

# Funding Considerations



# Agenda

- Current State
- Stress Testing
- Funding Policy Actions to Consider:
  - Amortization Period
  - Assumed Rate of Return
- COLA's Analysis
- Additional Data
- Next Steps

# ***Current State***

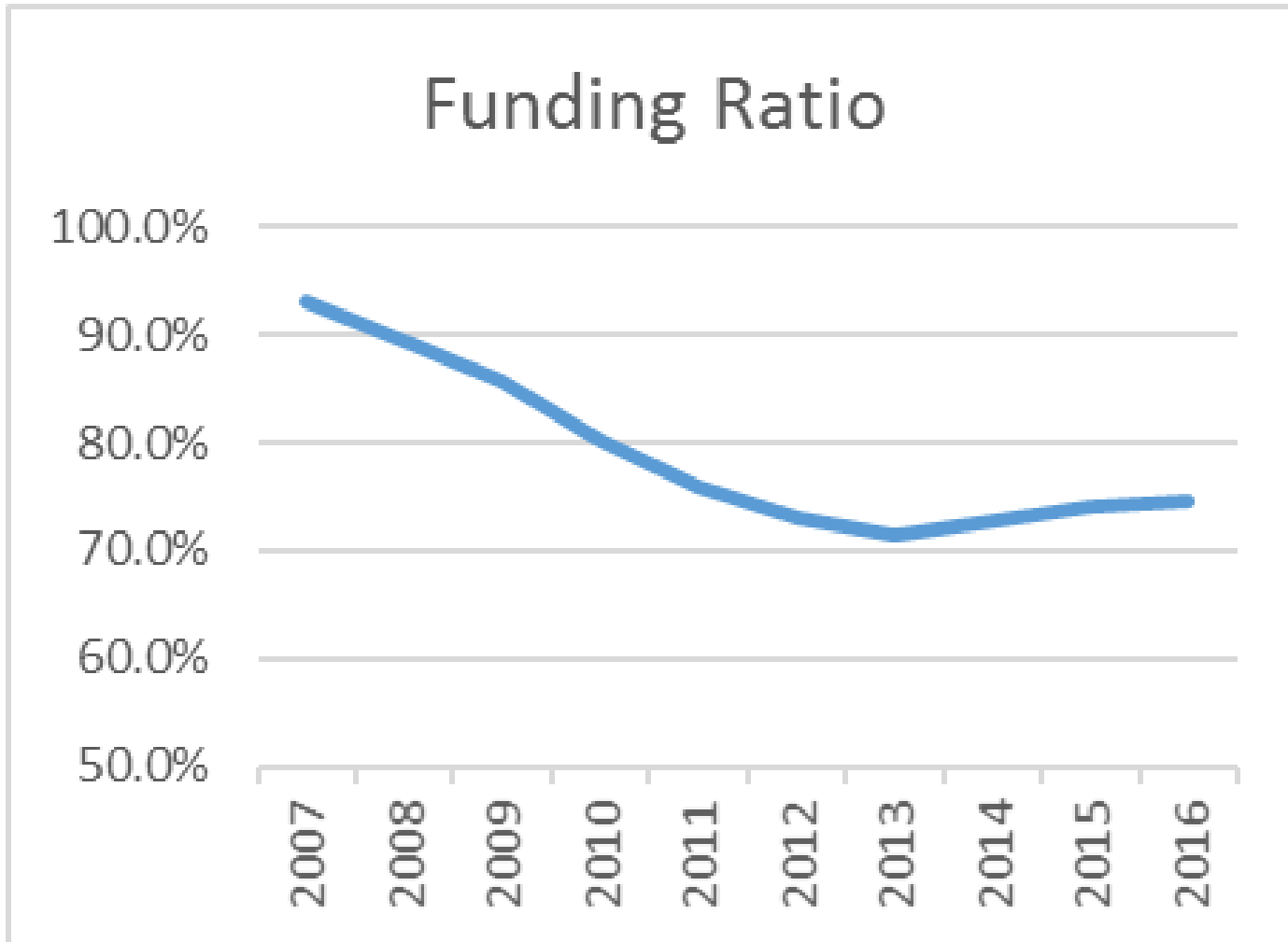
## *Current State*

- Most recent valuation date: 6/30/2016
- Funding ratio: 74.7%
- Unfunded Actuarial Accrued Liability: \$4.345 billion
- Employer Contribution Rates (for FY 2019):
  - Old Plan / New Plan: 24.66%
  - GSEPS: 21.66%
- Active Members and Payroll:
  - 59,766 (current: ~61,000)
  - \$2.384 billion
- Retired Members / Beneficiaries and Payroll:
  - 48,265 (current: ~50,500)
  - \$1.332 billion

