



THE **PEW** CHARITABLE TRUSTS

South Carolina Joint Committee on Pension Systems Review

**Public Pensions: 50-State Overview & South Carolina
Comparison**

October 25, 2016

**Greg Mennis, Director
Public Sector Retirement Systems Project**

The Pew Charitable Trusts

- More than 40 active, evidence-based research projects
- Projects include public safety, immigration, elections, transportation, pensions, and state tax incentives
- All follow a common approach: data-driven, inclusive, and transparent

Pew's Public Sector Retirement Systems Project

- Research since 2007 includes 50-state trends on public pensions and retiree benefits relating to funding, investments, governance, and employee preferences
- Technical assistance for states and cities since 2011

Presentation Overview

- Introduction
 - Background
 - Purpose of Joint Committee
 - Principles for Fiscal Sustainability and Retirement

- Pension Funding and Fiscal Health

- Investments

- Benefit Design

- Considerations for the Joint Committee

Background

- South Carolina's \$21 billion pension debt is the result of unfunded benefit increases, shortfalls in investment returns, and annual contributions that have not been sufficient to reduce the state's unfunded pension liability.
- Reforms passed in 2012 increased employee contributions, reduced cost of living adjustment (COLA) benefits and raised retirement ages. In addition, the Retirement System Investment Commission (RSIC) is in the process of implementing and evaluating measures to streamline governance, identify efficiencies, and improve the effectiveness of the pension investment fund, based on the findings of an independent audit report.
- Despite these efforts, there is increasing concern around the fiscal health and sustainability of the state's retirement system, which currently has less than 60% of assets on hand to pay for promised benefits – ranking 43rd across the 50 states.

Background (continued)

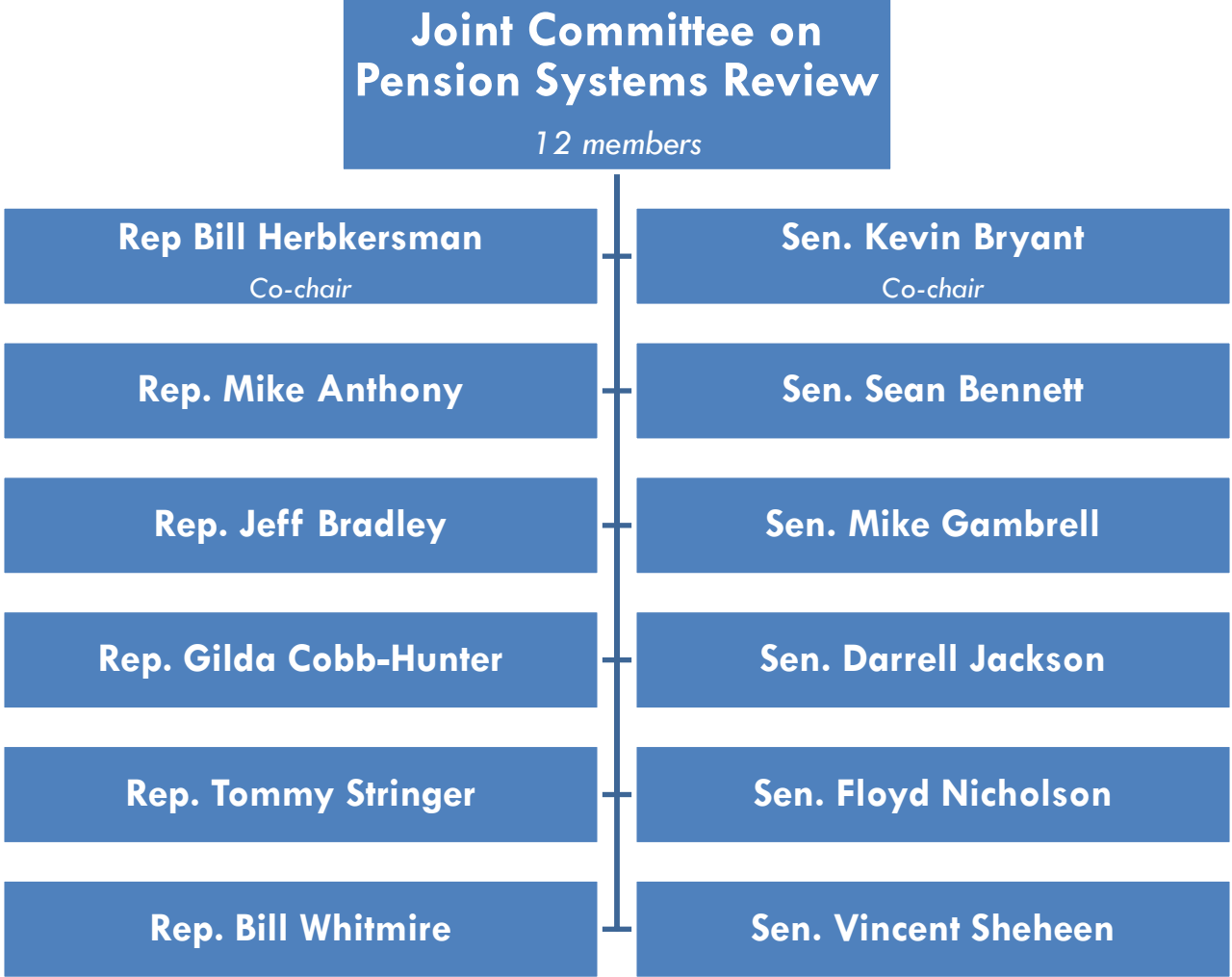
- The Joint Committee was formed to identify and evaluate measures to improve the fiscal health of the South Carolina Retirement System.
- Pew's presentation today will cover 50-state, regional and South Carolina specific information on pension funding, benefits, and investments to inform the work of the committee.
- There is no one size fits all solution to pension reform. However, common principles can be applied to develop a solution tailored to the needs and capabilities of the South Carolina Retirement System.

Purpose of the Joint Committee

- “This committee will take into account all the relevant factors involved in making this system as strong as possible. I’m confident we’ll roll up our sleeves, work together and make sure South Carolina honors its obligations in a fiscally responsible way.”
 - Senate President Pro Tempore Hugh Leatherman

- “Thousands of South Carolinians have voluntarily contributed into the state retirement system with the hope of receiving a positive return in the future. These hardworking citizens have entrusted our state to invest their income wisely and we owe it to them to honor our commitments. With the formation of this Joint Committee, I am confident the House and Senate can work together to address this problem in an efficient manner that puts our pension system on a path to solvency.”
 - Speaker of the House Jay Lucas

Joint Committee Membership



50 State and Regional Report Card

	South Carolina	50 State Rank	Southeast Region Rank	Comments
Funded Ratio	61% (2014 - for comparison)	43	7/7	
% of ARC Paid (2004-2013)	100%	8	1	AL, GA and TN also contributed 100% of ARC
Net Amortization as a share of Payroll	-5%	39	6/7	NC, TN achieved positive net amortization
10 Year Investment Return	5.1%	40 /41 (reporting net of fees)	5/5	41 report annual returns net of fees, as of 6/30 AL and TN not among the 41
Assumed Rate of Return	7.5%	US Median	Average	VA lowest in US/region at 7%
Investment Transparency	Reports returns net of fees and by asset class	National leader on investment fee disclosure	Regional leader	Fee levels are third highest among 73 largest state funds
Pension Benefits	Defined Benefit Plan with a 1.82% multiplier per year of service	The average general employee DB plan multiplier is 1.8%	Average Multiplier = 1.7 TN and VA now offer DB/DC hybrid plan	South Carolina has one of the most significant cost sharing policies in US and a robust optional DC plan
OPEB Liability as a % of Personal Income	5.98%	11 th largest	5/7 (3 rd highest)	State provides workers with percentage of premium benefit, based on YOS

Note: Southeast region includes AL, FL, GA, NC, SC, TN, VA.

Principles for Fiscal Sustainability

- Commit to fully funding and paying for pension promises
- Manage investment risk and cost uncertainty
- Follow sound investment governance and reporting practices

Principles for Retirement Security

- Target sufficient contributions and savings to help put employees on a path to a secure retirement
- Invest assets in professionally managed, pooled investments with low fees and appropriate asset allocations
- Provide access to lifetime income in retirement

