NOTICE OF TELECONFERENCE MEETING
SOUTH DAKOTA RETIREMENT SYSTEM
BOARD OF TRUSTEES

DATE: Thursday, May 7, 2020

TIME: 11:00 a.m. CST (10:00 p.m. MST)

DUE TO THE COVID-19 PUBLIC HEALTH EMERGENCY, THIS MEETING WILL BE HELD BY TELECONFERENCE. THIS MEETING WILL BE BROADCAST LIVE AT HTTPS://WWW.SD.NET/ . Due to the COVID-19 public health emergency, no public access is available.

PUBLIC COMMENT: Anyone wishing to make a comment during the meeting's public comment item should contact SDRS at (605) 773-3731 prior to the beginning of the meeting and the individual will be called during the time for public comment.

Agenda*

11:00 a.m. - Call Meeting to Order - Determination of Quorum

ITEM 1 - Chair's Preliminary Remarks
- Introductions and Announcements
- Board Conflict Disclosure
- Policy Concerning Public Testimony and Comments

ITEM 2 - Approval of April 2, 2020, Minutes

ITEM 3 - SDRS Projected Funded Status – Doug Fiddler, Senior Actuary

ITEM 4 - Planning for the Good, Bad, and Ugly Times - Revisited #2– Travis Almond, Executive Director, Doug Fiddler, and Paul Schrader, Retirement Consultant

ITEM 5 - Public Comment

ITEM 6 - Old/New Business

ADA COMPLIANCE: THE SOUTH DAKOTA RETIREMENT SYSTEM FULLY SUBSCRIBES TO THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT. IF YOU ARE IN NEED OF SPECIAL ACCOMMODATIONS, PLEASE NOTIFY THE SDRS OFFICE AT LEAST 72 HOURS PRIOR TO THE MEETING SO APPROPRIATE AUXILIARY AIDS AND SERVICES CAN BE MADE AVAILABLE.

2020 MEETING DATES

June 3
September 2 or 3
December 2 or 3

**In some circumstances, the Chair may choose to take agenda items out of the listed order.*

BOARD MEETING

SOUTH DAKOTA RETIREMENT SYSTEM

April 2, 2020

The Board of Trustees of the South Dakota Retirement System held its regular Board meeting on April 2, 2020. The meeting began at 11:00 a.m. via Skype Conference Call.

BOARD MEMBERS IN ATTENDANCE:

James Johns, Chair
Eric Stroeder, Vice Chair
Karl Alberts
James Appl
Penny Brunken
Kathy Greeneway
Laurie Gustafson
Dr. James Hansen
Myron Johnson
Louise Loban
Kevin Merrill
Justice Mark Salter
Darin Seeley
Glen Vilhauer
Matt Clark, Ex Officio

Table of Contents

Board member Liza Clark was absent.

OTHERS IN ATTENDANCE:

Larry Langer, CavMac
Paul Schrader
Brittnie Adamson
Travis Almond
Doug Fiddler
Michelle Mikkelsen
Jessica Reitzel

Jane Beer
Dawn Smith
Jacque Storm

AGENDA ITEM 1
CHAIR'S PRELIMINARY REMARKS AND
BOARD CONFLICT DISCLOSURE

Summary of Discussion:
No board member had any conflict to disclose.

Board Action:
No action was necessary.

AGENDA ITEM 2
APPROVAL OF MEETING MINUTES

Board Action
IT WAS MOVED BY MS. GREENEWAY, SECONDED BY MR. VILHAUER, TO APPROVE THE MINUTES OF THE DECEMBER 5, 2019, BOARD MEETING. THE MOTION PASSED UNANIMOUSLY ON A ROLL CALL VOTE.
THOSE VOTING AYE: ALBERTS, APPL, BRUNKEN, GREENEWAY, GUSTAFSON, HANSEN, JOHNS, JOHNSON, LOBAN, MERRILL, SALTER, SEELEY, STROEDER, VILHAUER.
THOSE ABSENT AND NOT VOTING: CLARK(LIZA)

AGENDA ITEM 3
BOARD MEMBER ELECTION UPDATE

Summary of Discussion
Ms. Dawn Smith, SDRS Executive/Board Assistant, informed the Board of the current election candidates. She stated that there would be one election as there were multiple candidates for the State Employee representative position. The candidates for the School Boards representative and the Board of Regents representative were unopposed. She noted that there were no candidates for the County Employee representative position; therefore, staff will request resumes from interested candidates and the Board will appoint a representative at the June meeting.

Board Action
No action was required.

AGENDA ITEM 4
2020 LEGISLATIVE AND BUDGET REPORT

Summary of Discussion
Ms. Jacque Storm, SDRS Deputy Director/General Counsel, discussed the 2020 Legislative Session. She explained that all the SDRS bills passed unanimously through both bodies of the Legislature and were signed by the Governor.

She noted that there were several other bills SDRS was watching during the Legislative Session. These included bills such as the Department of Labor and Regulation's retirement plan merging with SDRS, the adoption of the Uniform Power of Attorney Act, the State Investment Council's bills relating to conflicts of interest and indemnity provisions, and the transfer of authority to the State Brand Board to hire law enforcement officers as brand board inspectors.

There were also several bills SDRS was watching that did not get enacted. These included bills exempting certain retirement funds from division of property in a divorce, prohibiting the state from endorsing or enforcing certain policies regarding domestic relations, and correcting technical errors in statutory cross-references.

Ms. Jane Beer, SDRS Chief Financial Officer, stated SDRS requested an increase of $117,000 in expenditure authority for the 2021 SDRS budget and the Legislature approved the SDRS budget.

Board Action
No action was necessary.

AGENDA ITEM 5
INVESTMENT PERFORMANCE UPDATE

Summary of Discussion
Mr. Matt Clark, State Investment Officer, stated that through March 31, 2020, the estimated return for SDRS was approximately negative 10 percent.

Board Action
No action was necessary.

AGENDA ITEM 6
SDRS PROJECTED FUNDED STATUS

Summary of Discussion
Mr. Doug Fiddler, SDRS Senior Actuary, noted that the SDRS COLA will vary more directly with both inflation and long-term affordability. As a result, under

most circumstances, SDRS's fair value funded ratio (FVFR) is expected to remain at 100 percent.

Mr. Fiddler noted that since 2010, the average SDRS COLA of 2.4 percent was almost 1 percent higher than the average inflation for the same time period.

Mr. Fiddler stated that based on a FY20 net investment return of negative 10 percent the baseline FVFR is expected to be 81 percent at June 30, 2020. As a result, the preliminary estimated 2021 restricted maximum COLA is 0.5 percent, which results in a FVFR of 97 percent. Since the FVFR would be less than 100 percent, a corrective action recommendation would be required by statute. The amount of the corrective action that would be required is estimated at $354 million.

Mr. Fiddler stated at the June 30, 2019, actuarial valuation, the one-year likelihood of required corrective actions using the benchmark asset allocation statistics was 19 percent.

In summary, advised Mr. Fiddler, absent a significant market recover, the FVFR will be less than 100 percent at June 30, 2020, and a corrective action recommendation will be required. Net FY20 returns less than approximately negative 7 percent would reduce the 2021 restricted maximum COLA to 0.5 percent and require corrective action recommendations. The magnitude of the required corrective action will depend on the final net investment return for the fiscal year.

AGENDA ITEM 7
PLANNING FOR THE GOOD, BAD, AND UGLY TIMES:- REVISITED

Summary of Discussion

Mr. Travis Almond, SDRS Executive Director, stated that this presentation was a follow-up to the planning discussions that were started in 2018. Originally staff felt this planning conversation would be more theoretical, but based on the current climate, this conversation is unfortunately a reality.