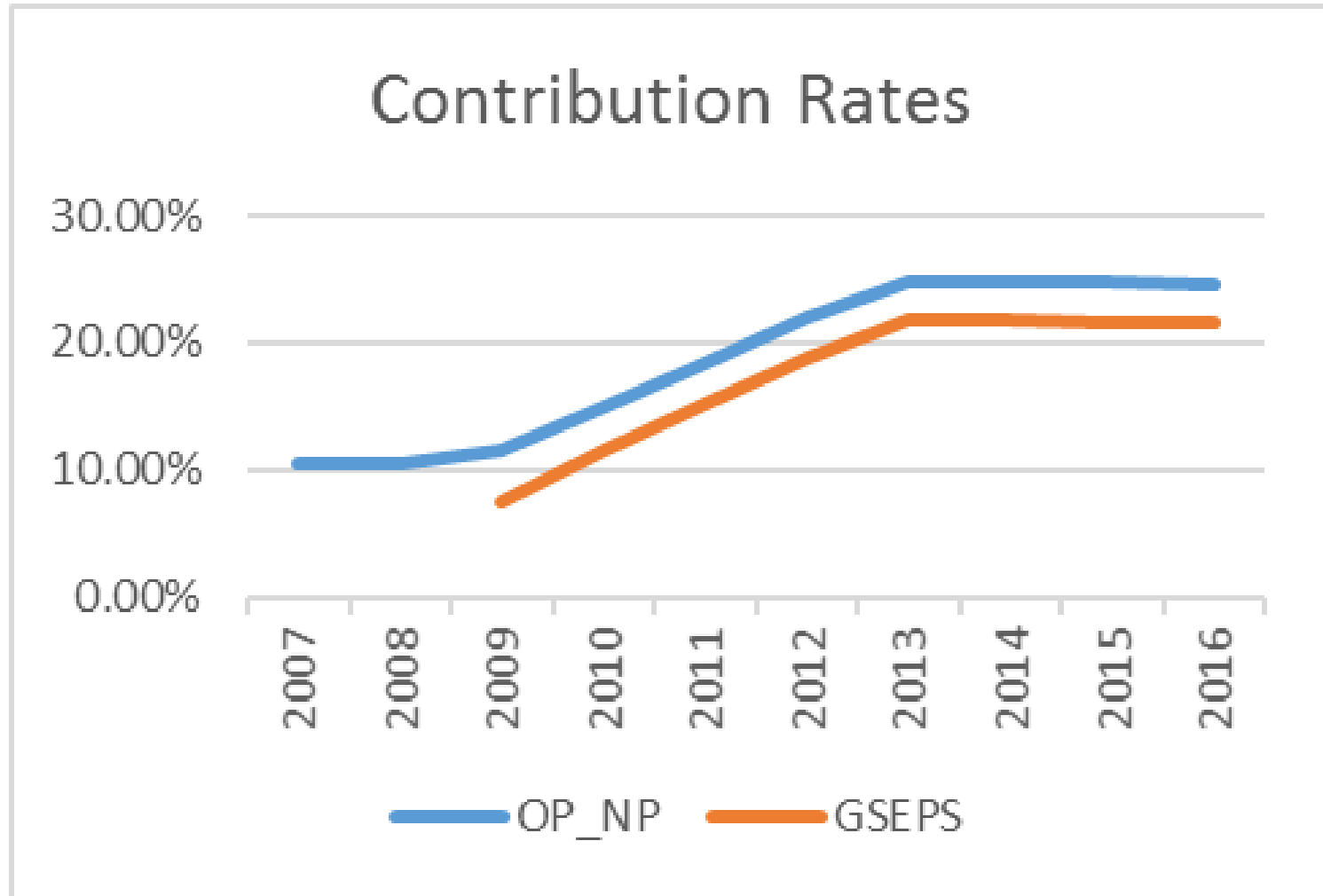
## *Current State*

- Key valuation assumptions:
  - Rate of Return / Discount Rate: 7.50%
  - Amortization Period: 25-year closed
  - Amortization Method: Level Dollar
  - Asset Smoothing: 5 years
  - Active Member Payroll: near-0% growth
- Investment return, FY 2017: 12.4%
- Investment return, FYTD 2018
  - January 26, 2018: 13.0%
  - February 8, 2018: 5.3%
  - February 13, 2018: 7.0%