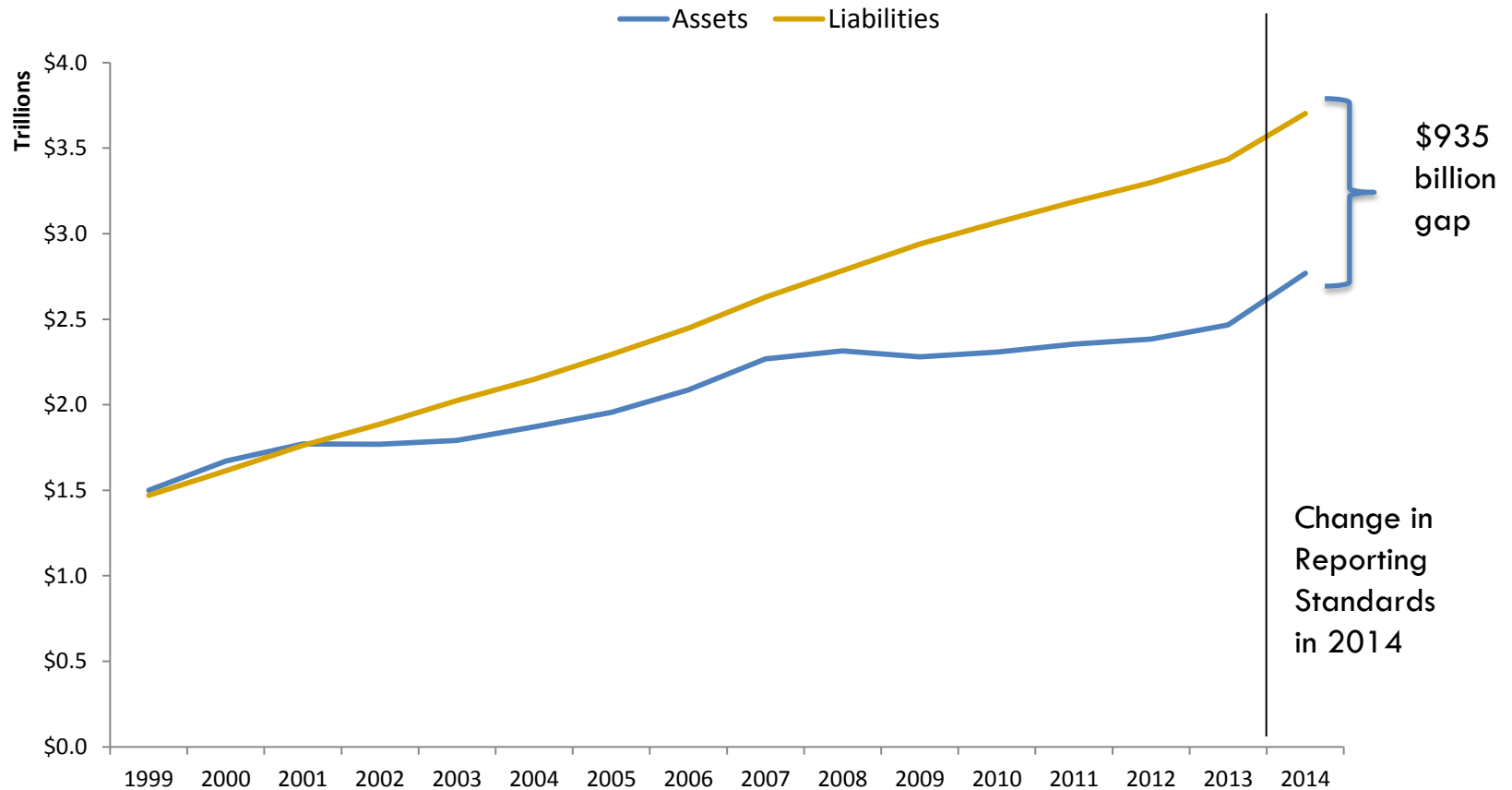
Pension Funding & Fiscal Health

50 State Summary & South Carolina History

Pension Funding & Fiscal Health - Summary

- State and cities report a gap of over \$1 trillion between pension liabilities and the assets on hand to pay for promised benefits.
- South Carolina's \$21 billion pension debt is the result of unfunded benefit increases, shortfalls in investment returns, and annual contributions that have not been sufficient to reduce the state's unfunded pension liability.
- The state ranks 43rd on pension funding and 39th on contribution adequacy, based on standard measures applied across the 50 states.
- The increase required in annual contributions to pay down pension debt and sustain an economic downturn could be as much as 40%.
- See appendix for details on state OPEB liability (retiree health care).

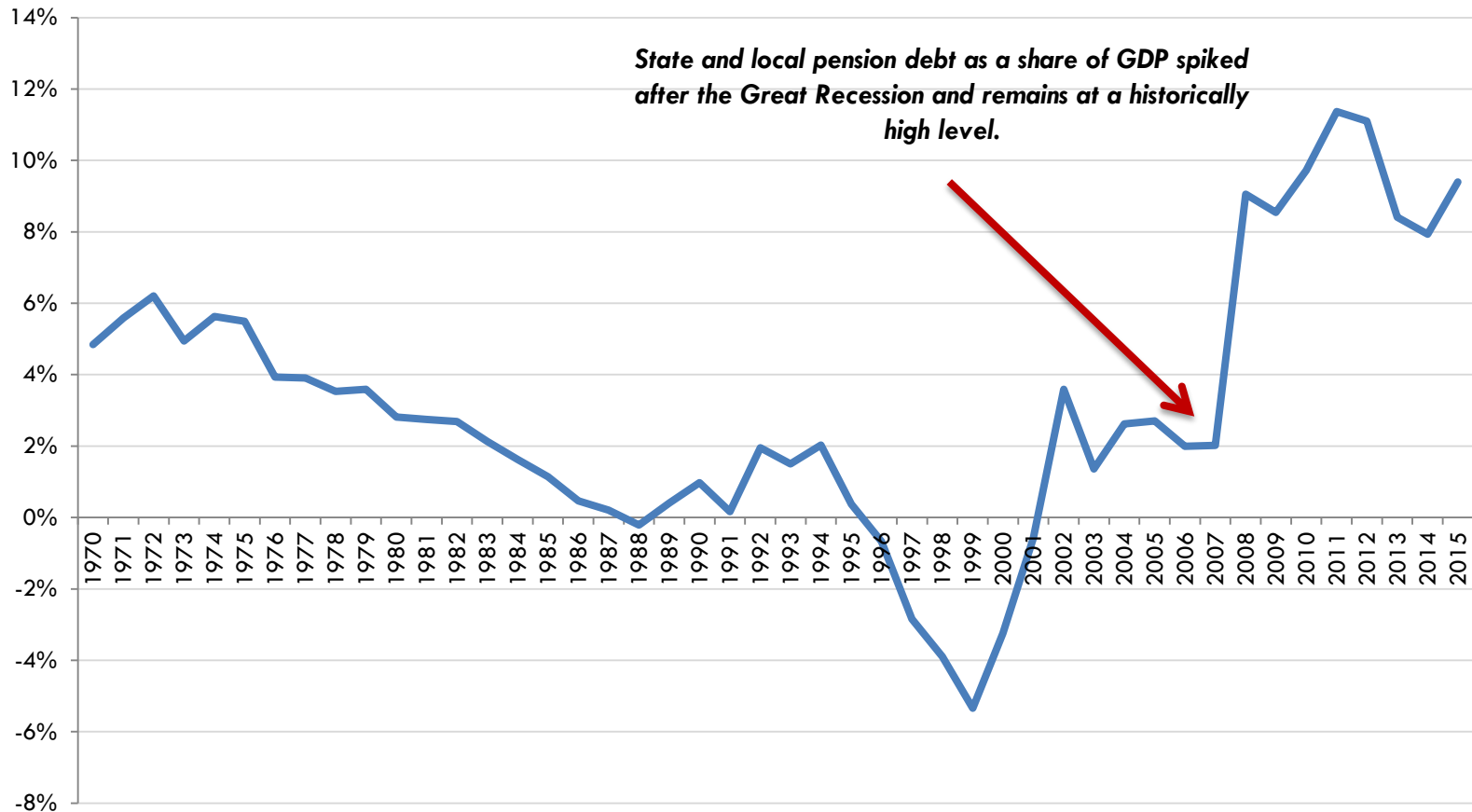
50 State Pension Funding Gap - 2014



Note: GASB reporting standards changed in 2014.

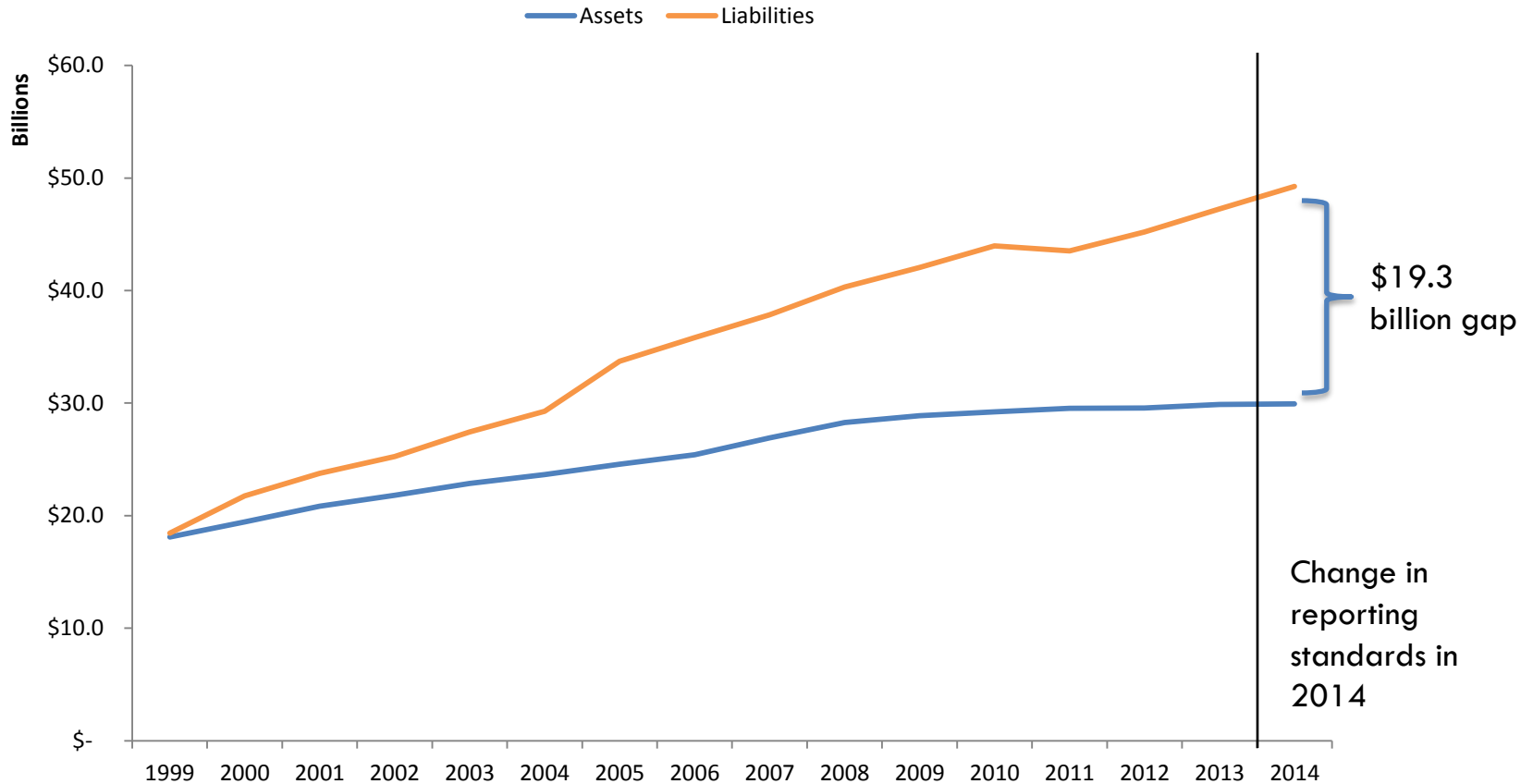
Source: Data for this graph were collected from Comprehensive Annual Financial Reports (CAFRs), actuarial reports and valuations, or other public documents.

