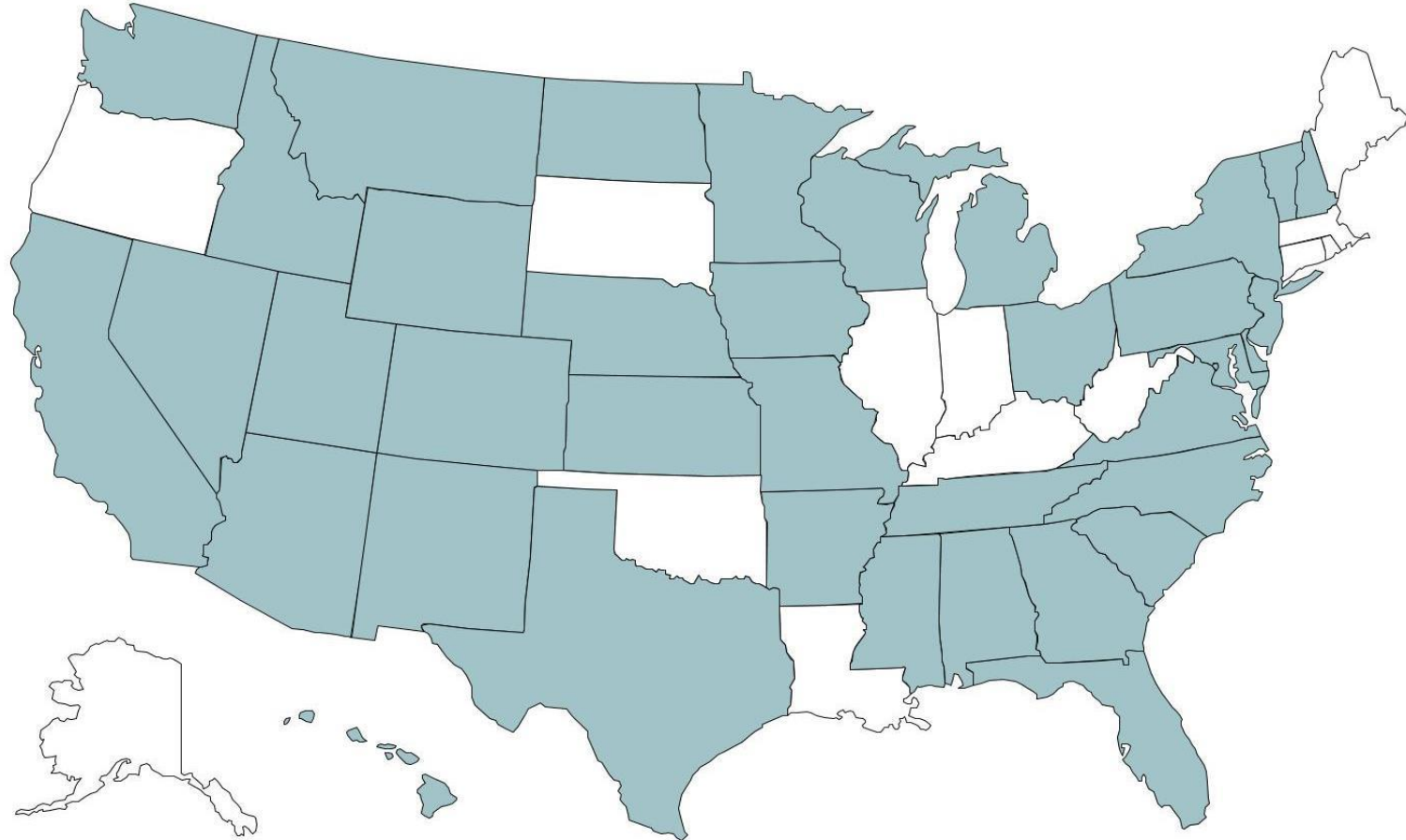
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Pension reforms in recent years