## *Recent History*



## Recent History

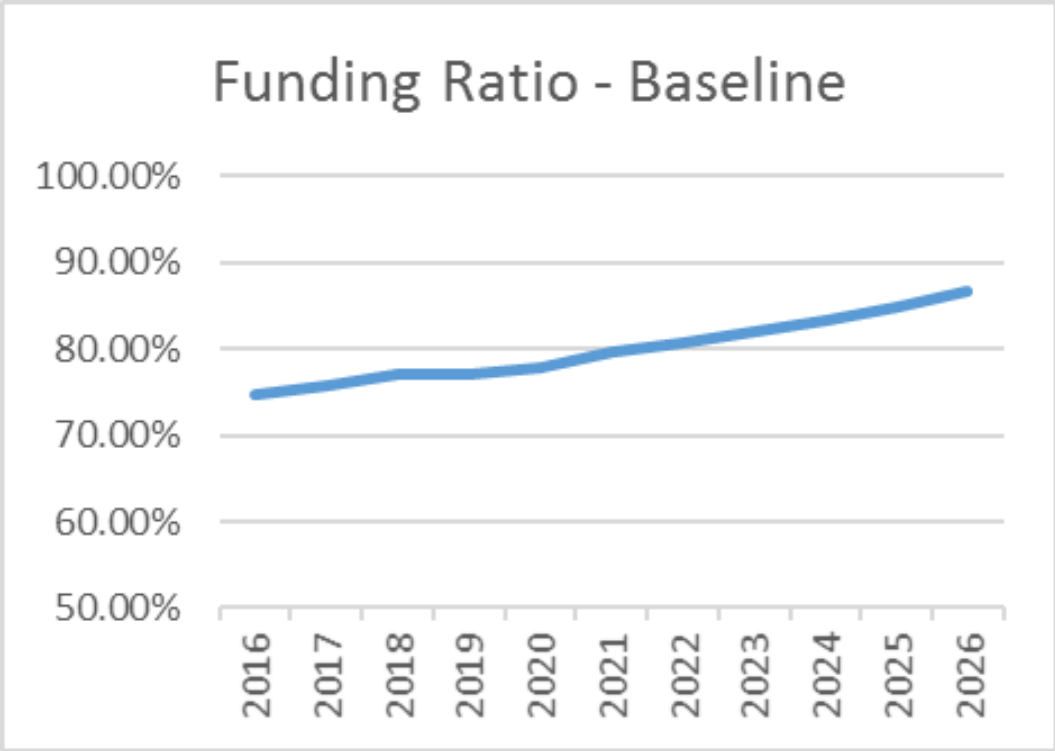


# Ten-Year Projections - Baseline

7.5% discount rate and assumed RoR, all years

Includes 12.4% RoR for FY17

Includes 13<sup>th</sup> check paid 7/1/2017



100% funded ratio projected as of 6/30/2032 valuation