State and Local Pension Debt as a Share of Gross Domestic Product



Source: The Federal Reserve and U.S. Department of Commerce Bureau of Economic Analysis

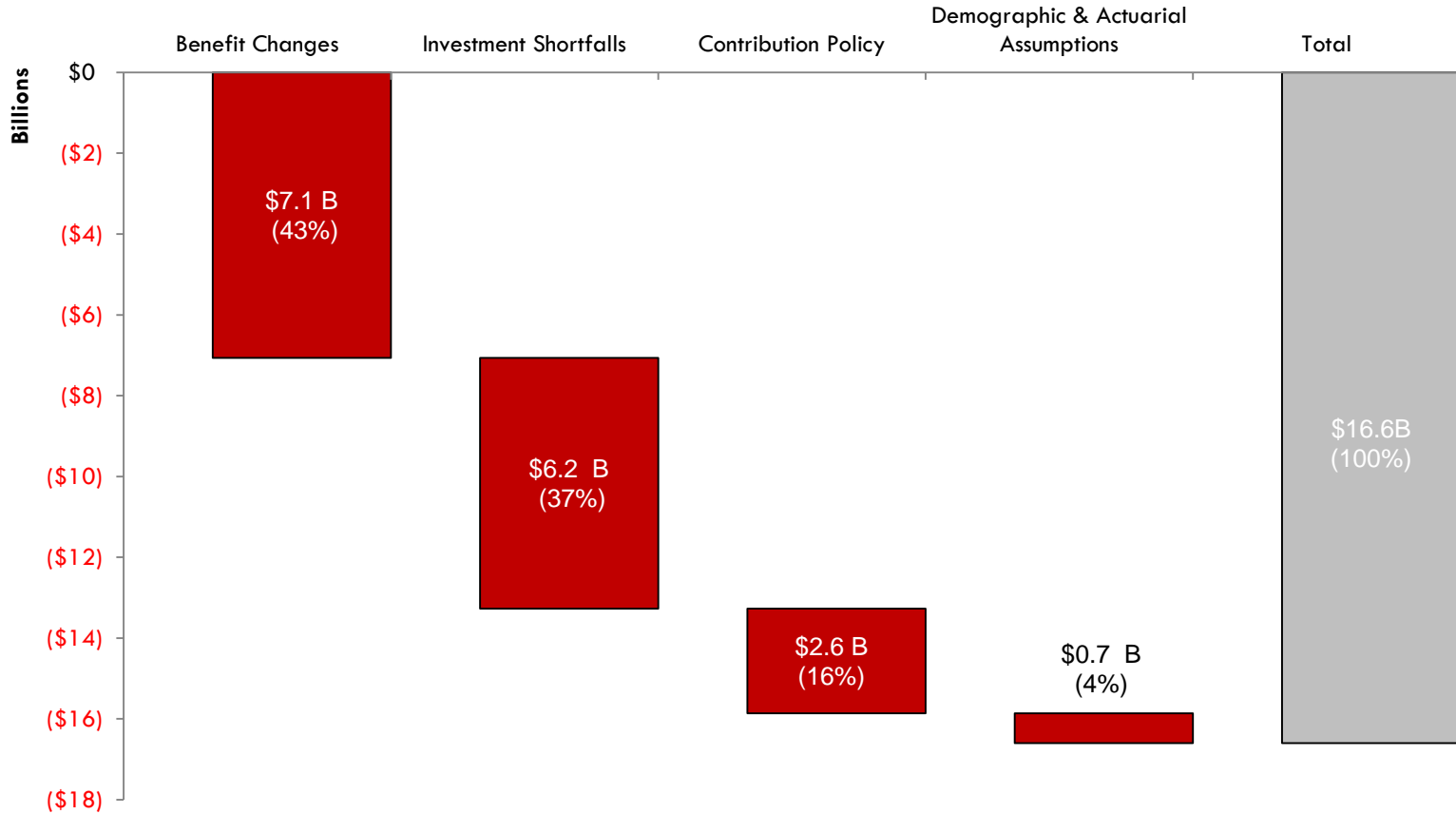
2014 State Pension Funding Gap (South Carolina)



Note: GASB reporting standards changed in 2014.

Source: Data for this graph were collected from Comprehensive Annual Financial Reports (CAFRs), actuarial reports and valuations, or other public documents.

SCRS Sources of Growth in Unfunded Liability 2000-2015

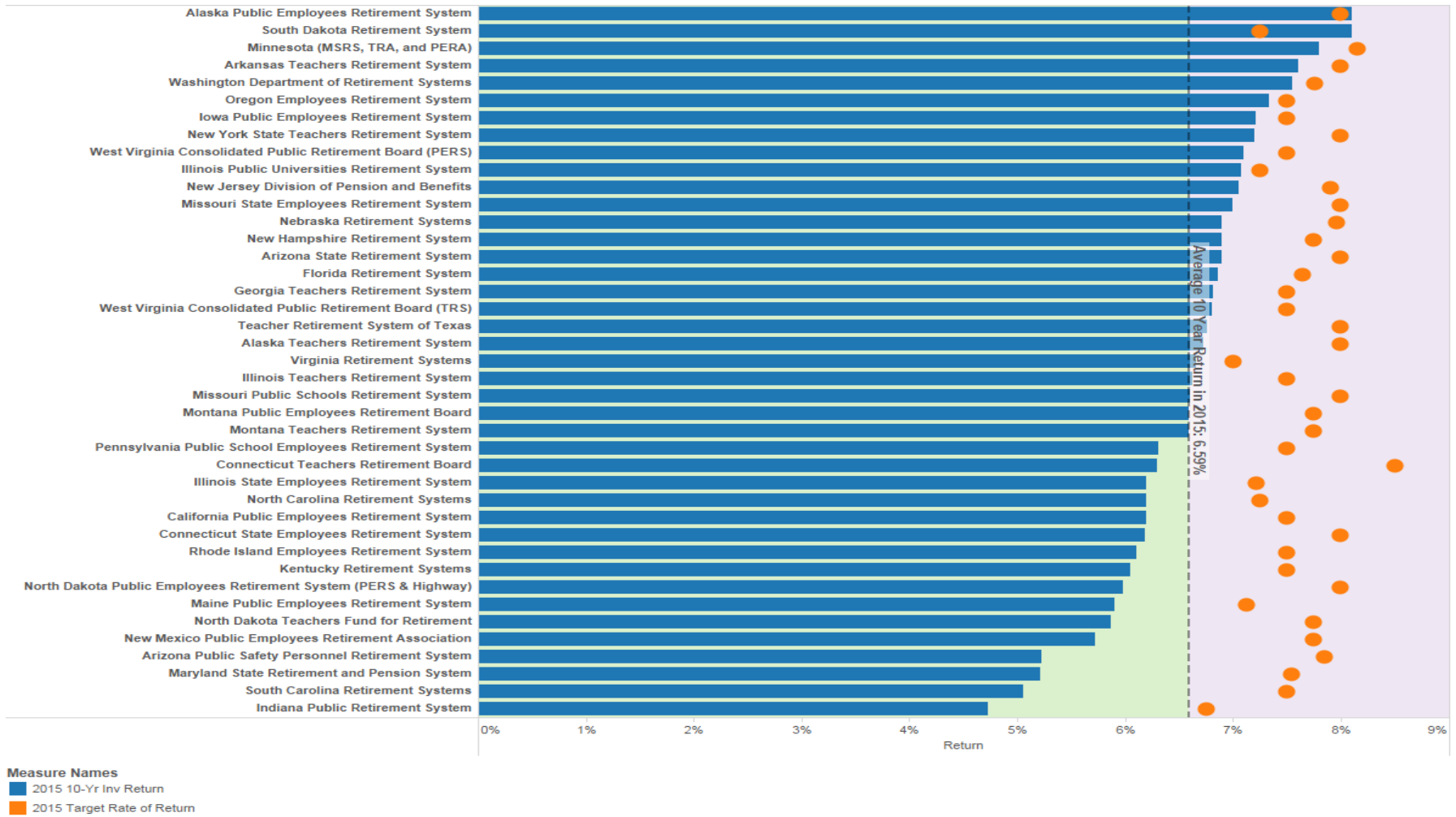


Note: Figures calculated using actuarial valuation of assets.

Source: SCRS actuarial valuations

10-Year Investment Returns

SCRS vs. Other State Funds That Report Net of Fees

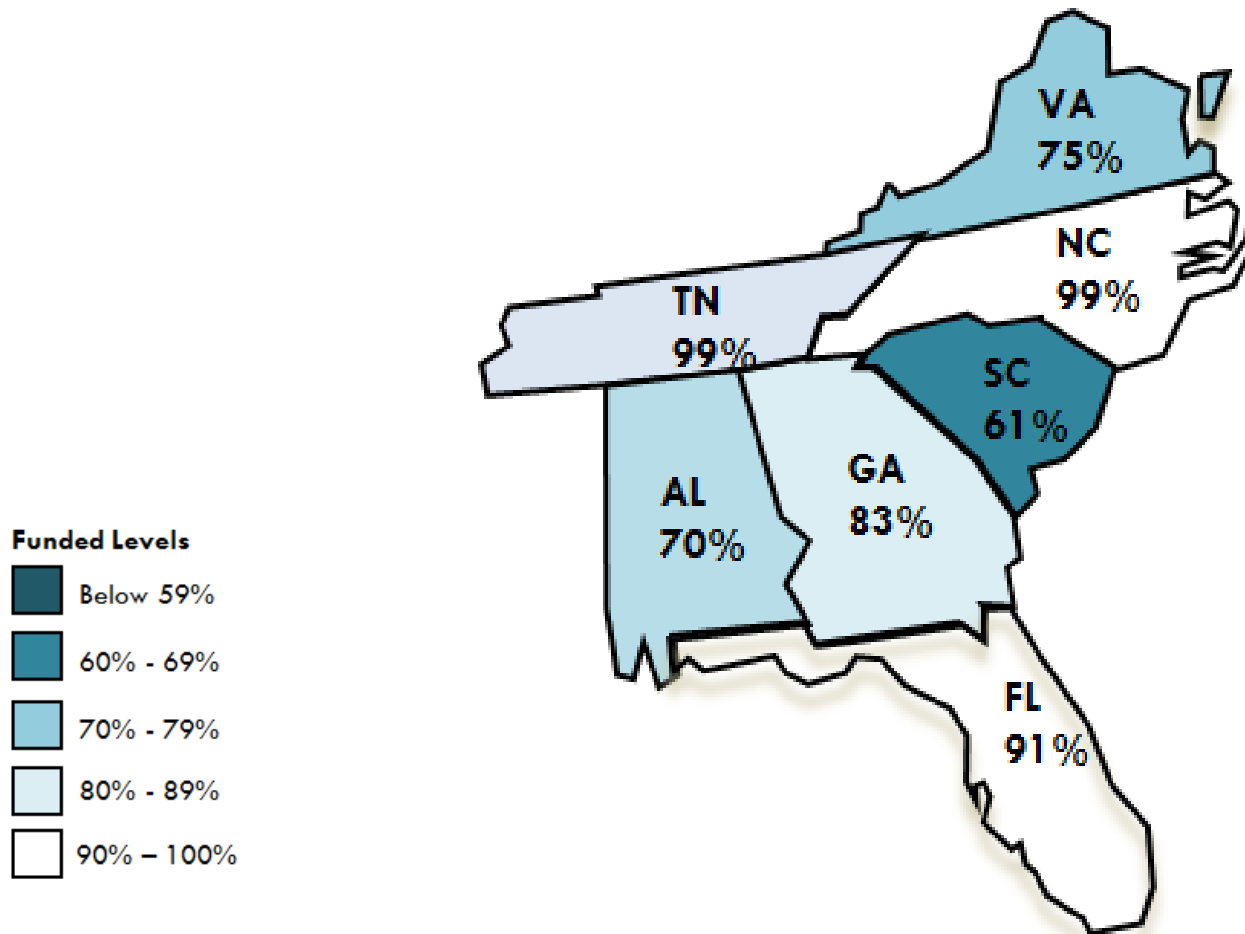


Sources: Comprehensive Annual Financial Reports, 2014 & 2015; quarterly investment reports; and plan responses to data inquiries