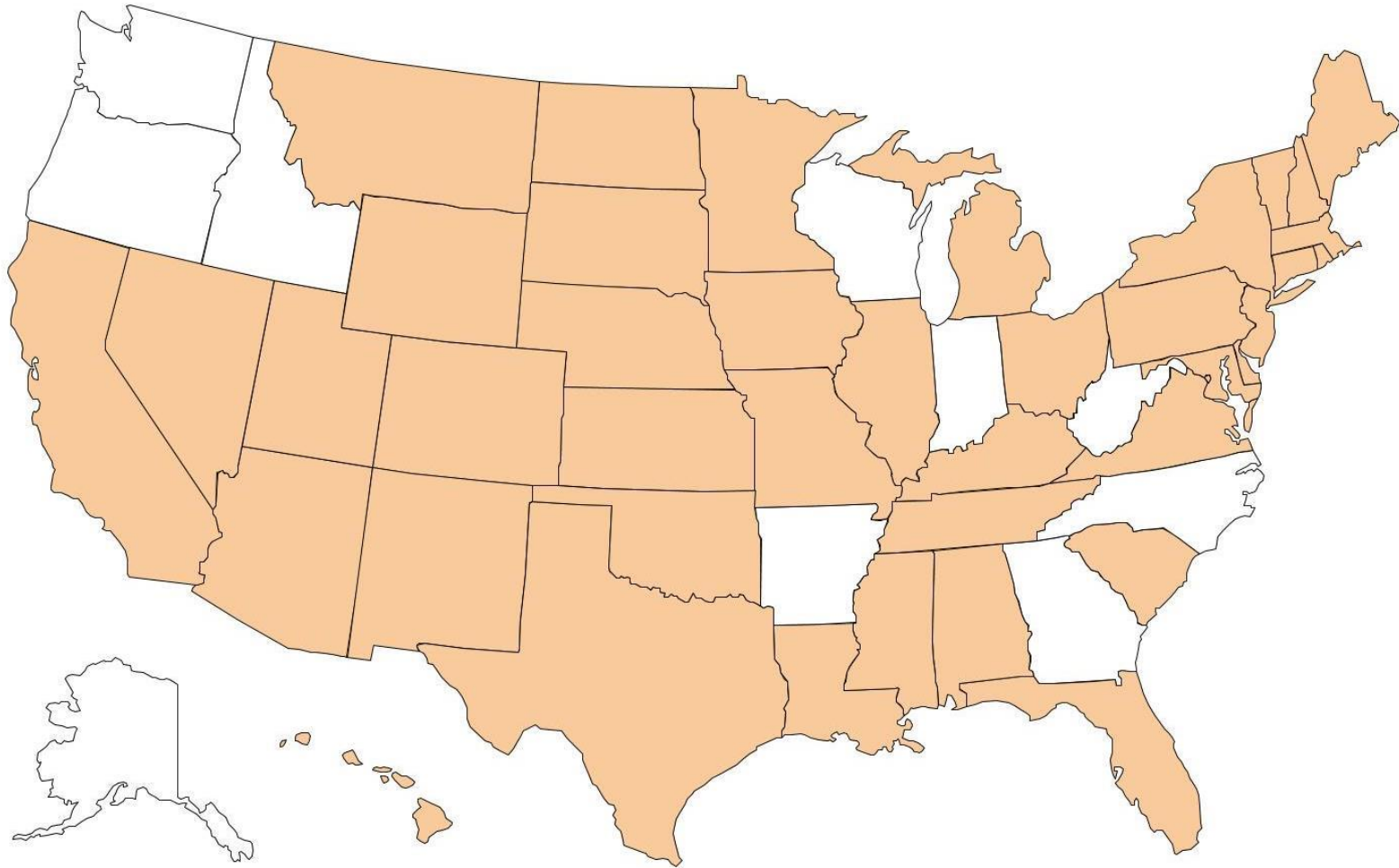
- ▲ Nearly every state modified public pension benefits, financing arrangements, or both, since 2009
- ▲ Lower benefits, higher employee contributions
- ▲ Increased use of hybrid plans
- ▲ Limited use of defined contribution plans
- ▲ Transfer of risk from employers to employees
 - ▲ Investment risk: the risk that investment returns will be less than expected
 - ▲ Mortality risk: the risk of outliving one's retirement assets
 - ▲ Inflation risk: a benefit that does not keep up with inflation