Mr. Almond noted that benefit changes have serious consequences to the members and must be balanced with the Board's responsibilities for the System's sustainability considering the fixed, statutory contributions. Benefit change recommendations also consider the short and long-term effect on SDRS members, the SDRS long-term outlook, the current fair value of assets, sound funding practices, actuarial standards and the SDIC outlook and advice.

Mr. Almond stated that the board had accomplished a lot over the past several years and that as of June 30, 2019, SDRS was well positioned. However, a lot has happened since then and the future is obviously uncertain and very volatile. He noted the next step in the planning process is to review the SDRS experience during the recent economic downturn, evaluate and further refine the 2018 general framework for changes, and establish a priority for changes when required or warranted.

Mr. Almond noted that Board feedback and discussion is vital as staff recommend formalizing a plan in June. This plan would be revisited periodically, as are many other Board policies and plans.

Mr. Paul Schrader, Retirement Consultant, stated that SDRS has experienced other economic downturns. There have been six economic downturns classified as recessions in SDRS history with the most significant being the dot-com bubble in 2001-2002 and the 2008 recession in 2008-2009. The S & P 500 dropped about 50 percent during both downturns from peak to trough. Therefore, reviewing the SDRS experience during these periods may be helpful in planning for the current economic times.

Referring to a chart, Mr. Schrader explained that the actual SDRS investment return was less than the investment return assumption for fewer than one-third of the years during the entire SDRS history. The actual return was below the assumption for two or more consecutive years only three times—including the 2001-2003 and 2008-2009 periods. There have only been five years since SDRS' inception that the fund actually lost money.

Mr. Schrader stated that going into the 2001 downturn, the annualized investment return for the prior 5-year period was 16.5 percent. Going into the 2008 downturn, the annualized return was 13.8 for the prior five-year period. The annualized return for the five-year period immediately preceding the current year is 6.1 percent.

Equally important, advised Mr. Schrader is the annualized investment returns for the 5-year periods coming out of the downturn. They were 13.8 percent after the dot-com downturn and 16.7 percent after 2008-2009. Mr. Schrader stated that since inception, SDRS has earned an annual investment return of 10.2 percent.

Mr. Schrader noted that a number of significant benefit improvements were made in the decade prior to 2001. The improvements followed a disciplined approach since the formula benefit improvements only applied to prior service, they were prefunded, and no unfunded liabilities were created when those improvements were made. In addition, the fair value funded ratio (FVFR) remained at 120 percent or above after the benefit improvement were made.

Mr. Schrader stated that during the first downturn in 2001-2002, the fund lost 2.9 percent and 4.9 percent, respectively, in FY 2001 and 2002. Since the assumed investment return was 8 percent during that time, the actual loss was effectively 25 percent. Similarly, for 2008-2009 period the assumed investment return had been lowered to 7.75 percent, but with 8.7 percent and 20.4 percent losses in those years, the total impact was effectively a 45 percent loss.

Prior to the 2001-2002 downturn, SDRS was very well-funded with a 126 percent FVFR in 2000 even with the frequent benefit improvements in the prior decade. SDRS maintained a 100 percent funded status position during this downturn except in 2003 when the FVFR dipped to 99 percent. No benefit changes were required as the fixed, statutory contributions met the actuarial funding requirements. The FVFR returned to 109 percent in 2004 after a 16.6 percent investment return for the year. The SDRS funded status going into this downturn provided the right amount of resources to weather the significant down period. During the five years after 2002, SDRS earned an annual rate of investment return of 13.8 percent.

Going into the 2008-2009 downturn, SDRS was even better funded with a 131 percent FVFR in 2007. There were no benefit improvements since 2000, until 2008. The SDRS funded position dropped significantly below 100 percent in 2009 and 2010. The 76 percent FVFR in 2009 required benefit changes. The benefit changes to the COLA and an 18.7 percent investment return in 2010 resulted in a FVFR of 88 percent at June 30, 2010. The FVFR increased to 103 percent in 2011 after an investment return of 25.8 percent for the year. In contrast to the 2001-2002 period, the SDRS funded status proved to be inadequate to avoid benefit changes during this period. During the five years after 2009, the System earned an annual rate of investment return of 16.7 percent.

Mr. Schrader stated that the lessons SDRS learned in these downturns are that conditions can change rapidly and substantially due to the volatility of investment markets, and severe economic downturns may be more frequent and severe than previously thought. A very well-funded retirement system does not guarantee that a severe economic downturn can be weathered without changes. He noted that a recovery after a severe downturn may be expected, but the timing and strength is unknown. The SDIC disciplined approach has resulted in smaller investment losses during downturns and a more rapid recovery after the downturn.

He added that the increasing maturity of plans like SDRS exacerbates the impact of the downturns and adding additional substantive fixed liabilities to SDRS is unwise. SDRS cannot afford unintended subsidies and benefit increases once granted have proven to be difficult to reverse. Rapidly changing conditions after a June 30 actuarial valuation, as well as informed outlooks, should be considered before finalizing any future recommended benefit changes.

Mr. Schrader stated that the Board has taken actions based on the lessons learned during the prior two downturns. These actions include adopting and expanding variable benefits, strengthening actuarial assumptions to reflect current outlooks, addressing benefit inequities and subsidies, expanding the SDRS risk analysis, increasing communication to stakeholders, and planning for volatility that results in good and bad times.

Mr. Schrader advised the Board that SDRS is not as well funded going into this period with a 2019 FVFR of 100 percent based on the restricted COLA of 1.88 percent compared with a FVFR of over 120 percent in 2000 and 2007. Likewise, the 5-year and 10-year annual investment returns for the period before 2001 were 16.5 percent and 13.9 percent, and 13.8 percent and 10.3 percent prior to 2008. Prior to the current year those 5-year and 10-year annual returns were 6.1 percent and 11.3 percent respectively. He noted that the current conditions are not directly comparable since the actuarial assumptions have been significantly strengthened and the variable COLA provides significant automatic adjustments to the liabilities.

Mr. Fiddler noted that the objectives for benefit improvements would consider any short-falls compared to the long-term benefit objectives, would include improving benefits for both active and retired members, and avoid substantive additional fixed benefit obligations. In addition, the improvement for active members should be based on both member pay and service, and on the current benefit for retired members. Above all else, any benefit improvement should be cautious.

Mr. Fiddler explained the recommended benefit improvements if and when conditions allowed. He noted that for active and inactive members, the recommendation was to fund the variable retirement account (VRA) for both foundation and generational members. The allocation should be formula based on pay, all service, and unimproved service. For retired members, improvements could be a one-time COLA adjustment if past COLA's since 2010 have not met the Board's goal of inflation protection, and/or an additional one-time payment, or repeating payment for a limited period. These payments should be paid separately from the regular benefit check. Mr. Fiddler explained the benefit improvement examples for all members.

Mr. Fiddler then reviewed the two statutory requirements for corrective actions which do not work together. He explained that as the restricted maximum COLA reduces to meet the 100% FVFR requirement, the statutory contribution margin, the excess of the statutory contributions over the normal cost required to fund new benefit accruals, grows. This results in contributions that could be used to fund an unfunded liability.

Mr. Fiddler stated that some considerations for corrective actions include the size of the funding shortfall and protecting the accrued benefits that members have already earned based on their service and pay. Variable benefits should also be expanded to delay the need for additional changes. The equity between foundation and generational costs and among generations of members should be considered. The Board may also want to consider a temporary suspension of the 100 percent funded status objective, but only after other actions are taken. For any corrective action, the complexity in benefit administration as well as the communication to the members should also be considered.

Mr. Schrader stated that in 2018 the Board set corrective action objectives. Those objectives have been revisited and staff is suggesting changes to those objectives and also the priority of any changes required.