Funding Policy Definitions

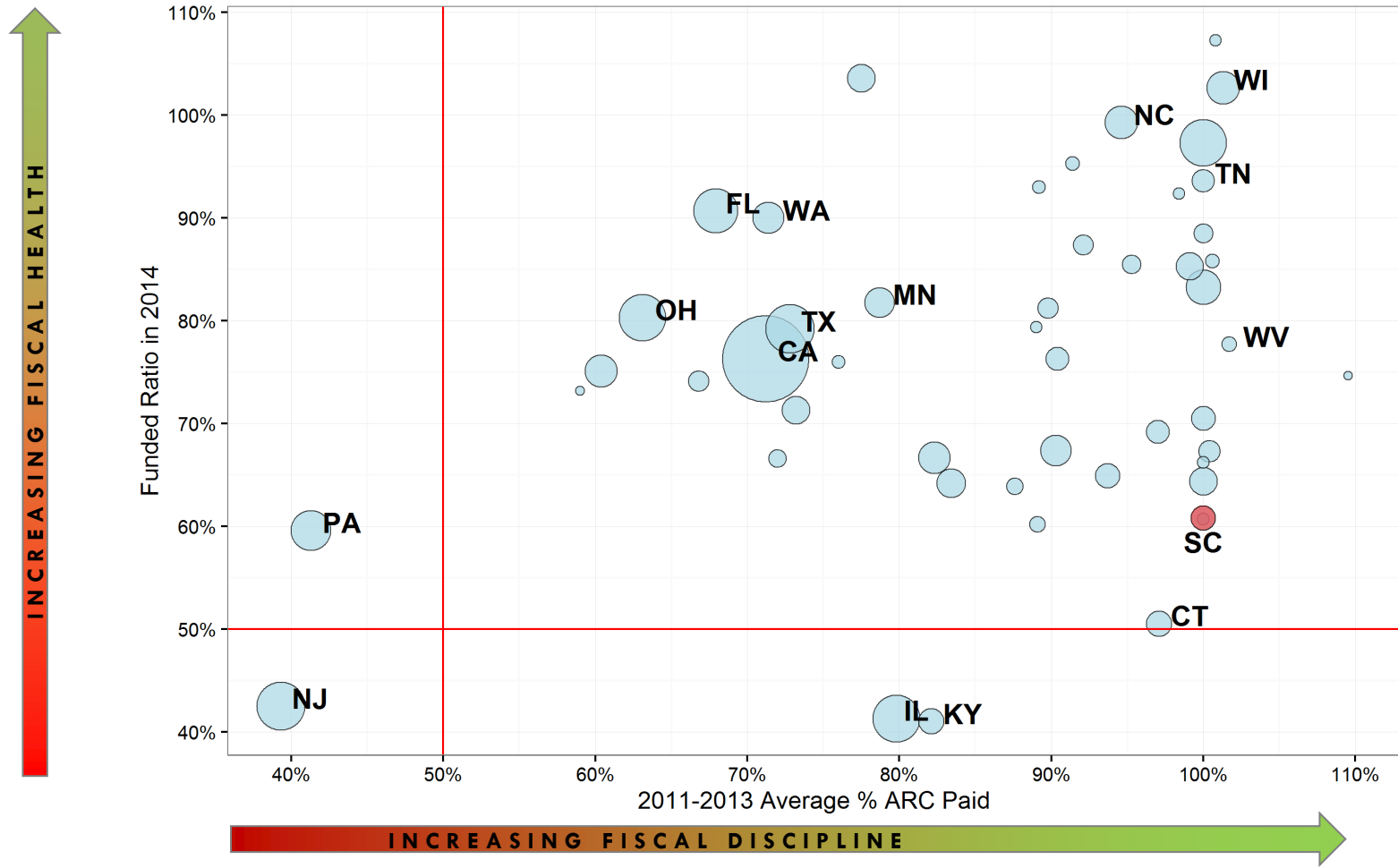
- **Funded Ratio:** The ratio of assets to the accrued pension liability. A measure of fiscal condition at a point in time.
- **Annual Required Contribution (ARC):** Calculation that includes the expected cost of benefits earned for the current year and an amount to reduce some of the unfunded liability. Based on a plan's own assumptions.
- **Net Amortization:** The sum of the cost of new benefits and interest on the pension debt, minus employee contributions. An indication of contribution adequacy.

Southeast Regional Comparison: 2014 Funded Ratio



Fiscal Health and Discipline Across States

%ARC Paid by Funded Ratio, plots scaled by 2014 Total Liability



Funding Policy

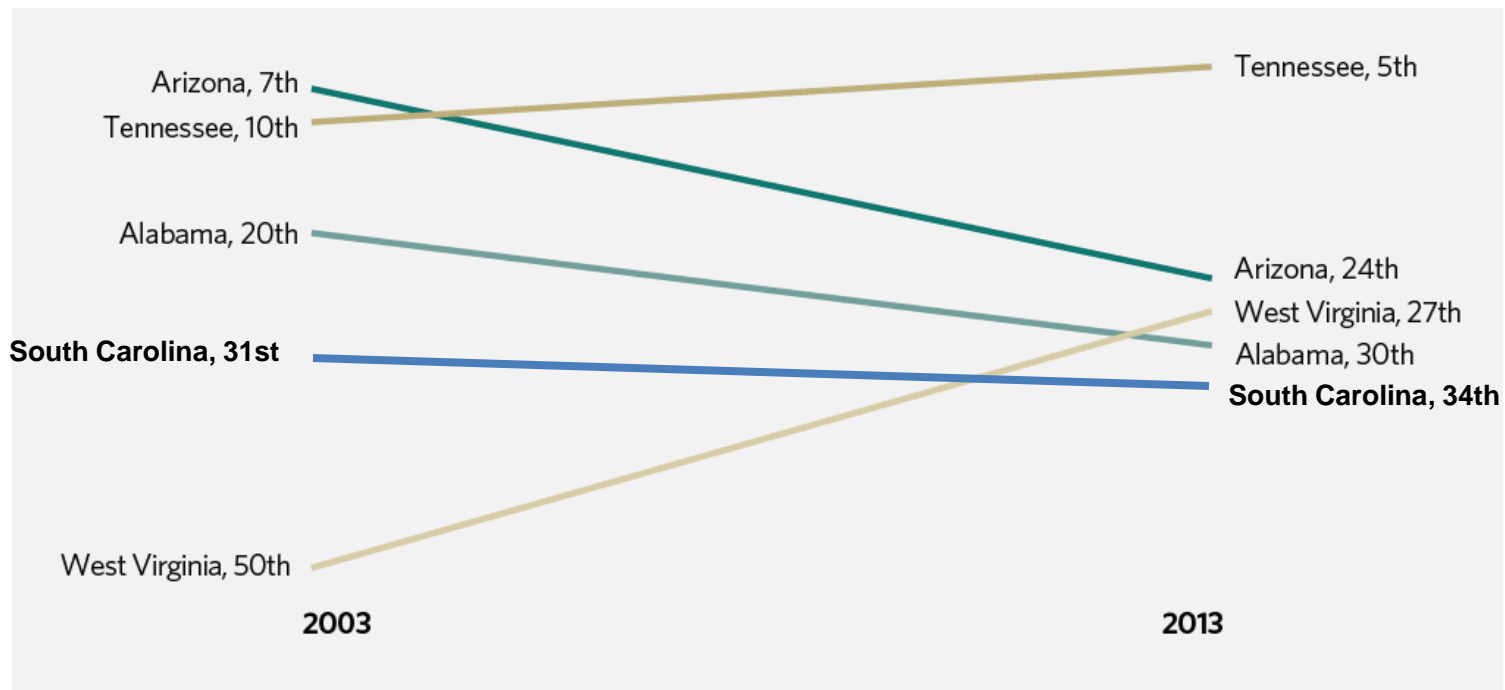
South Carolina

As specified by the Code, in the event the scheduled employer and member contribution rate is insufficient to maintain a thirty-year amortization period for financing the unfunded liability of the System, the Board shall increase the employer and member contribution rates in equal amounts, as necessary, to maintain a funding period that does not exceed thirty years. The contribution rate determined by a given actuarial valuation becomes effective twenty-four months after the valuation date. . .the Board is not permitted to decrease the employer and member contribution rates until the funded ratio of the plan is at least 90%. Also, any change in the rates must maintain the 2.90% differential between the employer and member contribution rates.

Source: 2015 South Carolina Retirement System Actuarial Valuation

Different ARC Calculations, Different Results

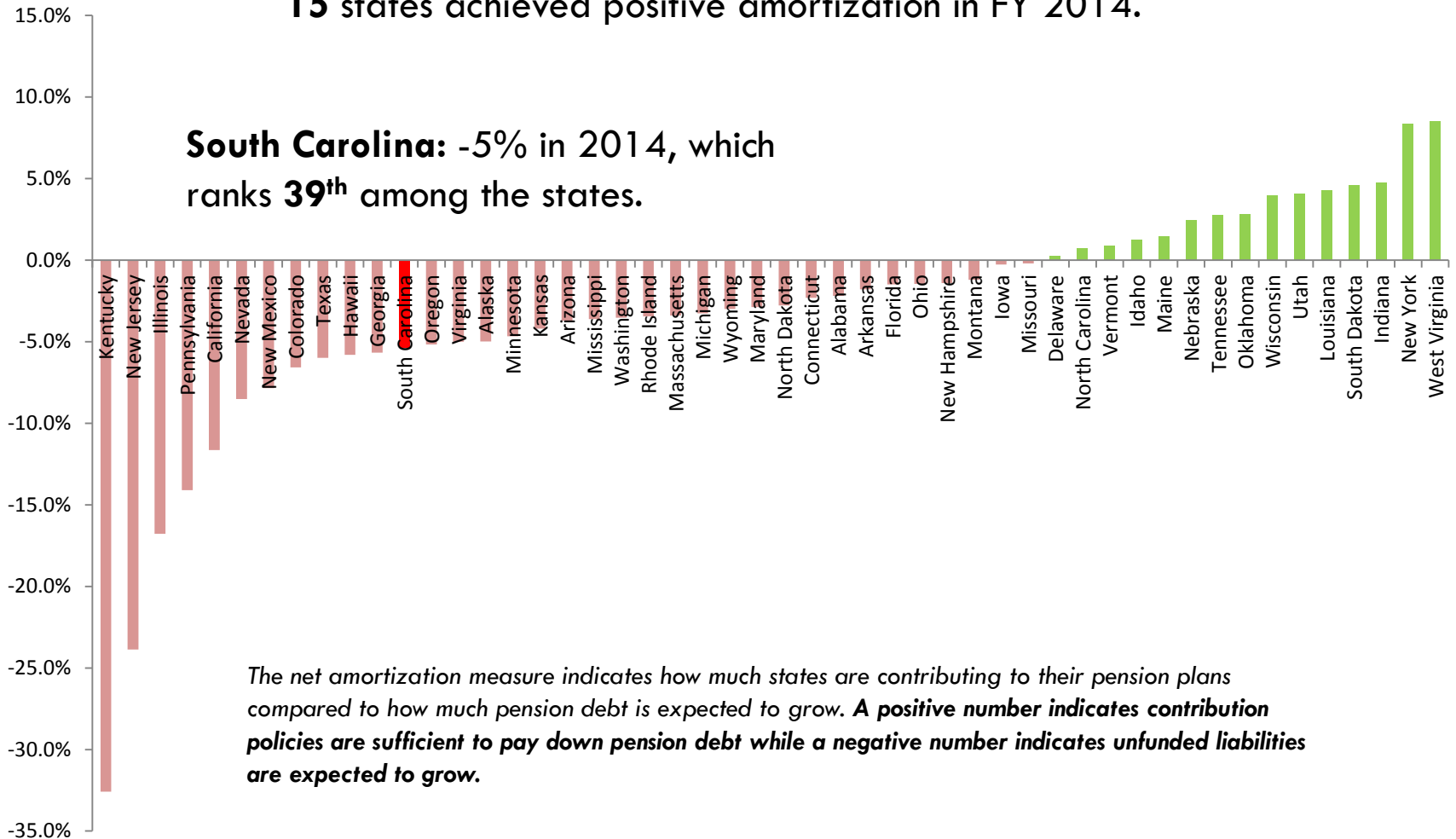
Comparison of 4 states that made 100% of ARC payments
Funding rank 2003 and 2013



Sources: Comprehensive Annual Financial Reports (CAFRs), actuarial reports and valuations, or other public documents, or as provided by plan officials

Net Amortization as a Share of Covered Payroll – FY 2014

15 states achieved positive amortization in FY 2014.



