South Dakota
Retirement System

Managing SDRS for Sustainability

December 2016

Economic Conditions

- Consensus forecasts: Continued low inflation and resulting low investment returns
- SDRS actuarial assumptions require modification to responsibly reflect those expectations
- This in turn will require changes to SDRS benefits to reflect lower inflation and reduced expected resources

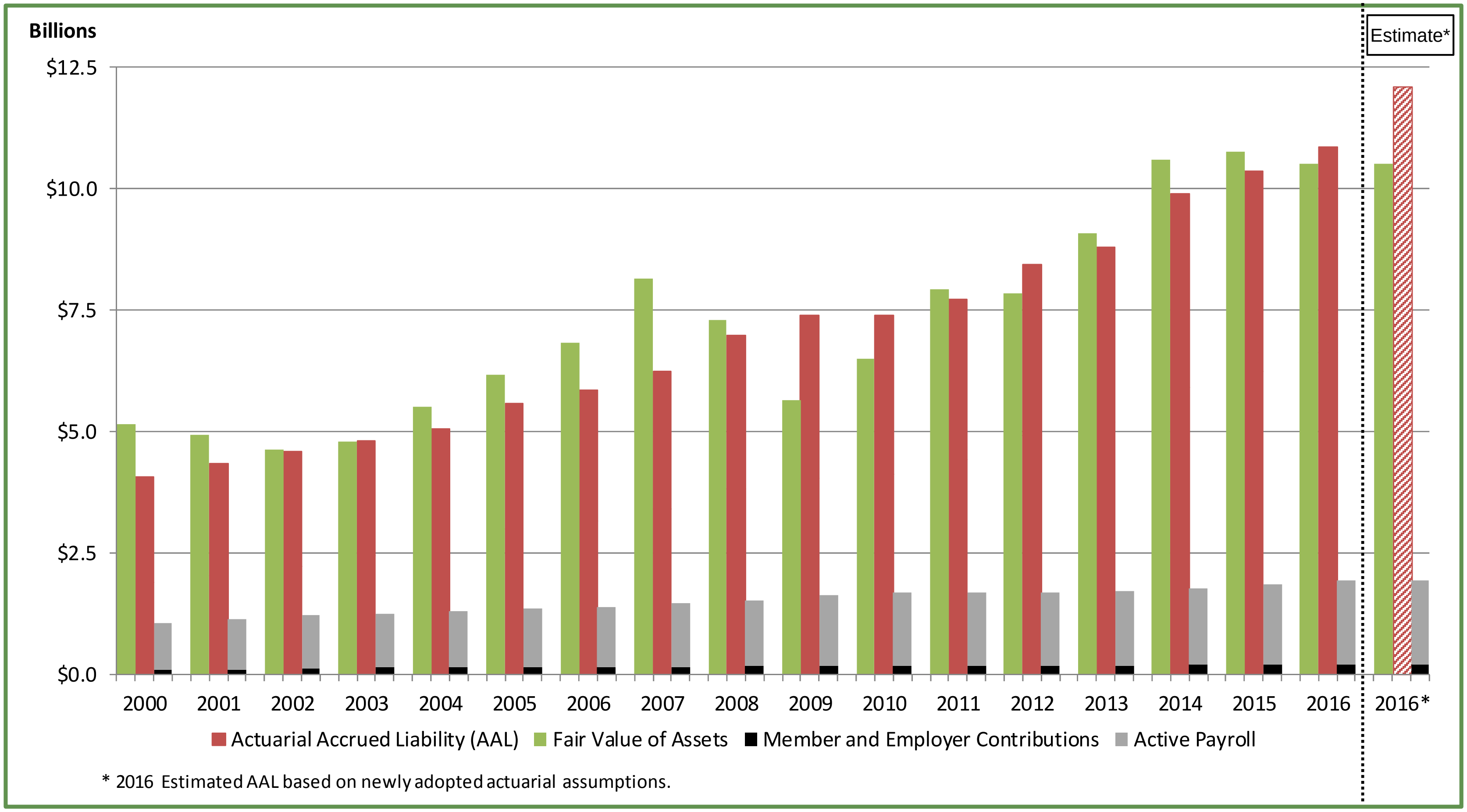
Actuarial Assumption Changes

- Based on an experience analysis of SDRS economic assumptions (review of past experience compared to assumptions and an analysis of expected results in the future)
- Board approved changes in actuarial assumptions:
  - Price inflation: From 3.25% to 2.25%
  - Investment return: From 7.25% through June 30, 2017 and 7.50% thereafter, to 6.50%
  - Wage growth: From 3.75% to 3.00%
- Changes reflect the Board's best estimate and most realistic view of future expectations
- Changes in actuarial assumptions effective with the June 30, 2017 actuarial valuation