Those proposed objectives include reducing the minimum COLA to 0.0 percent while retaining the current COLA mechanism that automatically adjusts when conditions allow; make changes only for future service so generational and foundation members have identical benefits for future service; consider reductions to the most recent fixed formula benefit improvement and other accrued benefits only as a last resort; and the introduction of additional variable benefit features.

Mr. Schrader stated reducing the minimum COLA to 0.0 percent is the recommended first priority.

The second priority would be to modify the corrective action threshold to permit a small unfunded liability that would be expected to be fully funded by the statutory contribution margin in a short period of time.

The third priority would provide for the generational benefit structure for all future service for foundation members and suspend the VRA contribution.

The fourth priority would reduce future service benefit formulas as needed.

Mr. Schrader noted that in the first four priorities, there is no reduction in the members' accrued benefit to date.

The fifth priority, however, would change that and would represent a very significant change. The proposed fifth priority would freeze accrued benefits, reduce accrued benefits as a last resort, and base future benefits on pay earned each year, not on final average compensation.

Mr. Schrader explained that the current variable COLA features provide significant downside protection. Even so, at the beginning of FY 2020 there was still a 19 percent chance that additional corrective actions would be required at June 30, 2020. The amount of the corrective actions required will depend upon the shortfall.

In addition, the 100 percent funded status (no unfunded liability) is a core SDRS objective and should continue to be a long-term priority. However, a relatively small unfunded liability based on the fair value of assets may be acceptable for a short period. If unfunded liabilities are allowed under these conditions, they should only be after the first priority action is implemented and based on the amount that is expected to be funded by the contribution margin in a short period of time. Favorable results after an unfunded liability is created would reduce the unfunded liability. No COLA would be payable while an unfunded liability exists.

Mr. Fiddler reviewed the different recommended corrective actions, their impact on plan costs, and the amount of fiscal year 2020 negative return each priority would handle.

Mr. Schrader stated that the potential next step, regardless of the conditions on June 30, is to formalize in statute the first two priorities. This will provide a wider automatic COLA range when needed and modify the corrective action threshold to permit a small unfunded liability that is expected to be funded by the contribution margin, but only after COLA changes are exhausted. These changes would substantially extend the period before additional corrective action legislation would be required.

Board discussion followed.

Board Action
No action was necessary.

AGENDA ITEM 8
EFFECTIVE RATE OF INTEREST FOR FY21

Summary of Discussion
Ms. Jane Beer noted that SDCL 3-12C-108 states that SDRS's annual effective rate of interest shall be no greater than 90 percent of the average 91-day United States Treasury bill rate for the immediately preceding calendar year.

Advising that the 91-day United States Treasury bill rate was 2.06 percent for 2019, Ms. Beer stated that 90 percent of the rate is 1.85 percent. She noted that this interest rate would be credited on July 1, 2021, for the period of July 1, 2020, through June 30, 2021.

Board Action

IT WAS MOVED BY MS. GREENEWAY, SECONDED BY MR. MERRILL, TO SET THE EFFECTIVE RATE OF INTEREST TO BE CREDITED FROM JULY 1, 2020, TO JUNE 30, 2021, AT 1.85 PERCENT. THE MOTION PASSED UNANIMOUSLY ON A ROLL CALL VOTE.
THOSE VOTING AYE: ALBERTS, APPL, BRUNKEN, GREENEWAY, GUSTAFSON, HANSEN, JOHNS, JOHNSON, LOBAN, MERRILL, SALTER, SEELEY, STROEDER, VILHAUER.
THOSE ABSENT AND NOT VOTING: CLARK(LIZA)

AGENDA ITEM 9
SET FY21 SUPPLEMENTAL PENSION BENEFIT INTEREST RATE ASSUMPTION

Summary of Discussion

Mr. Almond stated that the Board needed to establish the periodic Supplemental Pension Benefit interest rate assumption. He added that the interest rate assumption could not be greater than the actuarial assumed rate of return for SDRS, nor could it be less than the SDRS effective rate of interest.

He advised that the interest rate assumption is established based on the recommendations of both the system's external actuary and the State Investment Officer with the input of the Executive Director. The external actuary recommended between 2.0 and 3.0 percent and the State Investment Officer recommended between 2.75 and 3.5 percent.

Based on all the information and the process established by the Board, Mr. Almond stated it was his recommendation that the Board set the Supplemental Pension Benefit interest rate assumption at 2.875 percent, effective July 1, 2020.

Board Action

IT WAS MOVED BY MR. ALBERTS, SECONDED BY DR. HANSEN, TO ESTABLISH THE INTEREST RATE FOR THE SUPPLEMENTAL PENSION BENEFIT AT 2.875 PERCENT, EFFECTIVE JULY 1, 2020. THE MOTION PASSED UNANIMOUSLY ON A ROLL CALL VOTE.
THOSE VOTING AYE: ALBERTS, APPL, BRUNKEN, GREENEWAY, GUSTAFSON, HANSEN, JOHNS, JOHNSON, LOBAN, MERRILL, SALTER, SEELEY, STROEDER, VILHAUER.
THOSE ABSENT AND NOT VOTING: CLARK(LIZA)

AGENDA ITEM 10
ACKNOWLEDGE AND INTENT TO COMPLY WITH GOVERNOR NOEM'S EXECUTIVE ORDER 2020-01

Summary of Discussion
Ms. Storm informed the Board of SDRS' intent to comply with Governor Noem's Executive Order 2020-01 regarding state procurement and contract requirements and entities engaging in boycotts of Israel.

Board Action
No action was necessary.

AGENDA ITEM 11
CONFERENCE APPROVAL

Summary of Discussion
Mr. Almond stated that SDRS has money in the budget every year for Board continuing education.

Board Action
IT WAS MOVED BY MS. LOBAN, SECONDED BY MR. STROEDER, TO APPROVE THE CONFERENCE REQUEST BY JAMES APPL TO ATTEND THE NCTR CONFERENCE OCTOBER 10-13, 2020, IN LA JOLLA, CA. THE MOTION PASSED UNANIMOUSLY ON A ROLL CALL VOTE.
THOSE VOTING AYE: ALBERTS, APPL, BRUNKEN, GREENEWAY, GUSTAFSON, HANSEN, JOHNS, JOHNSON, LOBAN, MERRILL, SALTER, SEELEY, STROEDER, VILHAUER.
THOSE ABSENT AND NOT VOTING: CLARK(LIZA)

AGENDA ITEM 12
PUBLIC COMMENT

Summary of Discussion
There was no public comment.

AGENDA ITEM 13
OLD/NEW BUSINESS

Summary of Discussion
Upcoming Meetings
The Board discussed the upcoming meeting schedule.

Board Action
No action was necessary.