Source: Data for this graph was collected from Comprehensive Annual Financial Reports (CAFRs), actuarial reports and valuations, or other public documents, or as provided by plan officials. This data does not include plans where no covered payroll data was reported except for plans that are closed to new members.

Example of Net Amortization Calculation

North Carolina and South Carolina both paid their ARC but follow very different contribution policies.

Overall, North Carolina's pension promises are 99% funded compared to South Carolina at 61%.

		North Carolina	South Carolina
1	Pension debt, beginning of 2014	\$7,467,231	\$20,225,470
2	Effective interest rate for pension debt	7.3%	7.5%
3=1*2	Interest on pension debt	\$541,695	\$1,516,910
4	Cost of new benefits	\$2,234,931	\$895,467
5	Employee contributions, with interest	\$1,223,208	\$779,138
6=3+4-5	Employer benchmark for net amortization	\$1,553,417	\$1,633,240
7	Employer contributions, with interest	\$1,692,560	\$1,178,570
8=7-6	Expected reduction in pension debt	\$139,143	-\$454,670
9=7/6	Percentage of benchmark contributed	109%	72%

Source: State Comprehensive Annual Financial Reports and state pension plan actuarial valuations and financial reports. All dollar figures in thousands.

Pension Investments

Recent Trends and Emerging Issues

Pension Investments Summary

- US public pension funds have shifted away from bonds towards stocks and alternatives in recent decades. Measures of market risk are at all time highs.
- State funds are now invested 25% in higher fee alternative investments. There is increased attention around fee disclosure and the performance and cost of hedge funds in particular.
- RSIC 10 year investment returns of 5.1% are well below the assumed rate of return and lag nearly all other state pension funds. Shortfalls relative to peer group are driven primarily by underweighting to stocks and negative returns on commodity investments.
- Pew recommends the use of stress testing to better evaluate funding policy requirements and to provide policymakers with information to better measure and manage cost uncertainty.
- Pew supports the ongoing efforts of the legislature and the RSIC to streamline governance, identify efficiencies, and improve the overall effectiveness of the pension investment fund.

Investments – Key Trends: More in Stocks and Less in Bonds

Public Pension Investments, 1954-2014

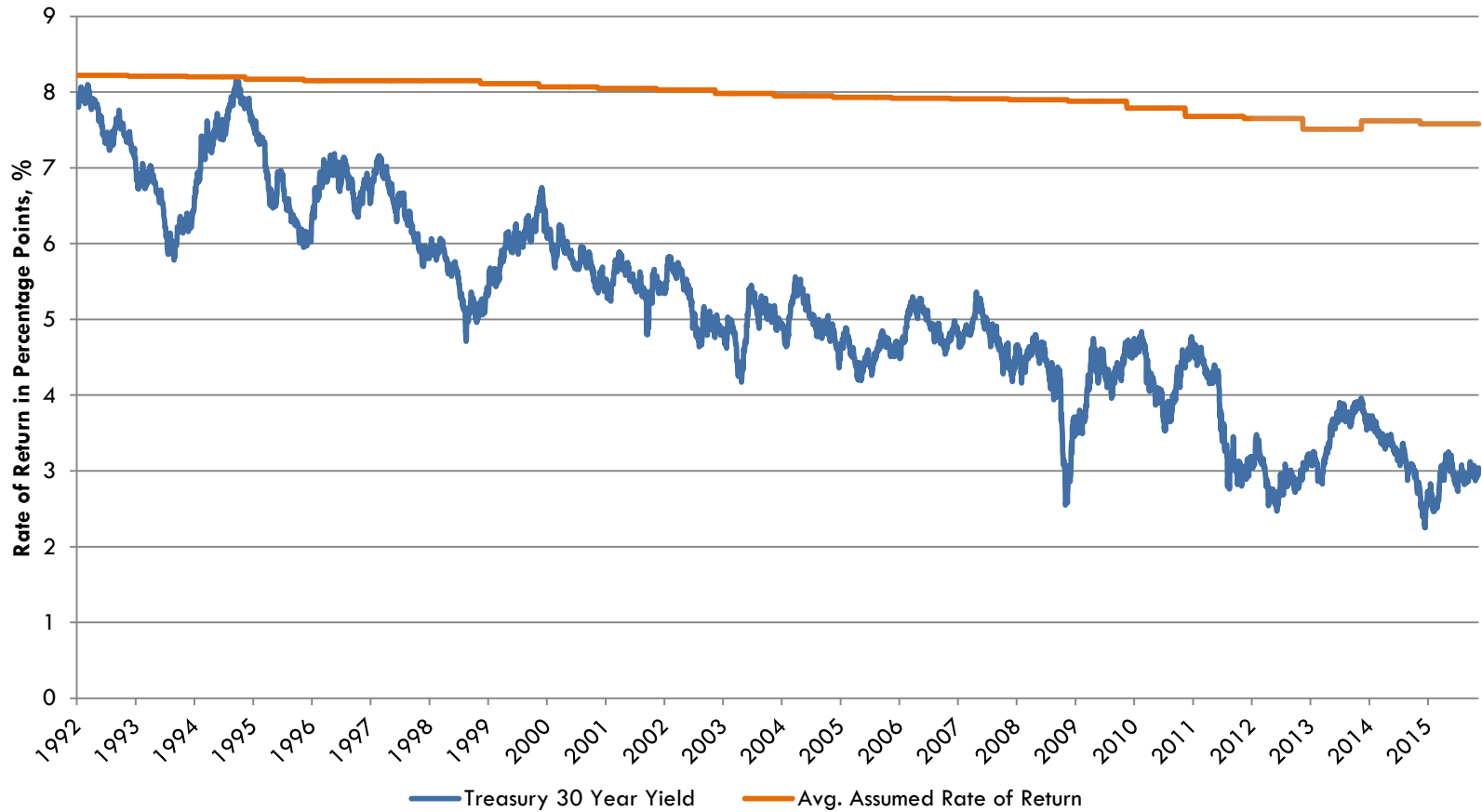
Allocations to equities and alternative investments have increased, while those to fixed-income investments have declined



Source: U.S. Board Of Governors of the Federal Reserve System, *Financial Accounts of the United States*, 1954 to 2014; Pew Analysis of State Financial Reports

Pension Fund Risk Premium at Historic High

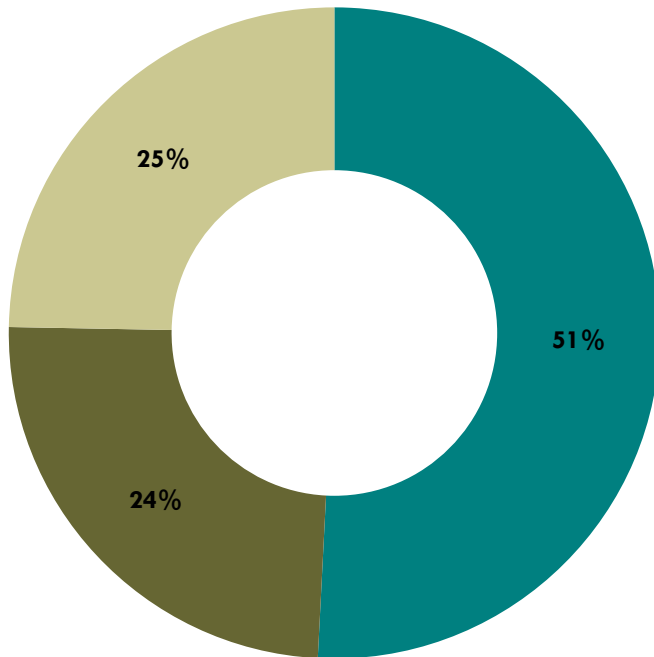
US Public Fund Average Increasing Risk Premium – Plan's Assumed Rate of Return Remains Relatively Stable, While Bond Yields Have Declined



Investments – Asset Allocations (U.S. Avg. & SCRS)