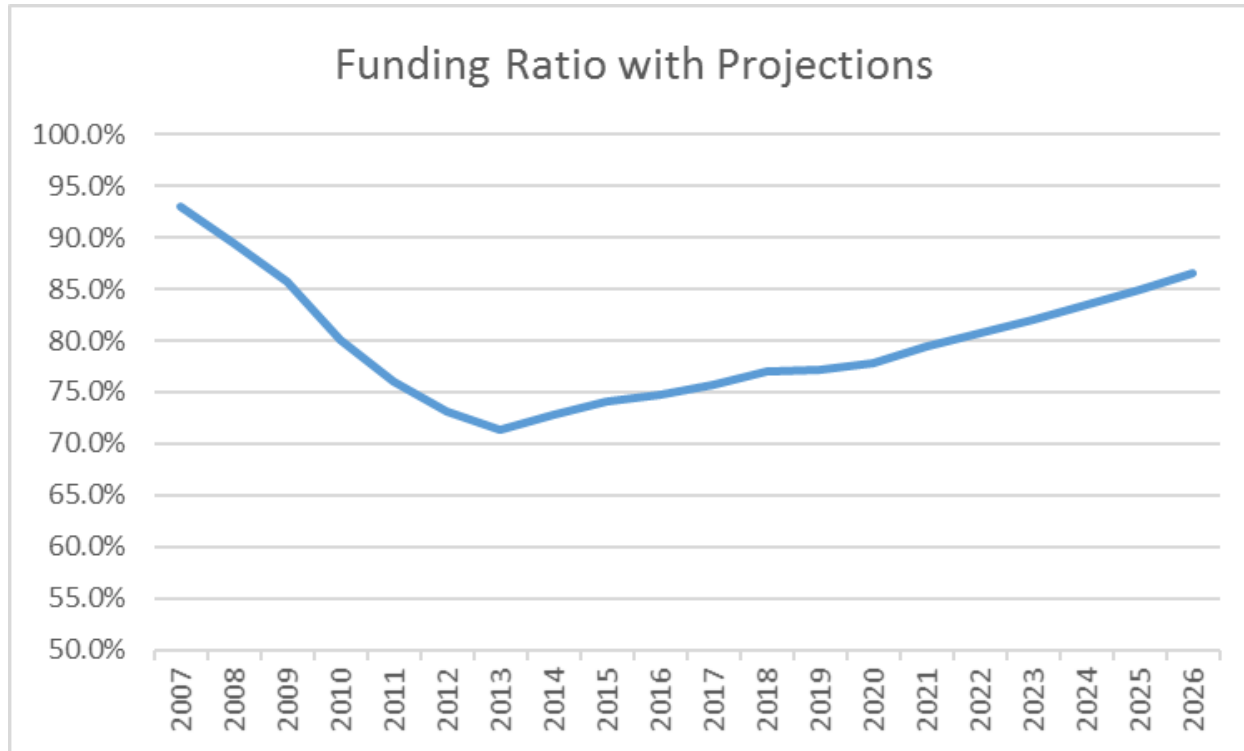


# Twenty Years

7.5% discount rate and assumed RoR, all years

Includes 12.4% RoR for FY17

Includes 13<sup>th</sup> check paid 7/1/2017



100% funded ratio projected as of 6/30/2032 valuation

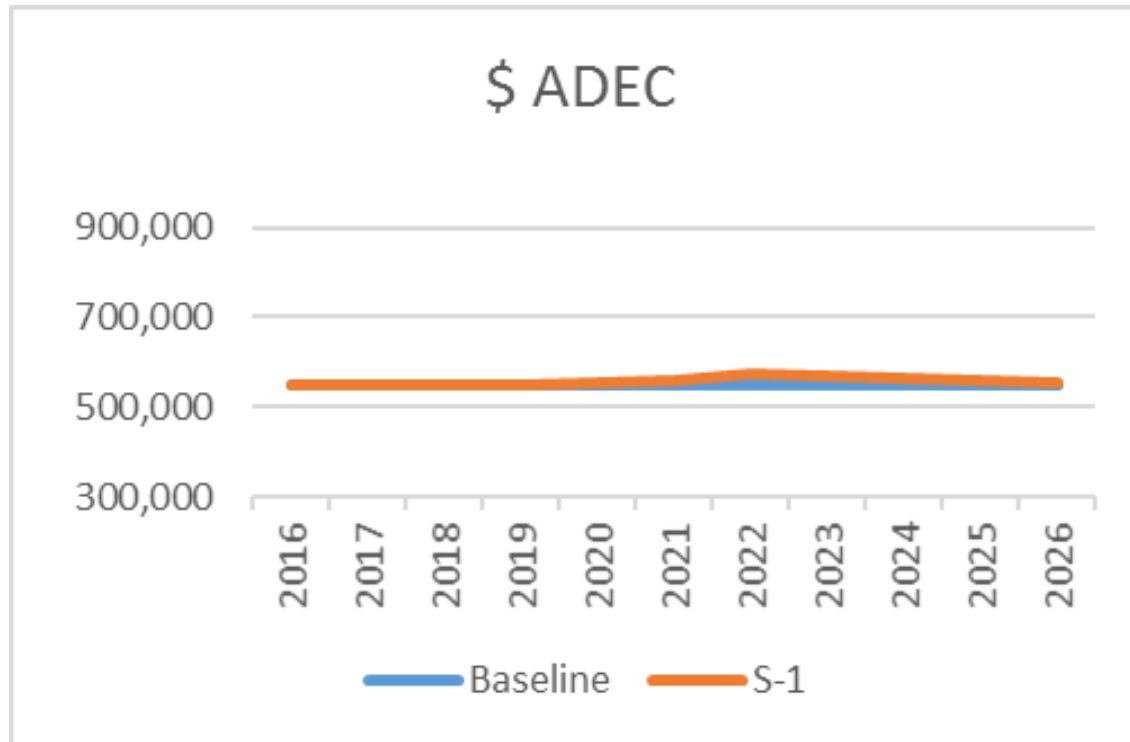