ADJOURNMENT

IT WAS MOVED BY MR. APPL, SECONDED BY MS. GUSTAFSON, THAT THERE BEING NO FURTHER BUSINESS, THE MEETING BE DECLARED ADJOURNED. THE MOTION PASSED UNANIMOUSLY ON A ROLL CALL VOTE.
THOSE VOTING AYE: ALBERTS, APPL, BRUNKEN, GREENEWAY, GUSTAFSON, HANSEN, JOHNS, JOHNSON, LOBAN, MERRILL, SALTER, SEELEY, STROEDER, VILHAUER.
THOSE ABSENT AND NOT VOTING: CLARK(LIZA)

Respectfully submitted,

Travis Almond
Executive Director

South Dakota Retirement System

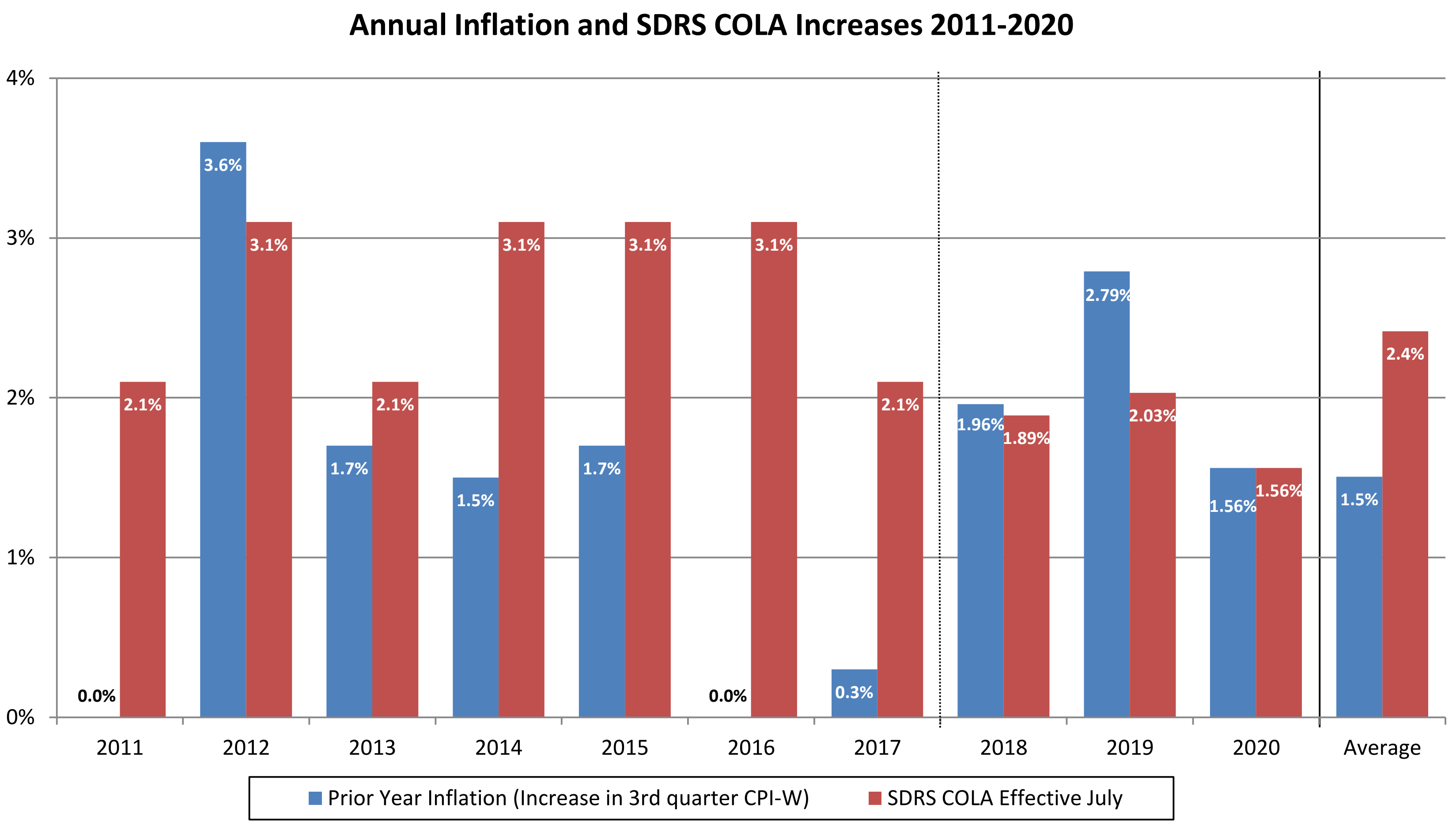
Projected Funded Status as of June 30, 2020

May 7, 2020

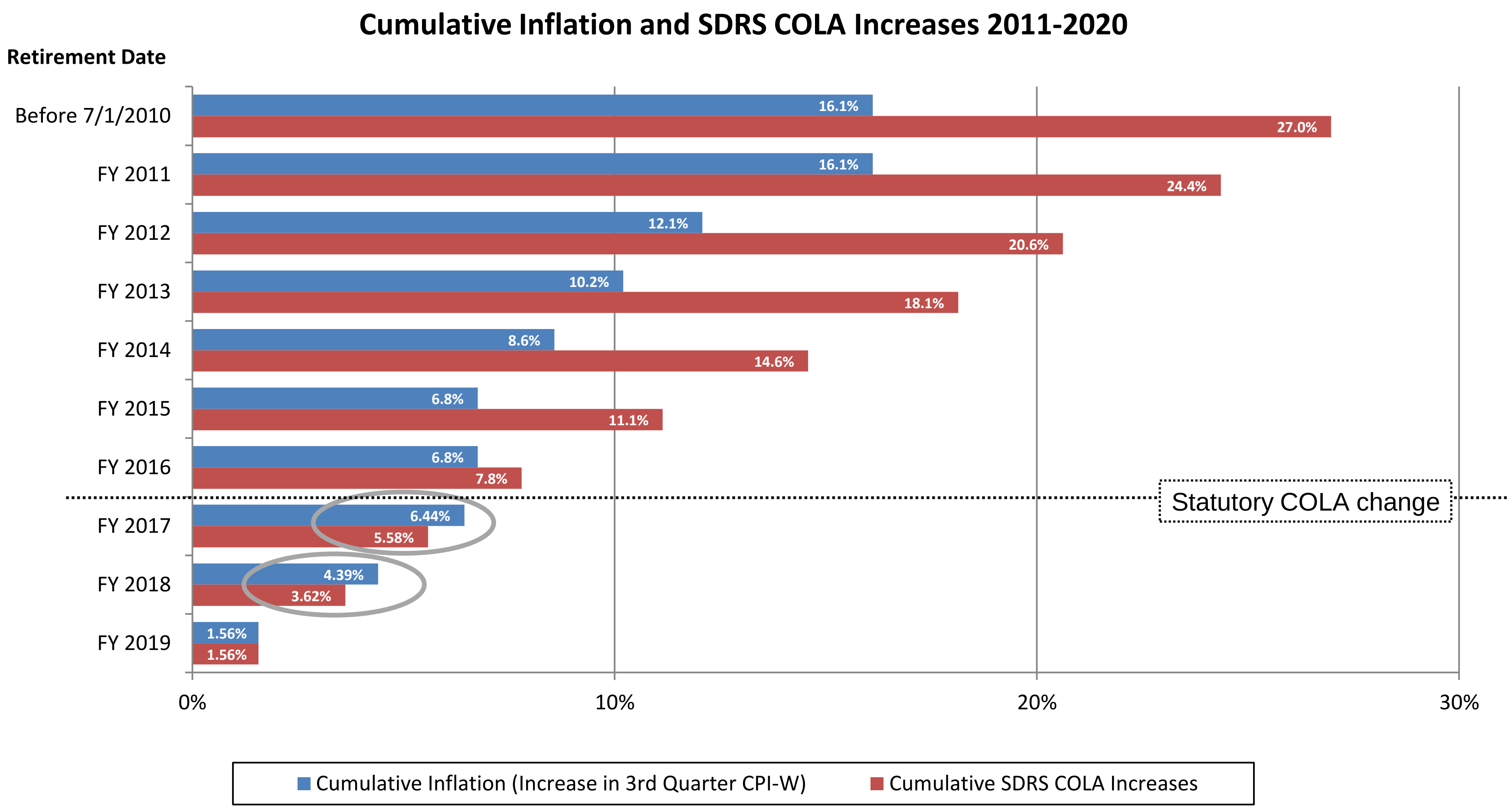
Projected Funded Status and COLAs

- SDRS contributions are fixed and benefits are variable based on affordability
- COLA is primary variable benefit and will vary directly with both inflation and long-term affordability
- The following exhibits examine:
  - SDRS COLAs and inflation since 2010
  - Inflation year to date
  - Projected FVFR at June 30, 2020 with:
    - Corresponding July 2021 COLA range, and
    - Magnitude of required corrective actions, where applicable