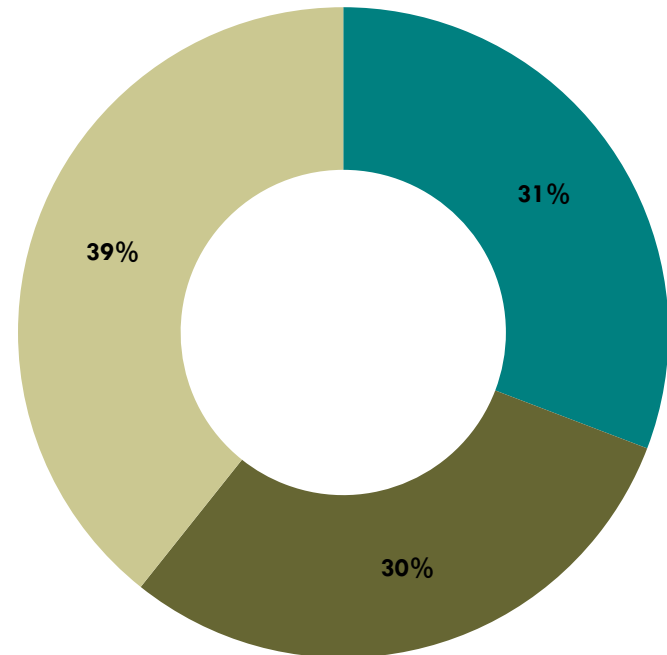
US Average (2014) Asset Allocation

■ Equity ■ Fixed ■ Alternatives



SCRS (2014) Asset Allocation

■ Equity ■ Fixed Income ■ Alternatives

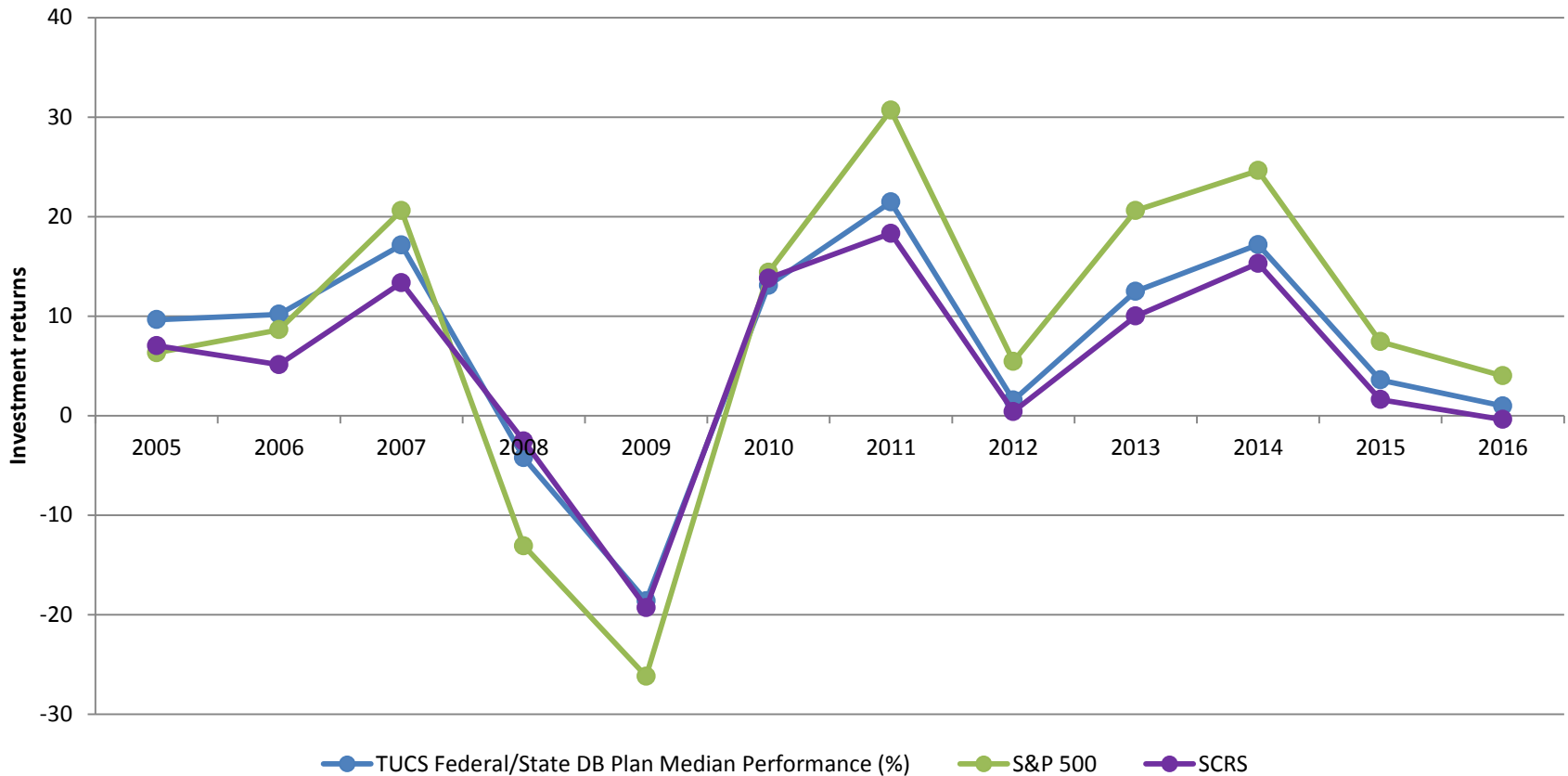


Source: Comprehensive Annual Financial Reports (CAFRs), actuarial reports and valuations.

Note: Pew includes Global Tactical Asset Allocation in Alternatives

SCRS - Average Annual SCRS, Stock Market, and Pension Fund Returns

Equity investments and pension fund returns are highly volatile



Note: SCRS data is reported *net of fees* from 2009 to 2016 and *gross-of-fees* from 2005 to 2008. TUCS data is reported *gross of fees*.

Sources: SCRS June 30th CAFRS and Investment Reports and the Wilshire®, Trust Universe Comparison Service®

Measuring and Managing Cost Uncertainty

- With interest rates at historically low levels, there is increased attention around both the level of risk in pension fund portfolios and the potential for unplanned costs if return targets are not achieved.

- Public pension funds have taken steps to address these concerns by:
 - Increasing contributions
 - Modifying investment return targets and/or asset allocations
 - Implementing changes to benefit plan design

- Stress-testing investment returns and pension costs can further aid policymakers in their efforts to better understand and plan for cost uncertainty.
 - See: Washington state, CALPERs, Society of Actuaries Blue Ribbon panel recommendations

Sample Stress Testing Language

I. Baseline Projections

- 1) Projections of assets, liabilities, pension debt, actuarial recommended contributions, net amortization, benefit payments, payroll, and funded ratio based on plan assumptions for the next 30 years;
- 2) The expected contributions as a percent of payroll, the ratio of benefit payments to payroll, the ratio of funding liability to payroll, and the ratio of market value of assets to payroll

II. Sensitivity Analysis

- 1) Estimates of the items listed in sub-paragraph 1(a) over a 20 year period assuming investment returns are 2 percentage points above plan assumptions, 2 percentage points below plan assumptions, and 3 percentage points below plan assumptions assuming:
 - a. Employer contributions adjust based on current policy
 - b. Employer contributions are held constant at the levels calculated for the Baseline Projections

III. Scenario Analysis (Asset Shock with Low Growth):

- 1) Estimates of the items listed in paragraph (1) if there is a one year loss on investments of 15%, followed by a 20 year period of investment returns 2 percentage points below plan assumptions assuming:
 - a. Employer contributions adjust based on current policy
 - b. Employer contributions are held constant at the levels calculated for the Baseline Projections

Benefit Design

Benefit Design- Summary

- South Carolina's defined benefit design matches closely with US averages for states that offer DB plans and also participate in social security.
- Reform measures implemented in 2012 also track closely with those implemented by most other states – including adjustments to employee contributions and COLA benefits.
- South Carolina is one of 18 states with a policy to adjust employee contributions or COLAs based on the fiscal health of the plan and one of 8 states that offers an optional DC plan for workers.

Summary of South Carolina Benefits

State/Teachers	Hired on or after July 1, 2012	Hired before July 1, 2012	Comparison to Plans for New Employees in Other States
Multiplier	1.82%	1.82%	The average general employee plan multiplier is about 1.8%.
COLA	1% fixed, max of \$500	1% fixed, max of \$500	60% of State/Teacher plans offer a COLA, while the remainder had ad hoc COLAs or no COLAs.
Employee Contribution	8.66%	8.66%	The average contribution rate for a new state employees was 5%, 6% for teachers.
Vesting	8 years	5 years	Average vesting period for new teachers and state employees is about 7 years. More plans had a 5 year vesting than a 10 year vesting period.
Normal Retirement	65/8; Age + YOS (min 8 earned service credit) = 90	65/5; Any/28	For new hires, the average earliest retirement age for teachers and state employees with 20 year or fewer years of service was 63 to 65.

Recent Pension Reforms in South Carolina

➤ 2012 reform

- Reduced COLA from 2% to 1% (with a \$500 cap) for retired, active, and new members.
- Increased employee contribution for current state employees and teachers from 6.5% to 8%, in 0.5% increments
- Future cost increases are distributed between the employee and employer contribution rates, contribution rates cannot be lowered until system is 90 percent funded.
- Increased vesting period (from 5 to 8 years), changed final average salary calculation, and raised retirement age and service requirements for new employees.
- Lowered assumed rate of return from 8 percent to 7.5 percent.

➤ Between 2000 and 2012, South Carolina started providing new state and K-12 school employees with a choice between a defined benefit plan and a defined contribution plan, called the State Optional Retirement Plan (State ORP). Higher education employees have been eligible to participate in the ORP since 1987. New state assembly members became eligible to join the plan in 2012.

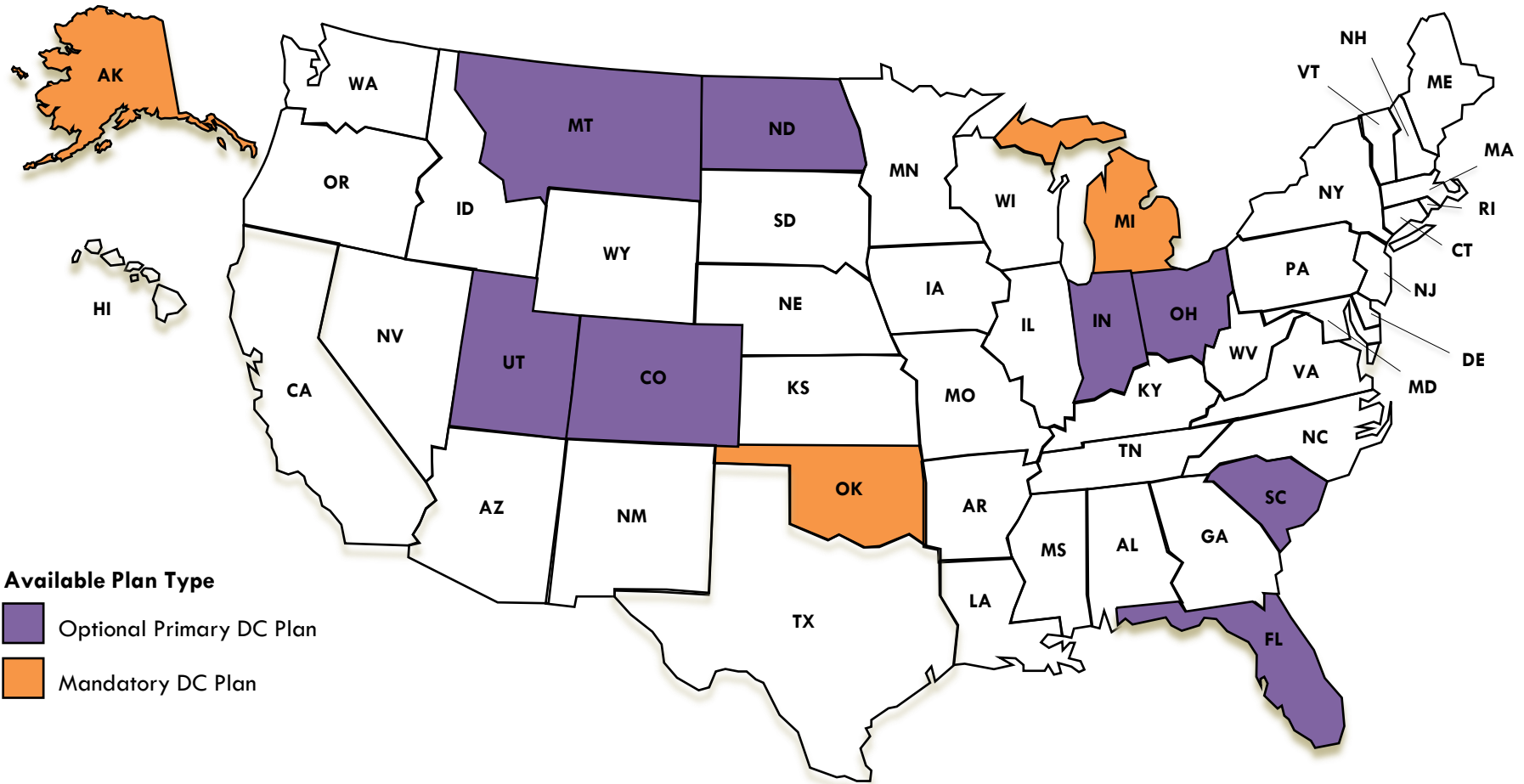
- For the FY 2016, 31% of eligible higher education employees, 12% of state employees, and 14% of K-12 employees selected the ORP.