Fiscal Impact of Economic Assumption Changes and Proposed Legislation

- **SDRS will not meet the objectives of its Funding Policy or the requirements of SDCL 3-12-122 without corrective actions as of July 1, 2017**
- **SDRS will not be sustainable without corrective action**
- Proposed legislation will bring SDRS back into actuarial balance:
  - Changes to the COLA design to reflect lower expected inflation
  - Changes to the Definition of Compensation, Final Average Compensation, and Compensation Caps to reduce the effect of large, late-career pay increases

SDRS Historical Funded Status



Fair Value Funded Ratio	126%	114%	101%	99%	109%	111%	117%	131%	105%	76%	88%	103%	93%	103%	107%	104%	97%	87%
Contributions as % of AAL	2.4%	2.5%	2.9%	2.9%	2.9%	2.7%	2.6%	2.6%	2.4%	2.4%	2.5%	2.4%	2.2%	2.2%	2.0%	2.0%	2.0%	1.8%

Objectives for Managing SDRS Benefits

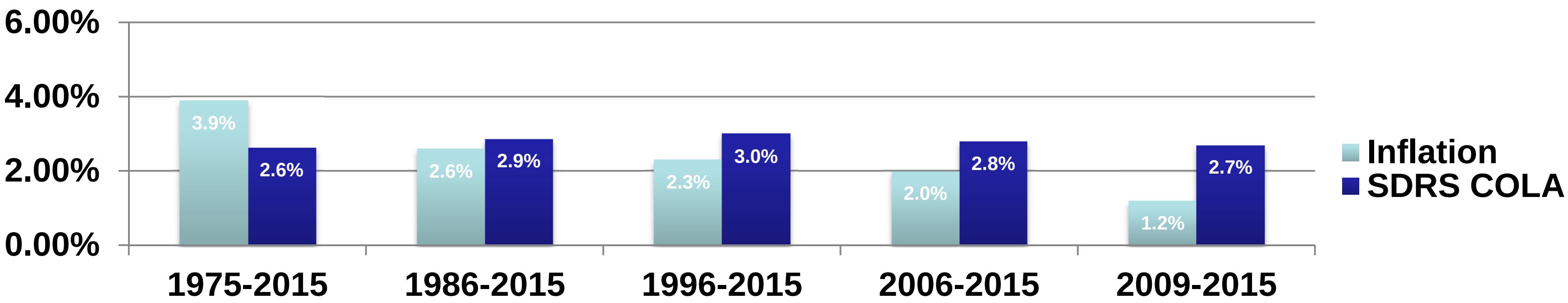
- Automatically adjust certain benefits based on fair value of assets and affordability
- Maintain a SDRS Fair Value Funded Ratio (FVFR) at or near 100%
- Make changes automatically based on defined criteria
- Lessen the likelihood of additional changes due to constraints outlined in SDCL 3-12-122

SDRS COLA Objective

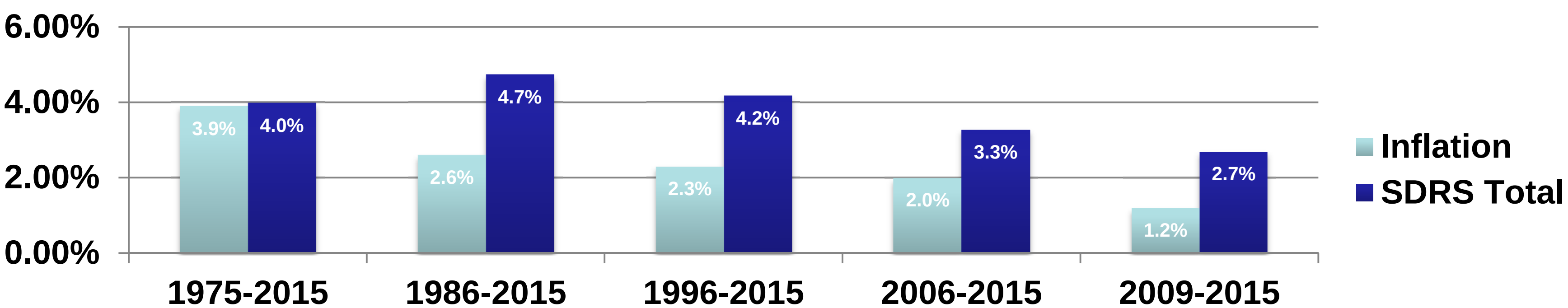
- Objective: Partially protect retirees from loss of purchasing power after retirement
  - Cost of living measured by CPI-W
  - Limits required to avoid unlimited liability
  - Not practical to provide total protection during high inflation
  - COLA benefits above inflation are costly and cause generational inequities