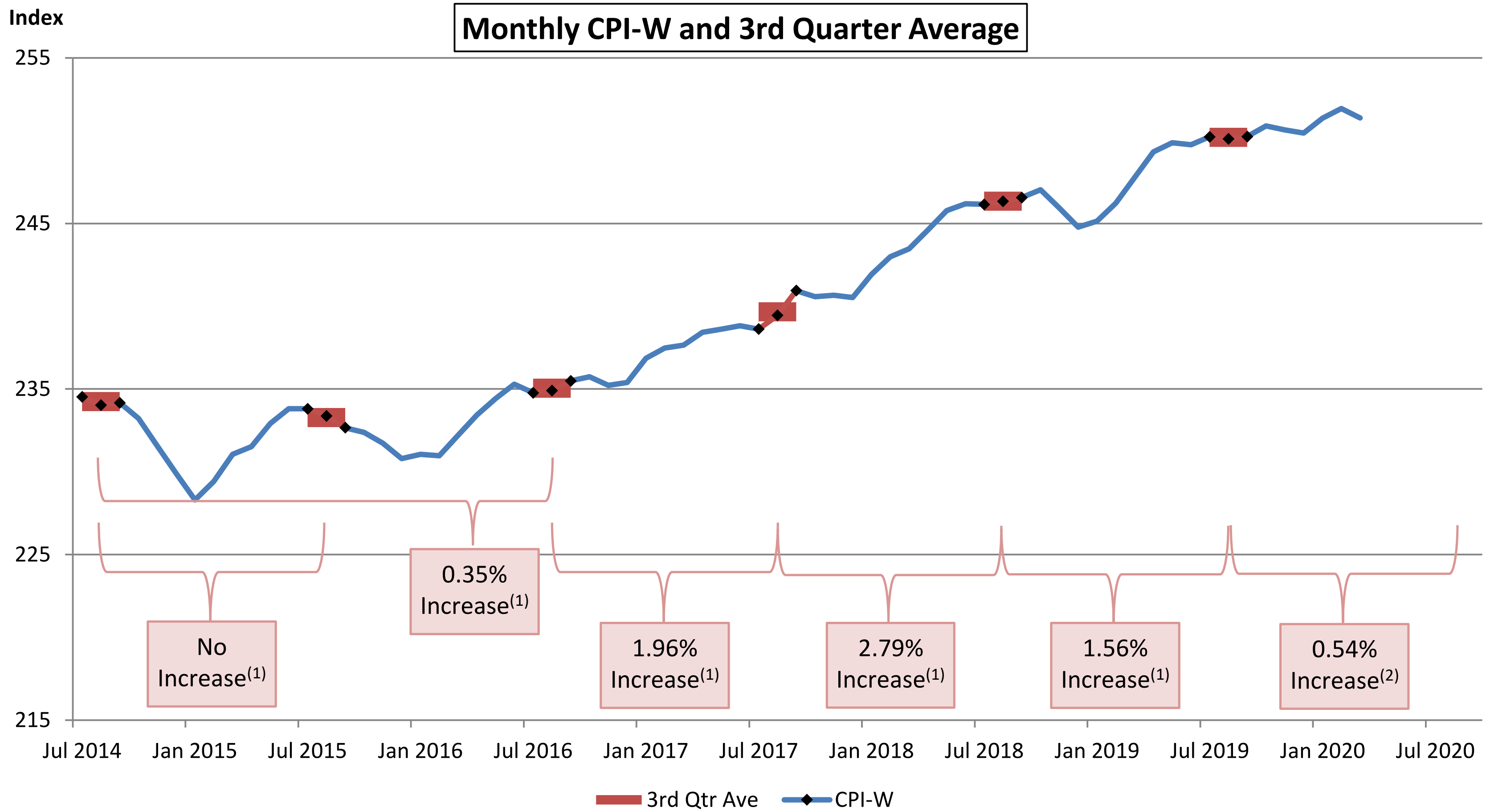
Inflation and SDRS COLAs Since 2010



Inflation and SDRS COLAs Since 2010



Inflation Measurement for Social Security and SDRS COLAs



(1) Increase in the third calendar quarter average over the prior highest third calendar quarter average is the specified inflation measurement for the Social Security COLA effective the following January and the SDRS COLA effective the following July.

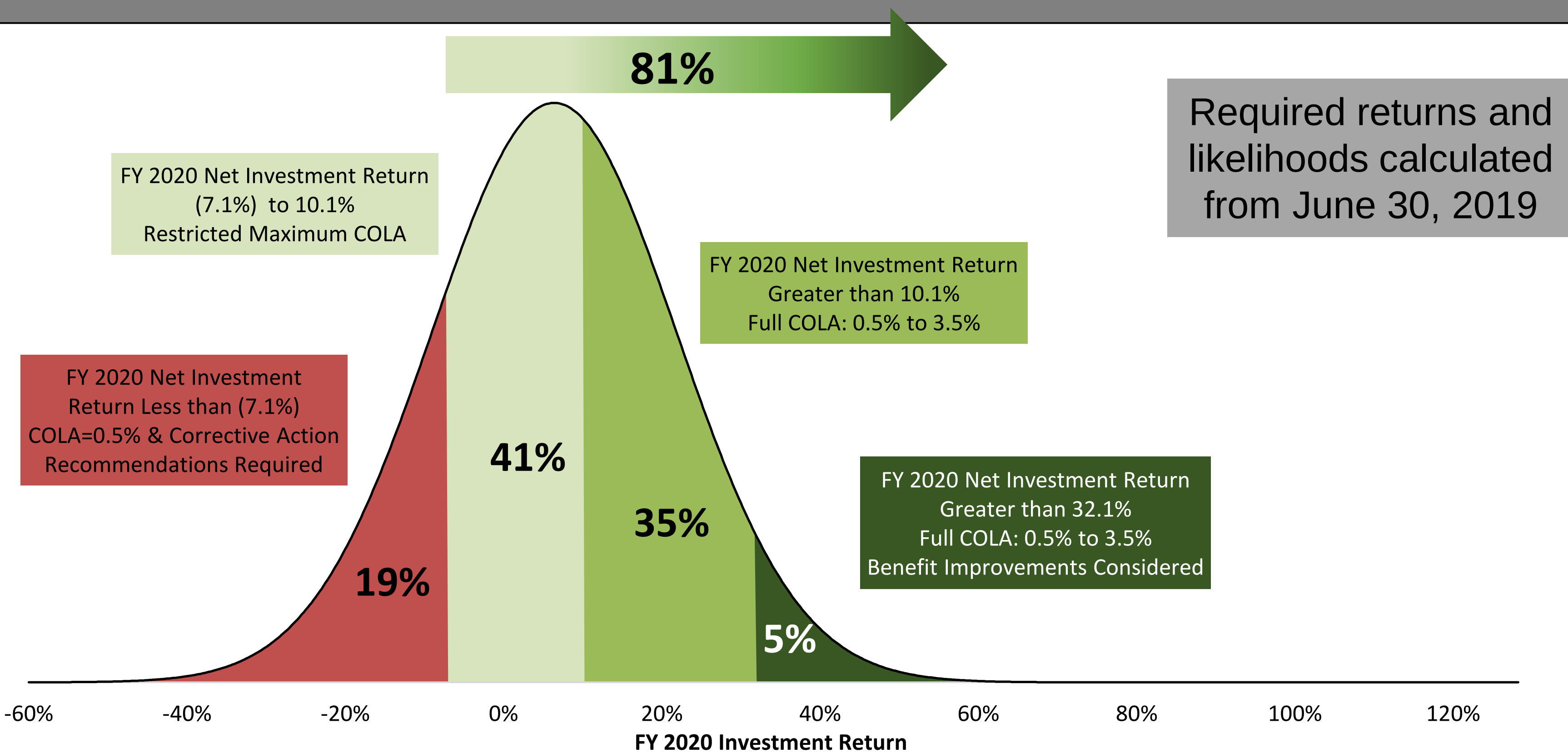
(2) Increase in most recent three-month average over July to September, 2019 average