States that increased employee contributions



States that reduced pension benefits

15

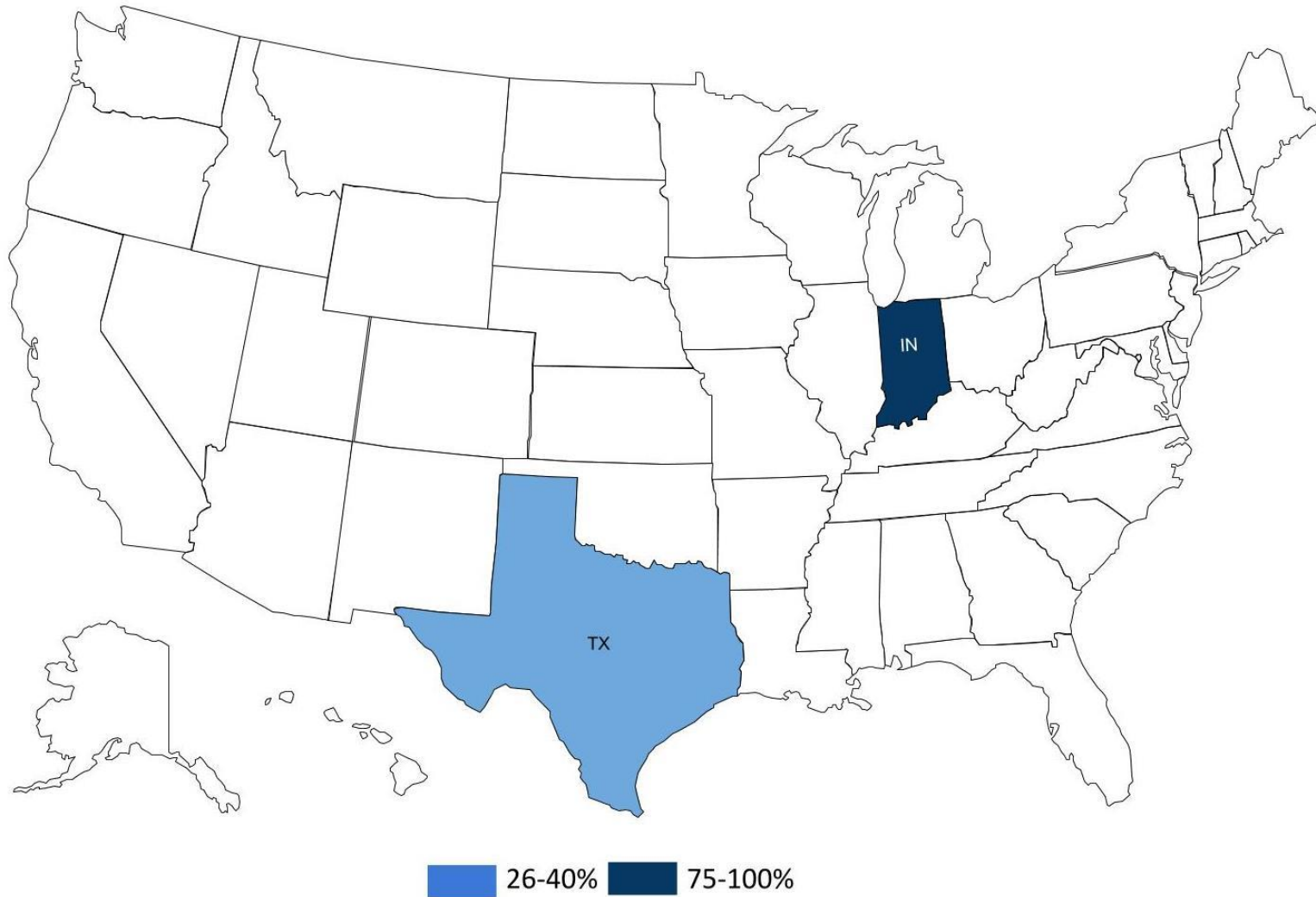


**“Significant Reforms to State Retirement Systems, NASRA 2016”
updated through 2017**

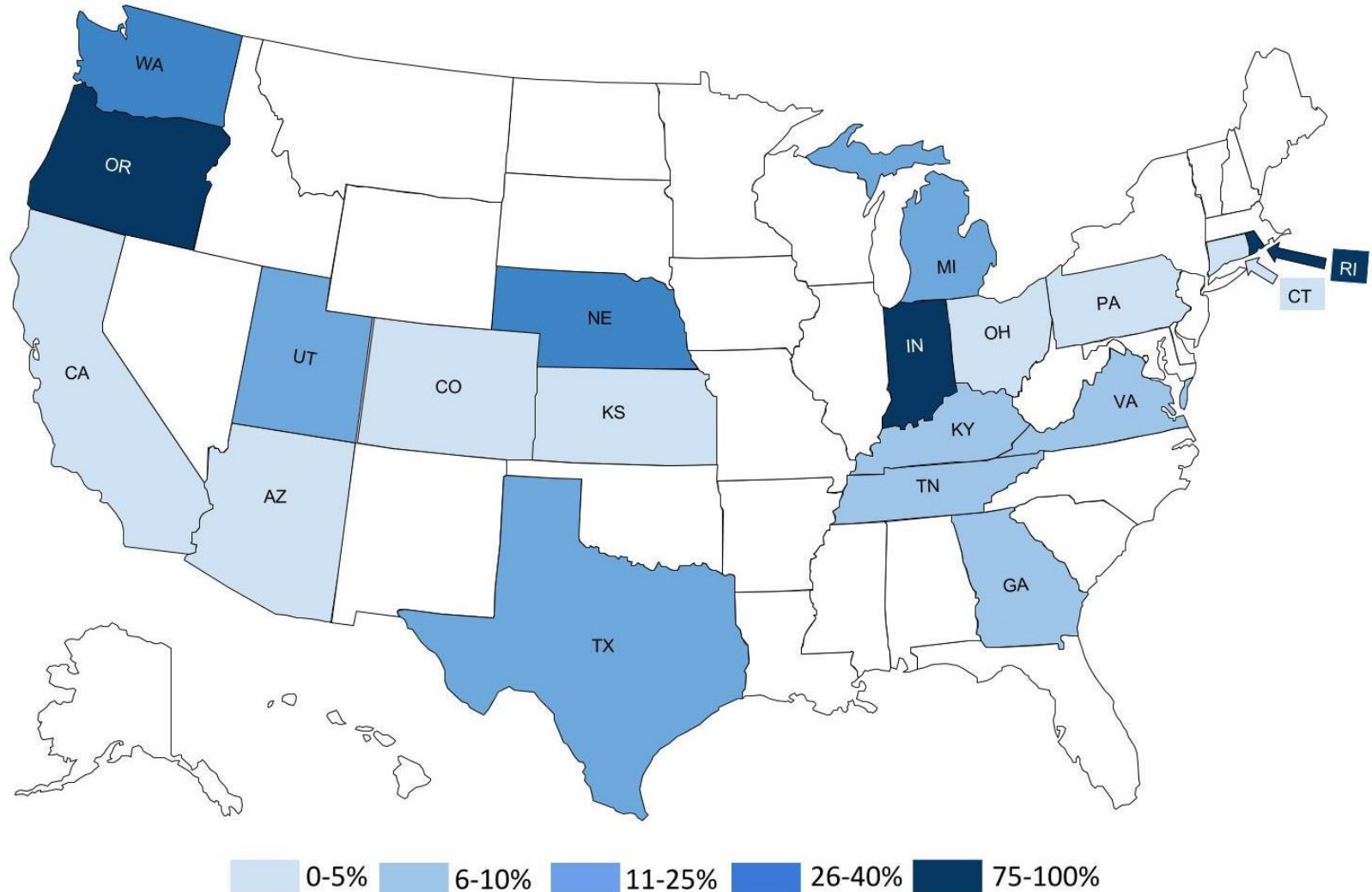
Hybrid Plans

- New hybrid plans are being created by legislatures nearly every year
- Usually apply to new hires only
- Mostly DB-DC, some cash balance plans
- DB-DC plans maintain a DB component, with a lower benefit accrual rate
- Cash balance plans contain key features of DB plans, but also transfer some investment risk to workers