SDRS COLA Historical Information

SDRS COLA Has Exceeded Inflation Since 1986



SDRS Total Retiree Benefit Increases Have Exceeded Inflation Even More



Compares inflation for the years shown with the SDRS COLA paid the following July 1

Recent COLA Experience

- The SDRS COLA in excess of inflation since 2010 has resulted in:
  - $100M in benefit increases greater than inflation paid during 2011-2016
  - A present value of future benefits that is $500M higher
  - An SDRS Fair Value Funded Ratio at July 1, 2016 of 97% compared to 103%
  - An average COLA of 2.7% compared to average inflation of 1.2%

Current COLA Provisions

Foundation COLA

- When SDRS FVFR is 100% or more:
  - COLA is 3.1%
- When SDRS FVFR is 90% or more but less than 100%:
  - COLA is equal to change in CPI-W with:
    - Maximum of 2.8%
    - Minimum of 2.1%
- When SDRS FVFR is 80% or more but less than 90%:
  - COLA is equal to change in CPI-W with:
    - Maximum of 2.4%
    - Minimum of 2.1%
- When SDRS FVFR is less than 80%:
  - COLA is 2.1%

Generational COLA

- When SDRS FVFR is 100% or more:
  - COLA is equal to change in CPI-W with:
    - Maximum of 3.1%
    - Minimum of 1.0%
- When SDRS FVFR is 90% or more but less than 100%:
  - COLA is equal to change in CPI-W with:
    - Maximum of 2.8%
    - Minimum of 1.0%
- When SDRS FVFR is 80% or more but less than 90%:
  - COLA is equal to change in CPI-W with:
    - Maximum of 2.4%
    - Minimum of 1.0%
- When SDRS FVFR is less than 80%:
  - COLA is equal to change in CPI-W with:
    - Maximum of 2.1%
    - Minimum of 1.0%

Proposed SDRS COLA

SDRS COLA for Foundation and Generational members is calculated annually and is equal to the Baseline COLA when affordable, or the Restricted COLA when not:

- Baseline COLA
  - Equal to change in CPI-W with:
    - Maximum of 3.5%
    - Minimum of .5%
  - Board adopted Baseline COLA assumption equal to 2.25% annually (equal to SDRS inflation assumption)
- Restricted COLA
  - Equal to change in CPI-W with:
    - Restricted COLA maximum
    - Minimum of .5%

Affordability Test

- The Baseline COLA is only payable when following affordability test is met:
  - SDRS is fully funded (FVFR of 100% or more) based on the Baseline COLA assumption
- If affordability test not met, a Restricted COLA is payable:
  - The Restricted COLA maximum is the annual COLA assumption that results in a 100% FVFR

Annual Process to Determine COLA

Step 1	Step 2	Step 3
Determine Baseline FVFR (Baseline COLA assumption of 2.25%)	Determine Restricted Maximum COLA	Determine Next June 30 COLA Payable
Baseline FVFR 100% or More	Not applicable	CPI-W Maximum = 3.5% Minimum = 0.5%
Baseline FVFR Less than 100%	Determine restricted COLA maximum resulting in FVFR of 100%	CPI-W Maximum = Restricted Maximum Minimum = 0.5%

Proposed COLA Outcomes

- An SDRS benefit structure that varies directly and automatically with experience and affordability
- A single reported funded status based on fair value of assets that will equal or exceed 100%, except in extreme down markets
- Alignment with GASB funded status reporting
- A COLA that would equal inflation most of the time and potentially less than inflation only when not affordable