Projected Funded Status as of June 30, 2020 and July 2021 COLA Range*

	Net Investment Return, FYE June 30, 2020	Baseline FVFR	COLA Range	Final FVFR	Required Corrective Action
Corrective Action Threshold	(7.1%)	84%	0.50%	100%	Return < (7.1%) requires Corrective Action
Assumed Return	6.5%	97%	0.50% to 1.91%	100%	n/a
Full COLA Range	10.1%	100%	0.50% to 3.50%	100%	n/a
Benefit Improvement Consideration	31.8%	120%	0.50% to 3.50%	120%	n/a
Example Returns	0%	91%	0.50% to 1.28%	100%	n/a
	(5%)	86%	0.50% to 0.74%	100%	n/a
	(10%)	81%	0.50%	97%	$354M
	(15%)	77%	0.50%	91%	$967M
	(17.5%)	75%	0.50%	89%	$1,273M
	(20%)	72%	0.50%	86%	$1,580M

* Before consideration of liability gains/losses for year ending June 30, 2020. June 30, 2019 Baseline FVFR was 96.3% and Restricted Maximum COLA was 1.88%.

Projected 2021 COLA Ranges: 2019 Benchmark Asset Allocation Statistics



- Ignoring FY20 returns to date, the likelihoods for July 2021 COLA ranges, which are primarily driven by FY20 investment returns, are:
  - 19% likelihood that a 0.5% COLA will be payable and additional Corrective Action recommendations will be required
  - 41% likelihood that the COLA will have a restricted maximum (CPI-W between 0.5% and the restricted maximum)
  - 40% likelihood that the COLA will be CPI-W between 0.5% and 3.5%, with a 5% likelihood of considering benefit improvements

* Before consideration of liability gains/losses. Likelihoods based on SDIC 2019 **benchmark** asset allocation investment portfolio statistics (mean = 6.29%, standard deviation = 15.4%).

Summary

- At June 30, 2019, the one-year likelihood of required corrective actions using benchmark asset allocation statistics was 19%
- The FVFR may be less than 100% at June 30, 2020 and a corrective action recommendation may be required
- Net FY20 returns less than approximately -7% would reduce the 2021 restricted maximum COLA to 0.5% and require corrective action recommendations
- The magnitude of any required corrective action depends on final net investment returns for the fiscal year

South Dakota Retirement System

Planning for the Good, Bad, and Ugly Times: Revisited #2

May 7, 2020

Guiding Principles – Benefit Changes

- Benefit improvements have allowed:
  - SDRS to come closer to meeting its adequacy objectives
  - Members to share in the favorable experience on an equitable basis
- Benefit reductions (including COLA changes that reduce the growth of benefits):
  - Have serious consequences to SDRS members
  - May result in a failure to meet adequacy objectives
  - Have protected benefits currently in pay or currently accrued
- The Board must balance benefit adequacy with the System's sustainability considering the fixed, statutory contributions
- SDRS benefit improvements have been much more significant than benefit reductions

Objectives for Today

- Board discussion and feedback from April meeting
- Provide examples and address questions
- Continue to evaluate, consider alternatives, and work to establish a general framework for changes

April Feedback: Why not Contribution Increases?

- SDRS has operated on fixed, statutory contribution rates since consolidation; this principle is the foundation for the disciplined management of SDRS and its success
- State and participating employers have always made contributions
- SDRS has committed to managing SDRS based on fixed contributions
- Increasing employer contributions have raised doubt about advisability and affordability of continuing defined benefit plans elsewhere
- Fixed contributions:
  - Have provided resources for numerous, essential benefit improvements
  - Avoid requesting more funding when employers can least afford it
  - Avoid reducing funding during good times (and bad times)
  - Have been key to confidence in, support of, and pride in SDRS

Statutory Requirements For Corrective Actions[1]

- Recommendations for corrective actions required if:
  - FVFR is less than 100%, or
  - Fixed, statutory contributions insufficient to fund benefits

(1) SDCL 3-12C-228

Corrective Action Considerations

- Funding shortfall magnitude
- Member accrued benefits and potential legal challenges
- Benefit adequacy and short and long-term effect on members
- Expanding variable benefits to delay need for additional changes
- Long-term outlook
- Foundation / Generational cost equity
- Intergenerational equity
- Complexity in benefit administration and communication
- Temporary suspension of 100% funded status objective, but only after other actions taken

Corrective Actions Objectives – April

- Reduce minimum COLA to 0% and retain current COLA mechanism that automatically adjusts when conditions allow
- Maintain balance between Foundation and Generational members
- Make changes only for future service so Generational and Foundation members have identical benefits for future service
- Consider corrections that exceed minimum required change to provide an additional risk margin
- Consider reductions to the most recent fixed formula benefit improvement and other accrued benefits only as a last resort
- Introduce additional variable benefit features

Corrective Action Options Identified and Discussed in April

- Reduce minimum COLA to 0%[(1)]
- Permit small Unfunded Liability expected to be fully funded by the statutory contribution margin in a short time
- Provide Generational benefit structure for all future service for Foundation members and suspend VRA contribution[(1)]
- Reduce future service benefit formulas as needed[(1)] (e.g., by 10%)
- Freeze accrued benefits, reduce accrued benefits as last resort, and base future benefits on pay earned each year, not FAC (career average pay[(1)])

(1) Benefits would vary with funded status or be reinstated if affordable

Feedback from April Meeting: Corrective Actions

- Fully Funded Status
  - Should a small Unfunded Liability be permitted for a short period?
- SDRS COLA:
  - Is it equitable to have the COLA range expanded?
  - Should some minimum COLA be retained?
  - More detail is needed on past retiree benefit improvements and comparisons of the COLA with inflation
  - Should 100% FVFR be required before any COLA is paid?
- Benefit Structure Changes:
  - Why is Foundation/Generational proposal better than the 2018 plan?

Statutory Contribution Margin

- Recommendations for corrective actions required if:
  - FVFR is less than 100%, or
  - Fixed, statutory contributions insufficient to fund benefits
- First requirement is key and will apply much sooner than second
- Results of requiring 100% funding – Statutory Contribution Margin:
  - Maximum COLA reduced as necessary to meet 100% funding
  - This reduction is larger than necessary to fund future benefits
  - Excess of fixed contributions over Normal Costs widens

Restricted Maximum COLAs and Contribution Margin

Baseline FVFR	100%	84%	80%
COLA Max	3.50%	0.50%	0.00%
Statutory Contribution Rate	12.416%	12.416%	12.416%
Normal Cost with Expenses	12.274%	9.995%	9.495%
Statutory Contribution Margin	0.142%	2.421%	2.921%
Present Value of Future Salaries	$17,603M	$17,603M	$17,603M
Present Value of Contribution Margin	$25M	$426M	$514M

Corrective Actions and Unfunded Liabilities

- Current variable COLA features provide significant downside protection, but at the beginning of FY 2020, there was still a 19% chance that additional corrective actions would be required at June 30, 2020
- Corrective actions required will depend upon the shortfall
- 100% funded status (no Unfunded Liabilities) is a core SDRS objective and should continue to be a long-term priority
  - Very significant market declines may be temporary
  - A relatively small Unfunded Liability based on fair value of assets may be acceptable for a short period
  - If Unfunded Liabilities allowed under these conditions, they should only be after COLA change implemented and based on amount that is expected to be funded by the contribution margin in a short time