Statewide Hybrid Plans, 1995



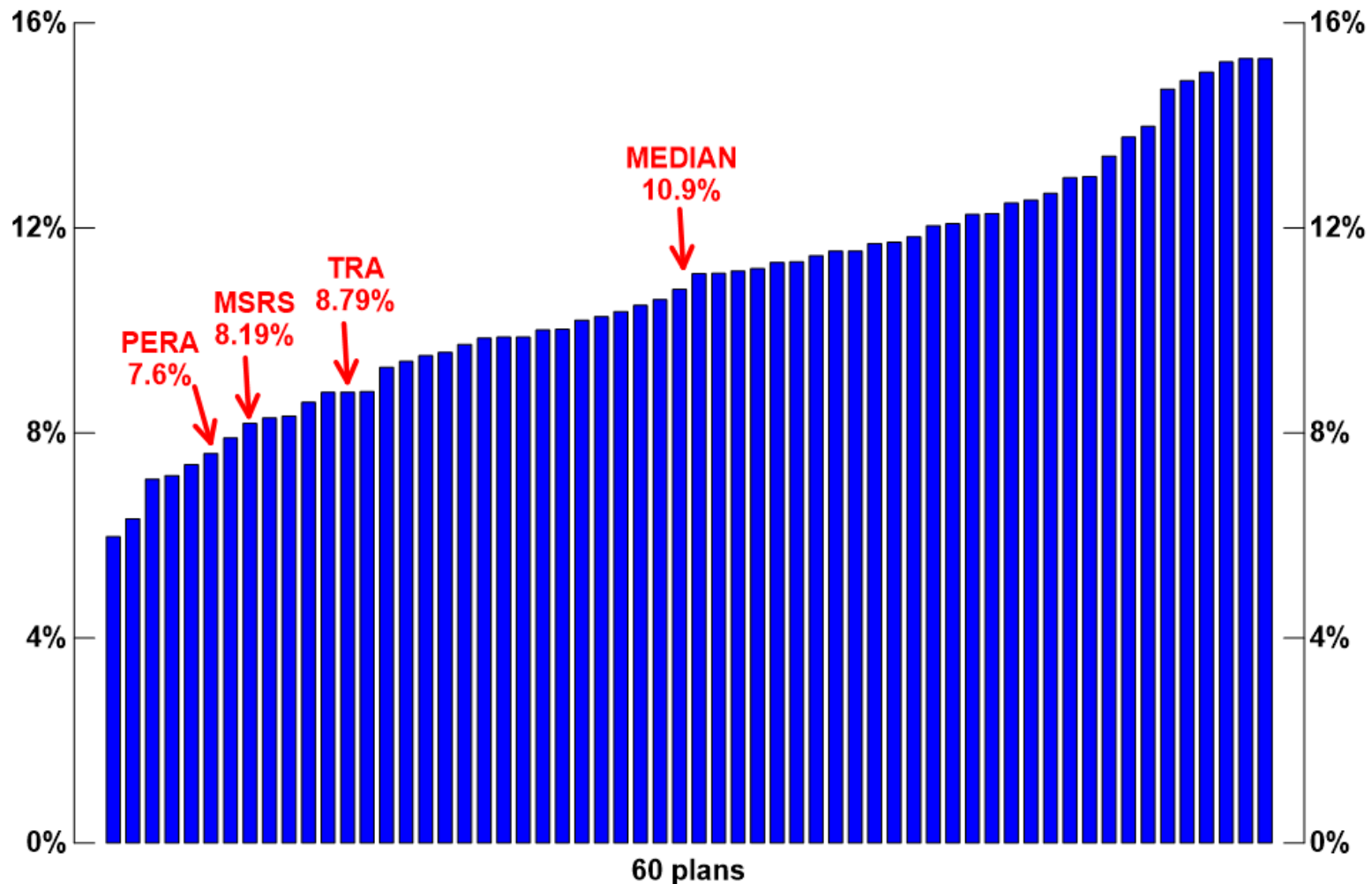
Statewide Hybrid Plans, 2017



Normal Cost

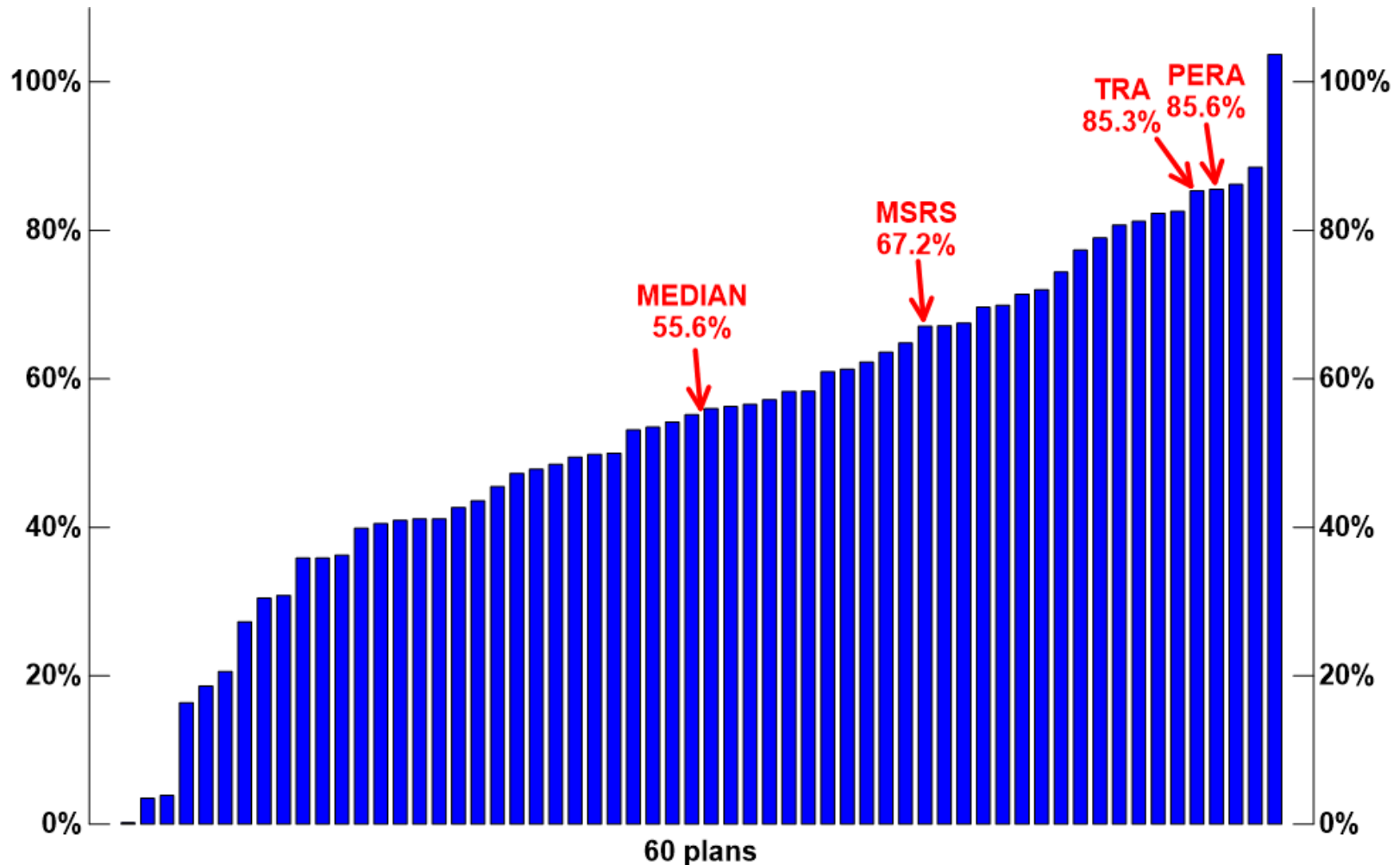
-  The cost of benefits being accrued in the current year
-  Generally expressed as a percentage of covered employee payroll
-  Funded through employee and employer contributions
-  Can serve as a proxy measure for the value of a pension plan