Optional DC Plan



- The South Carolina Optional Retirement Plan has been open to university employees since 1987. In the early 2000s, the state opened up the plan to state employees and teachers, providing them a DC option essentially identical to the university plan. Since 2012, new State Assembly members have also had the option to join the plan.
- South Carolina started offering the optional DC plan to school and state employees in part to provide a more portable plan for workers who do not expect to stay with the plan long term.
- For FY 2017, employee contribution rate was 8.66% and employer contribution rate was 5%. Members can choose from four providers: TIAA, VALIC, MassMutual, and Metlife.
- ORP members have several distribution options, including annuitization.
- For the FY 2016, 31% of eligible higher education employees, 12% of state employees, and 14% of K-12 employees selected the ORP.

8 of the 45 States with University DC Plans Provide Employees with Similar Plans as a Primary Plan Option

3 states have mandatory DC plans for at least some workers.



Available Plan Type

-  Optional Primary DC Plan
-  Mandatory DC Plan

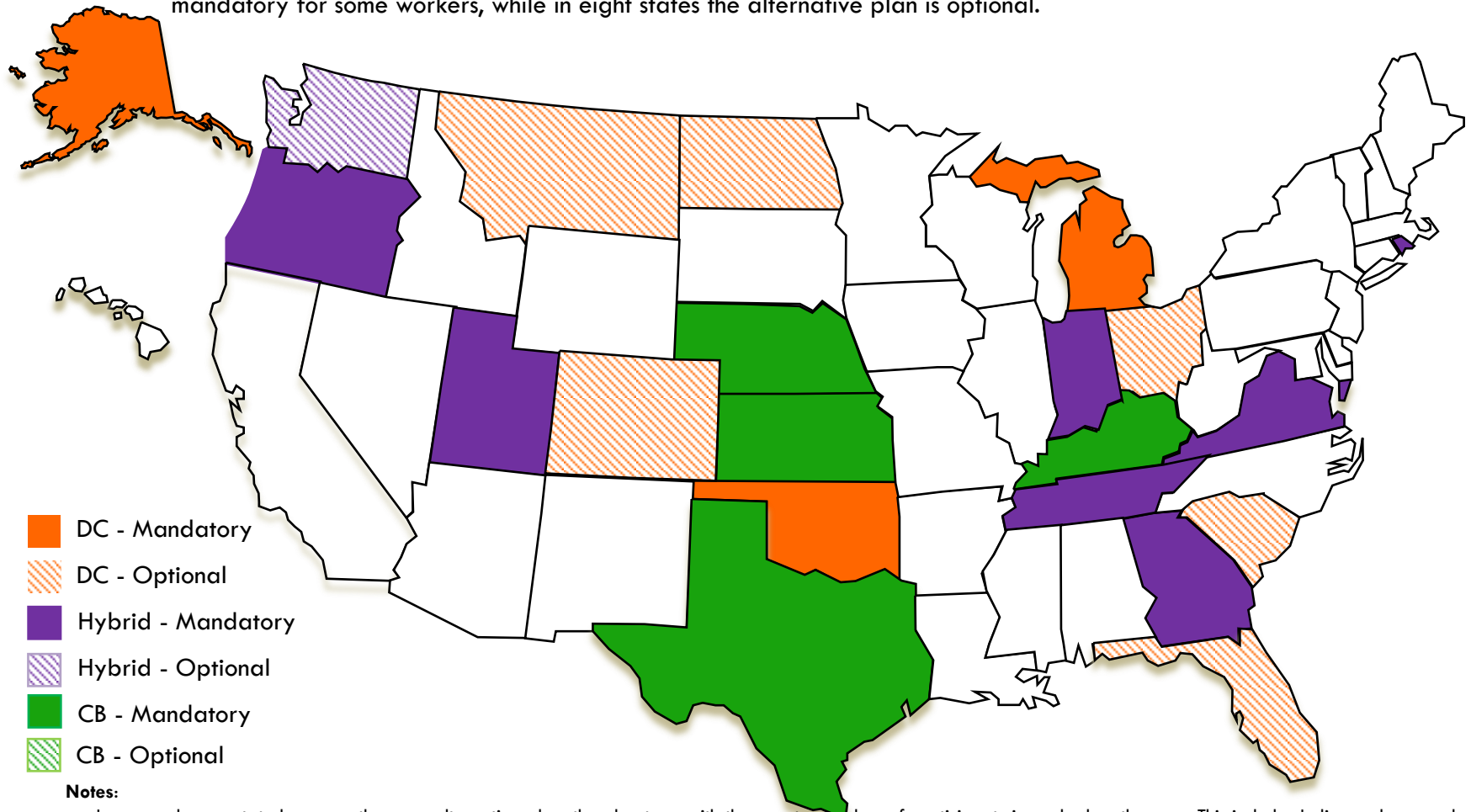
50 State Reform Summary

- 49 states have implemented some kind of reform between 2009 and 2015.
- Many reforms changed plan provisions for new workers, but kept the basic structure of the plan.
- A number of states passed reforms that affected current workers or retirees between 2009 and 2015:
 - 30 states reduced COLAs for active and/or retired members
 - 37 states increased employee contributions for either current or new members
- Between 2009 and 2015, 9 states passed reforms that changed the mandatory benefit design for new employees. Overall, 21 states have a mandatory or optional alternative benefit design.

Source: National Council of State Legislatures, NASRA, The Pew Charitable Trusts

States With Alternative Public Sector Retirement Plans

Twenty-one states have implemented an alternative plan for some workers. In fourteen states, the alternative plans are mandatory for some workers, while in eight states the alternative plan is optional.



- DC - Mandatory
- DC - Optional
- Hybrid - Mandatory
- Hybrid - Optional
- CB - Mandatory
- CB - Optional

Notes:

- In cases where a state has more than one alternative plan, the plan type with the greater number of participants is marked on the map. This includes Indiana where workers choose between a hybrid and DC plan, Michigan where state workers are in a DC plan and teachers are in a hybrid plan, and Ohio where workers choose between a DB, hybrid or DC plan, and Utah where workers choose between a hybrid and DC plan.
- Texas's cash balance plan is only available to local workers and California provides an optional cash balance plan for part-time workers and adjunct educational employees.

Source: NASRA, NCSL

Considerations for the Joint Committee

Considerations for the Joint Committee

- **Pension Funding:** Develop a plan to increase pension funding to reduce pension debt (e.g. shorter amortization) and weather next economic downturn.
 - *Implement net amortization metric to better evaluate and measure contribution sufficiency*

- **Stress Test Analysis:** Implement as part of regular reporting. Evaluating fiscal health under different economic conditions can help to quantify funding requirements and to measure and manage cost uncertainty.
 - *Build on state's strength in transparent reporting*

- **Investment Governance:** Continue efforts to streamline governance and reduce fees.
 - *Pew supports audit report recommendations and has provided 50 state research on targeted items (e.g. custodial banks)*

Considerations for the Joint Committee (continued)

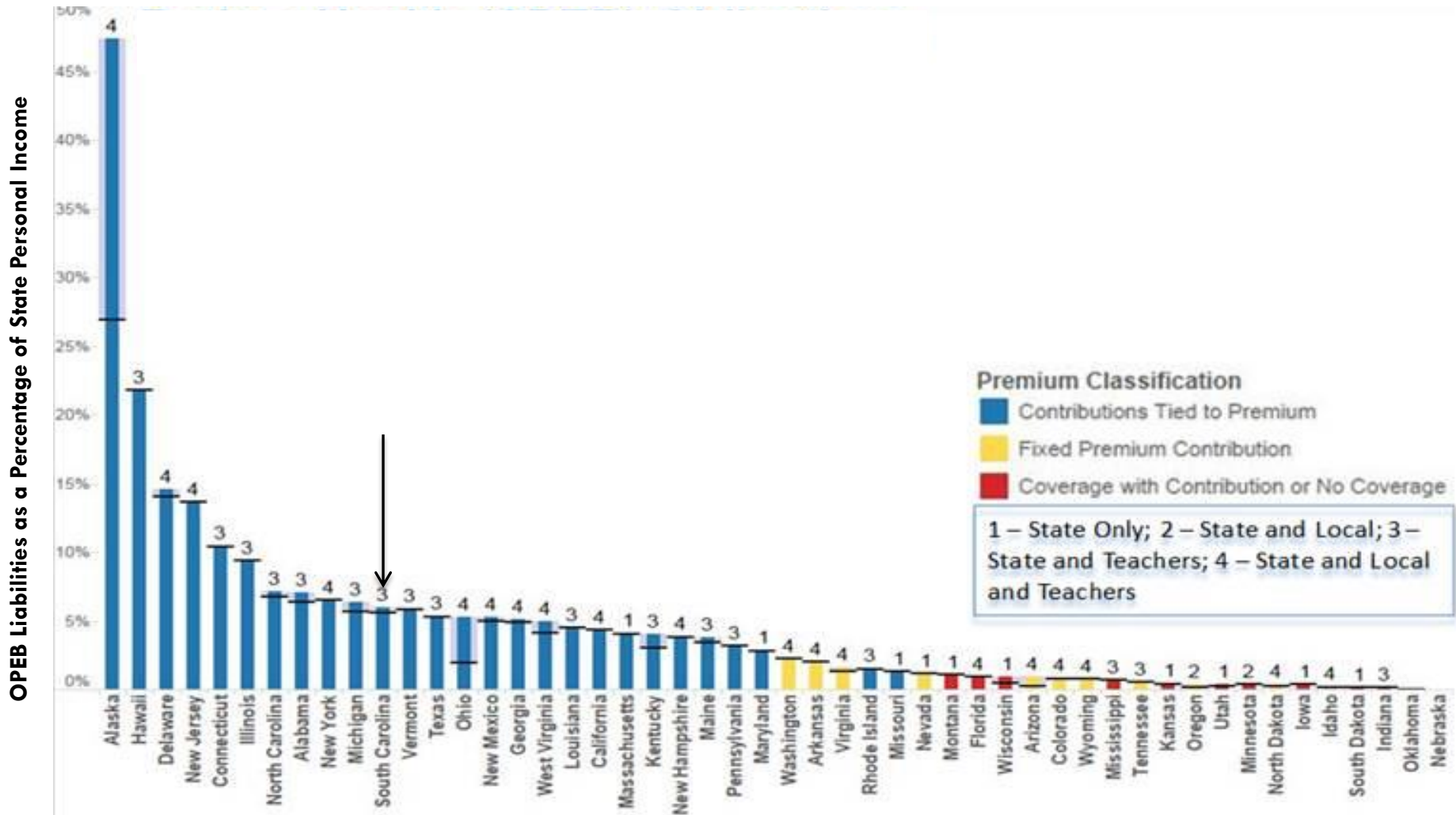
- **Benefit Design:** Consider implementation of a DB/DC hybrid plan to better manage investment risk, preserve path to retirement security for career workers and increase savings for younger workers.
 - *State is well positioned with DB risk sharing and optional DC plan in place*
- **OPEB:** Evaluate strategies that other states have followed to manage retiree health care liabilities.
 - *Pew has 50 state research on recent reforms*