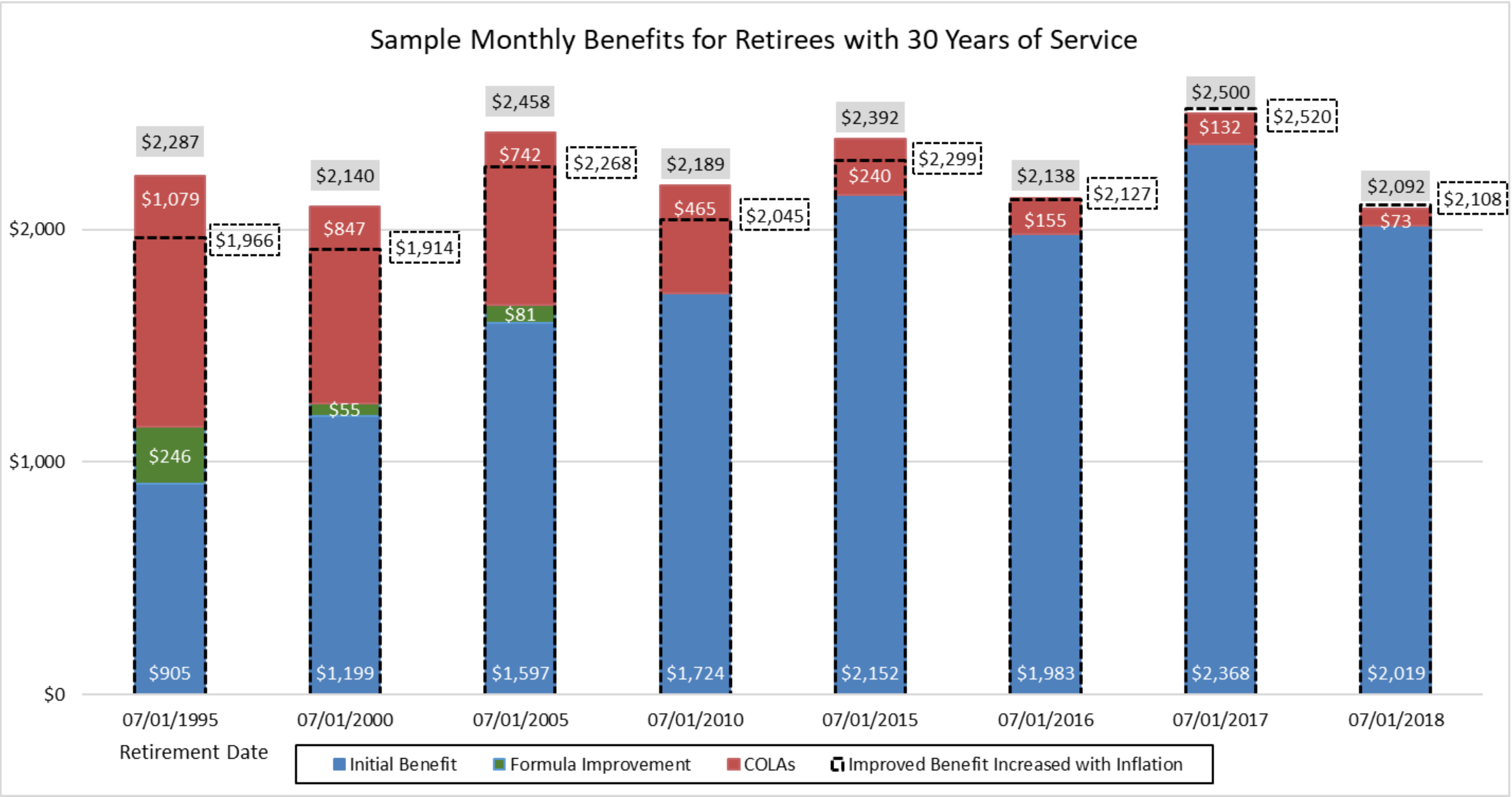
Unfunded Liabilities Discussion

- Is anything less than 100% funded in all conditions acceptable?
- How would rating agencies react to less than 100% funded?
- If unfunded liabilities permitted, under what conditions and for what maximum time period?
- If no unfunded liabilities permitted, additional and more significant benefit reductions may be required during severe economic periods

April Feedback: SDRS COLA Detail

- SDRS COLA initially a 2% simple COLA, improved several times, reaching 3.1% fixed, compound COLA in 1993
  - After 30 years, an initial $1,000 benefit increases to:
    - With a 2% simple COLA: $1,600
    - With a 2% compound COLA: $1,811
    - With a 3.1% compound COLA: $2,499
- In 2010, SDRS COLA was changed to variable between 2.1% and 3.1%; change was challenged and upheld in circuit court
- In 2017, SDRS COLA was changed to inflation (increase in 3rd calendar quarter CPI-W) between 0.5% and 3.5%, but limited to affordable COLA

April Feedback: SDRS COLA and Inflation Examples



April Feedback: Why Another COLA Change

- 2018 plan recommended additional COLA changes only after other changes for active members
- COLA has outpaced inflation for most retirees and inactives
- While the COLA only immediately impacts retirees, they are the only group currently receiving benefits and all SDRS members will be subject to the same structure in retirement
- A variable COLA pays only what is affordable and does not result in a permanent benefit reduction
- The variable COLA is a primary SDRS tool for managing risk and widening the COLA range enhances its effectiveness

April Feedback: Why No COLA Minimum

- An expanded COLA range with no minimum maximizes its effectiveness in managing risk
- The current 0.5% minimum will continue to exceed very low inflation
- Any COLA minimum would continue to increase benefits even if current benefits are unaffordable
- A very small minimum COLA provides only minimal increases and is not likely to be valued by members more than no minimum
- A 0% COLA minimum can delay or prevent more disruptive reductions to benefits and allow SDRS to remain sustainable within the fixed contribution rates

April Feedback: Why Generational Structure for All?

- Avoids any changes to Foundation structure for service to date:
  - Preserves accrued benefits for Foundation members
  - Maintains retirement eligibility requirements under Foundation structure
- Keeps balance between costs of Foundation and Generational structure considering all benefit features
- Standardizes benefits for future service for all members
- Minimally impacts members close to retirement at time of change

Benefit Structure Change Example – Class A Foundation Member

Member Intends to Retire at Age 55

- At effective date of change, age 50 with 25 years of service (12 improved years), FAC = $50,000, accrued benefit is:
  - (12 x .017 + 13 x .0155) x $50,000 /12 = $1,690 monthly
  - Would be eligible for unreduced benefit in 5 years
- If works five more years and FAC then equals $55,000 at age 55, accrued benefit is:
  - Without changes:
    - (12 x .017 + 18 x .0155) x $55,000 /12 = $2,214 monthly
  - With corrective action:
    - (12 x .017 + 13 x .0155) x $55,000 /12 = $1,859, plus
    - (5 x .018) x $55,000 /12 x 40% (early retirement factor) = 165
    - Total benefit at age 55 = $2,024 monthly
    - Plus VRA if funded

Benefit Structure Change Example – Class A Foundation Member

Member Intends to Retire at Age 65

- At effective date of change, age 60 with 25 years of service (12 improved years), FAC = $50,000, accrued benefit is:
  - (12 x .017 + 13 x .0155) x $50,000 /12 = $1,690 monthly
  - Currently eligible for unreduced benefit
- If works five more years and FAC then equals $55,000 at age 65, accrued benefit is:
  - Without changes:
    - (12 x .017 + 18 x .0155) x $55,000 /12 = $2,214 monthly
  - With corrective action:
    - (12 x .017 + 13 x .0155) x $55,000 /12 = $1,859, plus
    - (5 x .018) x $55,000 /12 x 90% (early retirement factor) = 371
    - Total benefit at age 65 = $2,230 monthly
    - Plus VRA if funded