Distribution of normal cost for general employees and teachers, FY 16



*Social Security eligible
Public Plans Database, compiled by NASRA

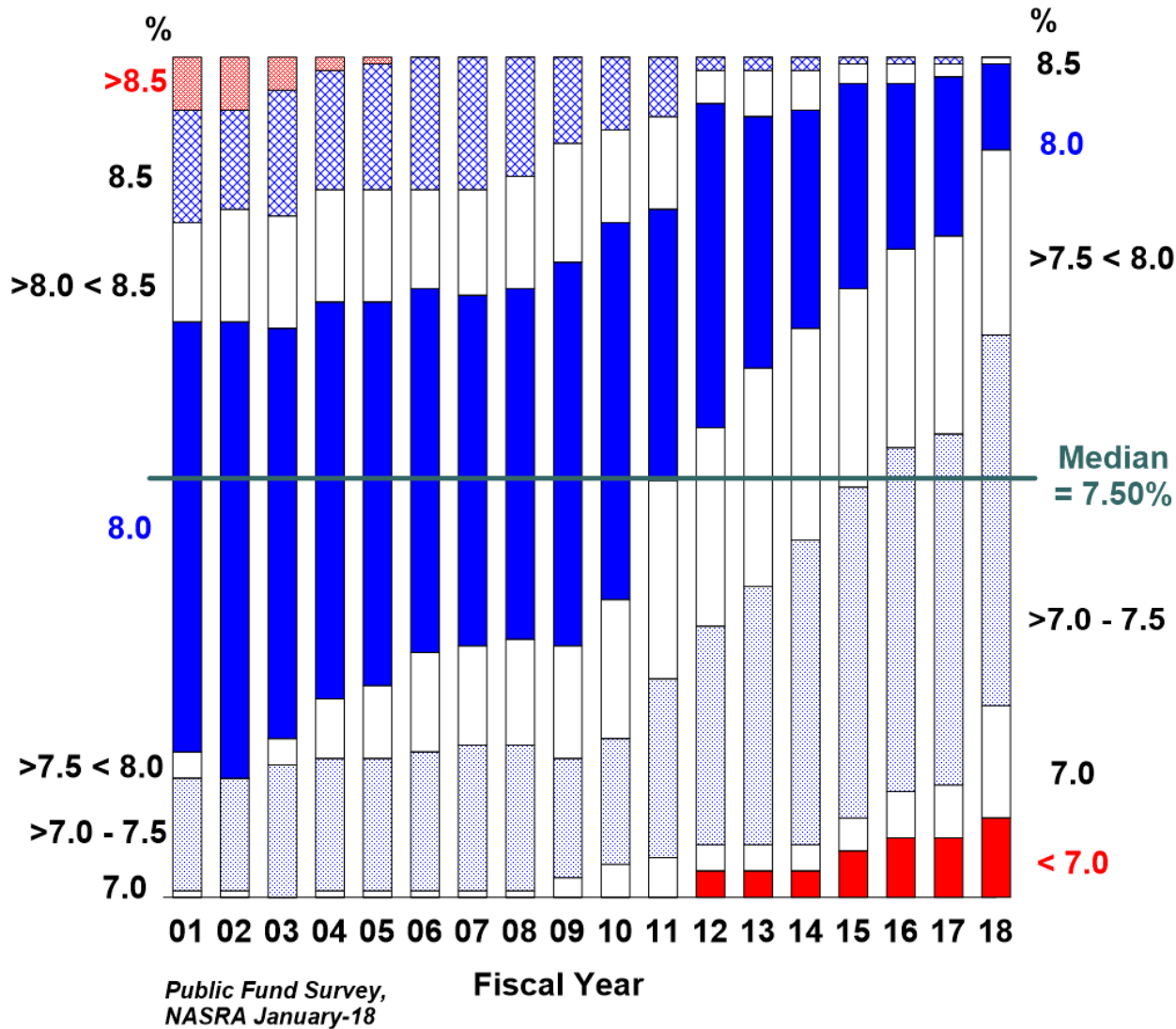
Distribution of percentage of normal cost paid by general employees and teachers, FY 16



*Social Security eligible
Public Plans Database, compiled by NASRA

Changes to the investment return assumption

- ▲ Retirement systems typically change their investment return assumption in response to a study of their assets and liabilities (aka experience study or asset liability modeling study)
 - ▲ Minnesota is one of three states where the legislature sets the investment return assumption (also SC, WA)
- ▲ These studies contain capital market assumptions, which are consensus outlooks of returns for individual asset classes and the total portfolio
- ▲ In the wake of the 2008-09 capital market decline, global interest rates and inflation have been low by historic standards
- ▲ See NASRA Issue Brief, Public Pension Plan Investment Return Assumptions



Distribution of Public Pension Investment Return Assumptions, FY 01 to FY 18

PERA: 8.0%

MSRS: 8.0%

TRA: 8.5%

Providing a retirement benefit that aligns with key stakeholder objectives

25

Key Stakeholders

- Public employees, public employers, taxpayers

Distinguishing elements of sound retirement plan design

- Mandatory participation
- Employee-employer cost sharing
- Targeted income replacement
- Assets that are pooled and professionally invested
- Death & disability protection
- A benefit that cannot be outlived

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