South Dakota Codified Law 3-12-122

- The Restricted COLA maximum will automatically reduce SDRS liabilities, maintain a FVFR of 100%, and meet the actuarial requirement for funding in most instances
- In the event of a severe market correction, or an extended period of experience worse than assumptions, these conditions may not be met and additional changes should be considered
- Proposed revisions to SDCL 3-12-122 require reporting to the Governor and Retirement Laws Committee:
  - If the FVFR is less than 100% based on the Restricted COLA maximum, or the actuarially required contributions are greater than the statutory, fixed contributions
  - Report shall include recommendations for circumstances and timing for any benefit changes, contribution changes, or any other corrective action
- When corrective actions are required under SDCL 3-12-122, they should result in an equitable and balanced benefit structure for all members

Income Replacement Goals and Large, Late-Career Pay Increases

- SDRS long-term income replacement goals are:
  - Designed to allow a retired member to maintain a similar standard of living as while employed
  - Based on replacing a percentage of typical compensation, not compensation artificially high near retirement, regardless of cause
- Large, late-career compensation increases result in:
  - Retirement benefits significantly higher than expected, higher than career contributions plus investment income have funded, and in excess of the Board's goals
  - For career members, increased monthly lifetime benefits of approximately 50% of late-career salary increases
  - Plan losses (higher liabilities than expected) regardless of cause or legitimacy
  - Inequities among members

The New Paradigm

- The SDRS benefit structure will have added variability and will be more directly linked to affordability based on the resources available
- Large, late-career compensation increases and compensation contrary to statutory provisions have always created inequities and subsides
- While the immediate effect wasn't evident, these increases could impact the magnitude and timing of:
  - Corrective actions
  - Benefit improvements
- With the new COLA structure, large, late-career compensation increases will directly impact the maximum COLA payable to all current and future retirees
- Since SDRS operates within fixed resources, benefit increases for some members require benefit decreases for others

Salary Increases of Recent Retirees

		FY 2013 Retirees	FY 2014 Retirees	FY 2015 Retirees
All Retirees	Count	1,552	1,591	1,604
Retirees with at least one 5% increase in final three years[1]	Count	478 (31%)	479 (30%)	546 (34%)
	Loss	$2.8M[2]	$3.4M[2]	$4.8M[2]
Retirees with at least one 10% increase in final three years[3]	Count	152 (10%)	165 (10%)	162 (10%)
	Loss	$1.9M[2]	$2.5M[2]	$3.6M[2]
Retirees with at least one 20% increase in final three years[3]	Count	29 (2%)	25 (2%)	40 (2%)
	Loss	$0.9M[2]	$1.2M[2]	$2.3M[2]
Retirees with a $50K or larger salary increase loss[3]	Count	8	7	15
	Loss	$743K[2]	$952K[2]	$2.1M[2]
Retirees with a $100K or larger salary increase loss[3]	Count	3	3	7
	Loss	$381K	$668K	$1.6M

(1) Does not differentiate salary manipulation from promotions, catch-up increases, or other late-career increases.
(2) Losses calculated as increased liabilities for compensation increases above 5%. Because later career salary increases are assumed to be less than 5%, losses reported in actuarial valuation will be higher.
(3) Counts and losses in 10%, 20%, $50K, and $100K rows are subsets of 5% rows.

Recommendations

- Tighten definition of Compensation since it is the key to limiting attempts to expand pay beyond what is intended as includable
- Change to five-year Final Average Compensation (FAC) with significant transition period since three-year FAC is very short and contributes to the problem
- Expand Compensation caps to five percent per year for the FAC period, also with a significant transition period
- Strengthen reporting requirements – contributions made on compensation inconsistent with definition of Compensation will be a Class 1 misdemeanor

Current Definition of Compensation

- Gross wages paid to member by employer for personal services rendered during the period of service, including:
  - W-2 compensation
  - SDRS member contributions
  - Contributions to the SRP or other qualified plan
- SDRS Compensation excludes:
  - Expense reimbursement
  - Lump sum payments for sick or annual leave
  - Payments for insurance of any kind or any other employee benefit
  - Retirement incentives
  - Severance payments
  - Worker's compensation payments

Proposed Changes to Definition of Compensation

Inclusions

Wages, tips and other W-2 compensation

Member contributions made by employer after 6/30/84

Member contributions to:

- IRC Section 125 plan
- IRC Section 401 plan
- IRC Section 403 plan
- IRC Section 408 plan
- IRC Section 457 plan
- Prior service purchase/ IRC Section 414(h)(2)

Exclusions

Payment, reimbursement, or allowance for expenses
(travel, meals, lodging, moving, uniforms, others)

Lump sum payment for sick leave

Lump sum payment for annual leave

Payment for/in lieu of insurance coverage

Temporary payments not due to additional duties*

Allowances or payments for housing or vehicles*

Payments based on/attributable to retirement

Payments resulting in an incentive to retire*

Payments upon dismissal/severance/termination

Worker's compensation payments

* New exclusion in proposed legislation. Other changes highlighted.