Benefit Structure Discussion

- Changes to future service benefits will have very little impact on accrued liabilities that need to be reduced to meet 100% funded status objective

- These changes will free up contributions to pay off unfunded liabilities, if permitted

- If no unfunded liabilities permitted, accrued benefits must be addressed as identified:
  - Freeze accrued benefits, reduce accrued benefits as last resort, and base future benefits on pay earned each year, not FAC (career average pay)

Policy Regarding Consideration of Benefit Improvements

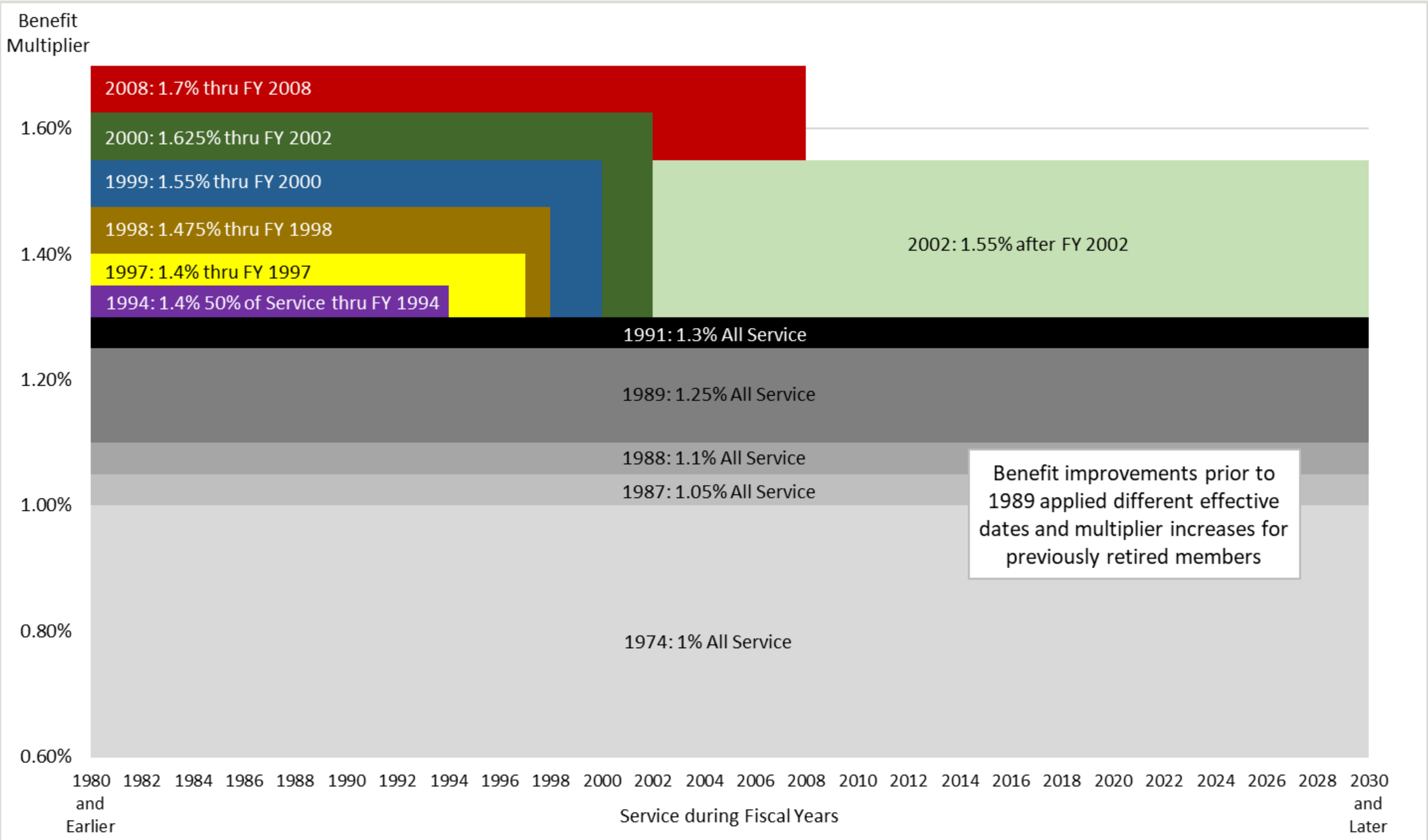
- Minimum actuarial conditions required:
  - 120% minimum FVFR and sustained net investment gains/losses[(1)]
  - Fully fund improvement
  - Maintain 120% minimum FVFR after funding benefit improvement

(1) For consideration of benefit improvements, investment gains and liability gains and losses are recognized over five years, investment losses are recognized immediately. Future benefit improvements likely first possible in 2026 at the earliest.

Feedback from April Meeting: Benefit Improvements

- Benefit Improvements:
  - Is 120% FVFR sufficient to consider benefit improvements?
  - Consider different objectives/priorities for benefit improvements
- Is 120% FVFR sufficient?
  - Estimated likelihood of investment returns requiring corrective actions after three years is 9% under current provision but could be less based on corrective actions implemented

Class A Benefit Improvements – Multipliers for Service in Fiscal Years



Future Benefit Improvement Form

- Past formula improvements increased monthly benefits for all members:
  - At time of improvements, COLA and liabilities were fixed
  - Recession quickly followed 2008 improvement increasing fixed liabilities
- Recent improvement discussions focused on one-time payments or VRA contributions to avoid fixed liabilities:
  - One-time payments to retirees are fully spent when distributed
  - Allocations to VRA may require 0% lifetime earnings minimum
- With COLA variability, increased liabilities due to benefit formula improvements are not fixed but are variable:
  - If COLA minimum is 0%, liabilities can contract approximately 20% in response to asset losses
  - If paid separately and clearly communicated as subject to future investment performance, possible to reverse improvement if necessary

Objectives for Benefit Improvements – April Staff/Consultant Suggestions

- ***Consider any short-falls compared to long-term benefit objectives***
- Improve benefits for both active and retired members
- Avoid **substantive** additional fixed benefit obligations
- Base improvement for active members on both member pay and service
- Base improvement for retired members on current benefit
- Be cautious

Objectives for Benefit Improvements – Board Member Suggestions

- ***Consider any short-falls compared to long-term benefit objectives***
- Improve benefits for ~~both~~ active, inactive, and retired members
- Avoid **substantive** additional fixed benefit obligations
- Base improvement for active members on both member pay and unimproved service
- Base improvement for inactive members on both current earned benefit and unimproved service
- Base improvement for retired members on current benefit and unimproved service
- Be cautious

Benefit Improvement Priority Discussion

- Priorities for improvements should consider conditions when funds available, including:
  - Timing since most recent improvement
  - Corrective actions subsequently taken
  - Percentages of membership on Foundation and Generational structures
- Potential priorities to be ranked:
  - Correcting shortfalls caused by required corrective actions
  - Following past improvement practices
  - Improving previously unimproved service as first priority
  - Improving all members’ benefits as first priority
  - Treating active, inactive, and retired members consistently
  - Maximizing risk mitigation

Board Discussion/Reactions

- Corrective Actions Policy:
  - Statutory requirements for recommendations
  - Objectives
  - Priorities
  - Living with a modest Unfunded Liability for a temporary period
- Benefit Improvements Policy:
  - Minimum requirements for recommendations
  - Objectives
  - Priorities