Appendix

SCRS Active Members & Beneficiaries

	Active Members				Beneficiaries		
As of July 1, 2015	Number	Avg. Salary	Avg. Age	Avg. Service	Number	Avg. Annual Benefit	Avg. Age
South Carolina Retirement System	187,318	\$39,604	45.1	10.2	134,640	\$19,931	68.8
Police Officers Retirement System	26,575	\$39,624	39.4	9.7	16,709	\$19,829	63.3
General Assembly Retirement System	104	\$22,483	55.6	13.4	362	\$18,414	73.7
Judges and Solicitors Retirement System	157	\$133,756	56.5	15.1	206	\$80,886	70.3
National Guard Supplemental Retirement Plan	12,165	-	32.2	9.7	4,647	\$915	70.2
Total	226,319				156,564		

Retiree Health (OPEB) Obligations (2013)



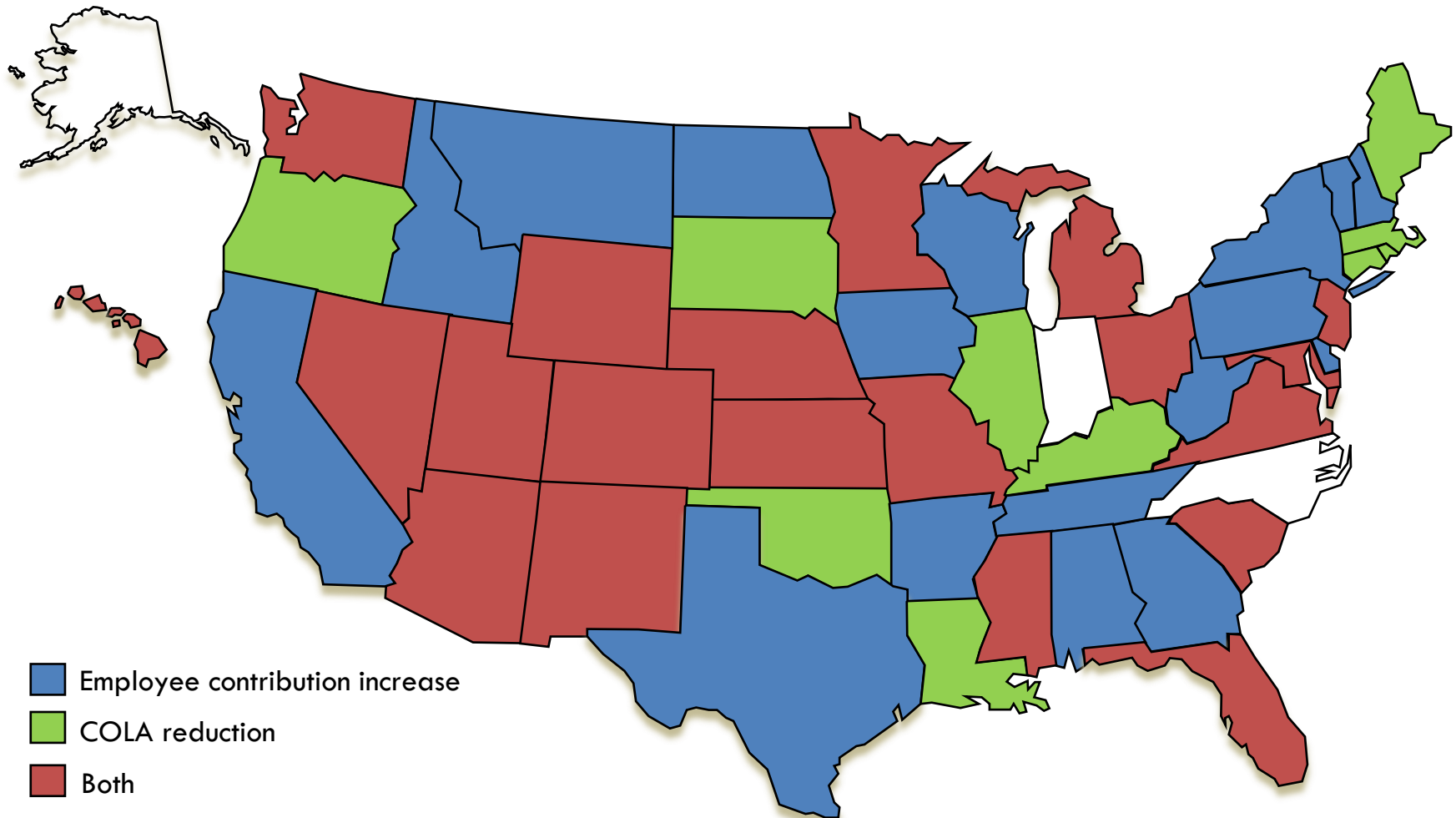
Source: State CAFRs, OPEB actuarial valuations, and plan documents.

OPEB Summary of Current Benefits

Benefit Provisions								Early Retiree		Medicare Age	
State	Date of Hire / Retire	Premium Contribution Category	Minimum Eligibility Age	Minimum Years of Service Required for Vesting	Minimum Years of Service Required to Qualify for a State Premium Contribution	State Premium Contribution for Dependents	Employer Group Waiver Plan (EGWP)?	State Premium Contribution per Retiree, per Year	State Premium Contribution Prorating Description	State Premium Contribution per Retiree, per Year	State Premium Contribution Prorating Description
South Carolina	Hired on or after May 2, 2008	Percentage of Premium	Age upon satisfying YOS requirements	5	15	Yes	Yes	0% to 72%	5-14 YOS = 0%, 15-24 YOS = 50%, 25 YOS = 100%	0% to 72%	5-14 YOS = 0% 15-24 YOS = 50% 25 YOS = 100%
South Carolina	Hired before May 2, 2008	Percentage of Premium	Age upon satisfying YOS requirements	5	10	Yes	Yes	72% (% correct based on aggregate at the time but may fluctuate)	None	72% (% correct based on aggregate at the time but may fluctuate)	None

- The state of South Carolina offers a percentage of premium benefit to eligible retirees.
- Employees hired on or after May 2nd, 2008 are eligible for the retiree health plan at any age so long as they have attained at least 5 years of service. Retirees with between 5 and 14 years of service are eligible for coverage but no premium contribution. When a retiree has between 15 to 24 years of service they are eligible to receive 50% of the employer contribution as set by the board (retiree is responsible for the remainder of the premium). Upon attaining 25 years of service, the retiree is eligible to receive the full employer contribution but is responsible for the remainder of the premium.
- Employees hired before May 2nd, 2008 are eligible for the retiree health plan at any age so long as they have attained at least five years of service. If an eligible retiree has not attained 10 years of service, then the retiree is responsible for the full premium amount. Upon reaching 10 years of service, the retiree will receive 100% of the employer contribution and is responsible for the remainder of the premium.

Reform to employee contributions and/or COLA between 2009 and 2015



Notes: 49 states have increased employee contributions, reduced COLA, increased retirement eligibility, or adopted new plan design since 2009. O the blank three states, Alaska adopted a defined contribution plan in 2006, North Carolina capped pension benefits for high earners in 2014, and Indiana began offering an optional defined contribution plan in 2011. Reforms include a reductions to COLA for future, current, or retirees or increases in employee contributions for future or current employees in at least one state administered plan. The COLA changes in Missouri and South Dakota were in 2016.

Source: National Association of State Retirement Administrators, The Pew Charitable Trusts

South Carolina Employee Contribution Cost Sharing Mechanism

- Starting in June 30, 2015, a new policy was implemented for SCRS that splits cost increases between the employer and members.
- If the actuarial valuation determines that the current employer and member contribution rates are insufficient to maintain an amortization schedule of 30 years or less, then the board will increase the employer and member contributions by an equal amount (keeping a differential of at least 2.90% between the employer and member rates) as needed to maintain a 30 year funding period.
- If the plan reaches a funding level of 90 percent or more, then the board can decrease the current contribution rates as long as the decrease does not result in a funded ratio of less than 90 percent. Any decrease must maintain the 2.9 percent differential between the employer and member contribution rates.
- If the funding level falls below 90 percent, the board can increase the rates again.

New Member Elections in States That Offer Plan Type Choices

System	DB	DC	Hybrid
Colorado Public Employees' Retirement Association	88%*	12%	Not Offered
Florida Retirement System	75% - 84%*	16% - 25%	Not Offered
Indiana Public Retirement System	Not Offered	8%	92%*
Montana Public Employee Retirement Administration	97%*	3%	Not Offered
North Dakota Public Employees Retirement System	98%*	2%	Not Offered
Ohio Public Employees Retirement System/State Teachers Retirement System	87%*	7.4%	5.6%
South Carolina Retirement Systems	86 - 88%*	12 - 14%%	Not Offered
Utah Retirement System	Not Offered	20%	80%*

*Default plan if member does not make an active choice.

Notes: Data for Colorado and North Dakota are new member elections between January 2010 and December 2010. Data for Montana are new member elections between July 2010 and June 2011. Data for Florida are based on new member elections between 2009 and 2015. Data for Ohio are new member between 2003 and 2008. Data for Utah is based on number of active employees in each plan as of December 2013.

Sources: Data for Colorado, Montana, and North Dakota are from the NIRS Report "Decisions, Decisions: Retirement Plan Choices of Public Employees and Employers." Data for Ohio, and South Carolina is from NBER study "Defined Contribution Savings Plan in the Public Sector: Lessons from Behavioral Economics." Data for Florida are based on the NIRS study, the NBER study, and Pew analysis of plan documents. Data for Utah, Indiana and South Carolina are reported numbers from a state employee in the state retirement system office.