Current Final Average Compensation/Caps

- Final Average Compensation
  - Average Compensation for the highest 12 consecutive calendar quarters (20 for Generational members) in the last 40 calendar quarters
- Current Compensation Caps
  - Caps Compensation in last quarter and the average of the last four quarters to 105% of Compensation in the prior highest quarter
  - Current caps on Compensation were enacted in 2004 with a one-year phase-in
- Several recent retirements have had large compensation increases in the 2nd and 3rd year prior to retirement – years that are not subject to the cap
- In addition, one quarter of high compensation prior to the last four quarters generally makes the current 105% caps completely ineffective

Proposed Change in FAC with Transition Period

- Final Average Compensation
  - Once the transition period is complete, average Compensation for the highest 20 consecutive calendar quarters in the last 40 calendar quarters (Generational members do not have a transition period)
- Transition period
  - Three-year FAC for retirements until June 30, 2021
  - Four-year FAC for retirements from July 1, 2021, to June 30, 2022
  - Five-year FAC for retirements after June 30, 2022
  - FAC cannot be less than June 30, 2017, FAC, through June 30, 2022

Proposed Changes in Caps with Transition Period

- Apply cap to Compensation in each of the five consecutive years (twenty consecutive calendar quarters) ending with the last calendar quarter considered in determining FAC
- Compensation for each of the five consecutive years is limited to 105% of the highest Compensation considered in any prior year in the final 10 years
- Make the change effective for members with compensation after June 30, 2020, to avoid changes to members approaching retirement
- Maintain current caps until June 30, 2020, and permanently maintain final quarter cap
- Employer and member contributions on compensation in excess of the cap paid to member at retirement as if invested in Variable Retirement Account

Revised FAC and Caps Outcomes

- Delayed effective dates
- SDRS exposure to large unanticipated costs reduced
- Reduced impact of large increases on future COLAs for all members
- More difficult to deliberately include additional compensation contrary to statutory provisions and/or circumvent caps
- Contributions on compensation in excess of cap paid to member at retirement to avoid forfeiture of employer and member contributions
- Contributions on compensation in excess of cap earn actual investment return of fund and result in additional member savings for retirement

Estimated Actuarial Results June 30, 2016 Including COLA and FAC Changes

	Current Assumptions and Benefits	Adopted Economic Assumptions: Current Benefits	Adopted Economic Assumptions: Step 1: Baseline COLA	Adopted Economic Assumptions: Step 2: Restricted COLA Maximum = 1.40%(1)
Accrued Liability	$10.851B	$12.1B	$11.4B	$10.5B
Fair Value Funded Ratio	96.9%	87%	92%	100%
Unfunded Liability	$0	$1.5B	$0.9B	$0
Cushion/(Deficit)	($338M)	$0	$0	$0
Contribution Rates				
Normal Cost with Expenses	10.744%	13.0%	11.9%	10.5%
Amortization	0.000%	5.7%	3.5%	0.0%
Actuarially Determined Rate	10.744%	18.7%	15.4%	10.5%
Statutory Contribution Rate	12.489%	12.5%	12.5%	12.5%
Risk Management Contribution/(Shortfall)	1.745%	(6.2%)	(2.9%)	2.0%

(1) Based on 2016 CPI-W increase, the COLA would have been the minimum 0.5% COLA

Fiscal Impact of Economic Assumption Changes and Proposed Legislation

- **SDRS will not meet the objectives of its Funding Policy or the requirements of SDCL 3-12-122 without corrective actions as of July 1, 2017**
- **SDRS will not be sustainable without legislative changes to the benefit structure**
- Proposed legislation will bring SDRS back into actuarial balance:
  - Changes to the COLA design to reflect lower expected inflation
  - Changes to the Definition of Compensation, Final Average Compensation, and Compensation Caps to reduce the effect of large, late-career pay increases and keep annual costs within the fixed, statutory contributions