# ***Stress Testing***

# Scenario "S-1"

Changes from Baseline:

0.00% return on investments in FY 2018

7.50% return on investments in all future years



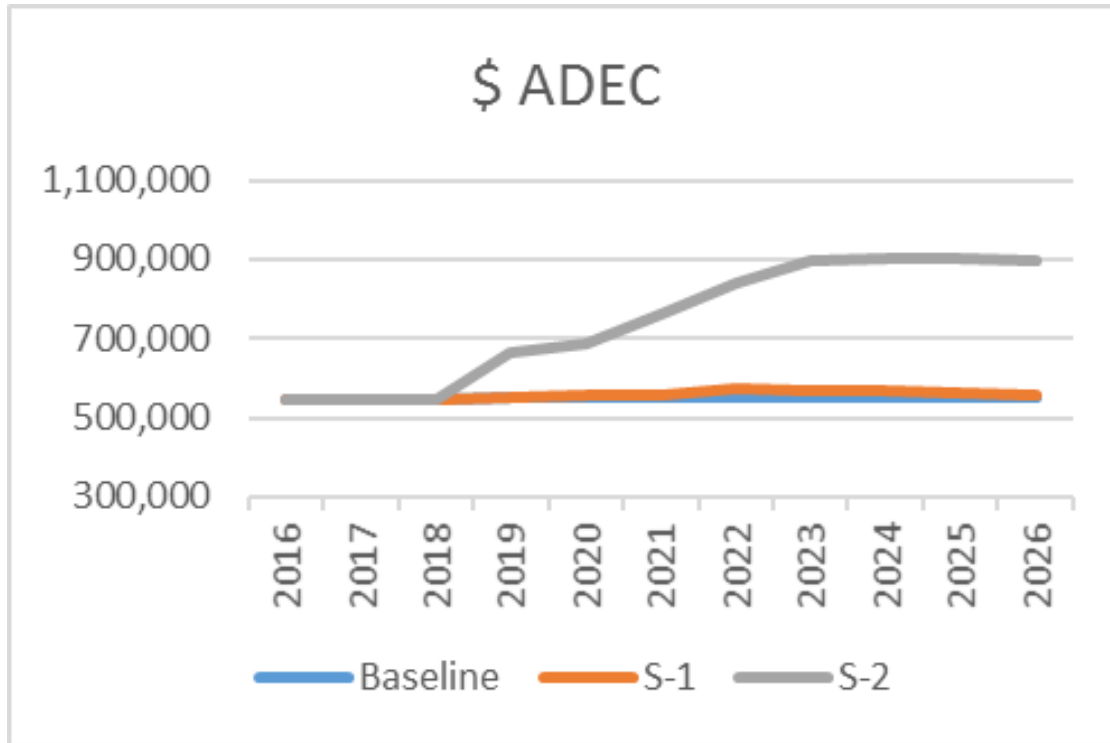
100% funded ratio projected as of 6/30/2038 valuation (S-1)

# Scenario "S-2"

Changes from Baseline:

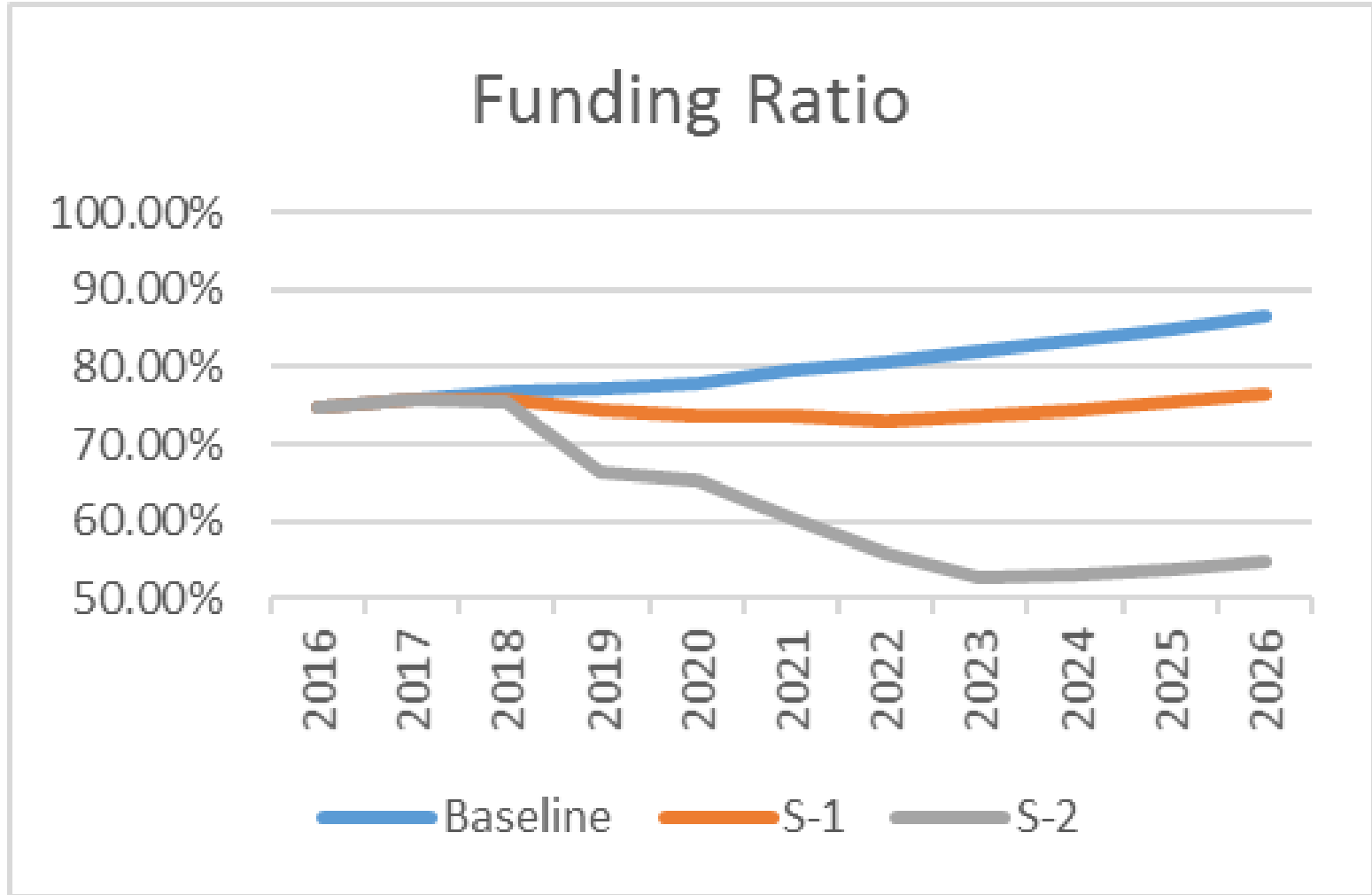
-3.50% return on investments in FY 2018, -13.00% in FY 2019

7.50% return on investments in all future years



100% funded ratio projected as of 6/30/2040 valuation (S-2)

# Funding Ratio Impact



***Funding Policy Actions to Consider:  
Amortization Period***

# *Proposal*

Consider changing the UAAL amortization period from the current 25 years to either 20 years or 15 years

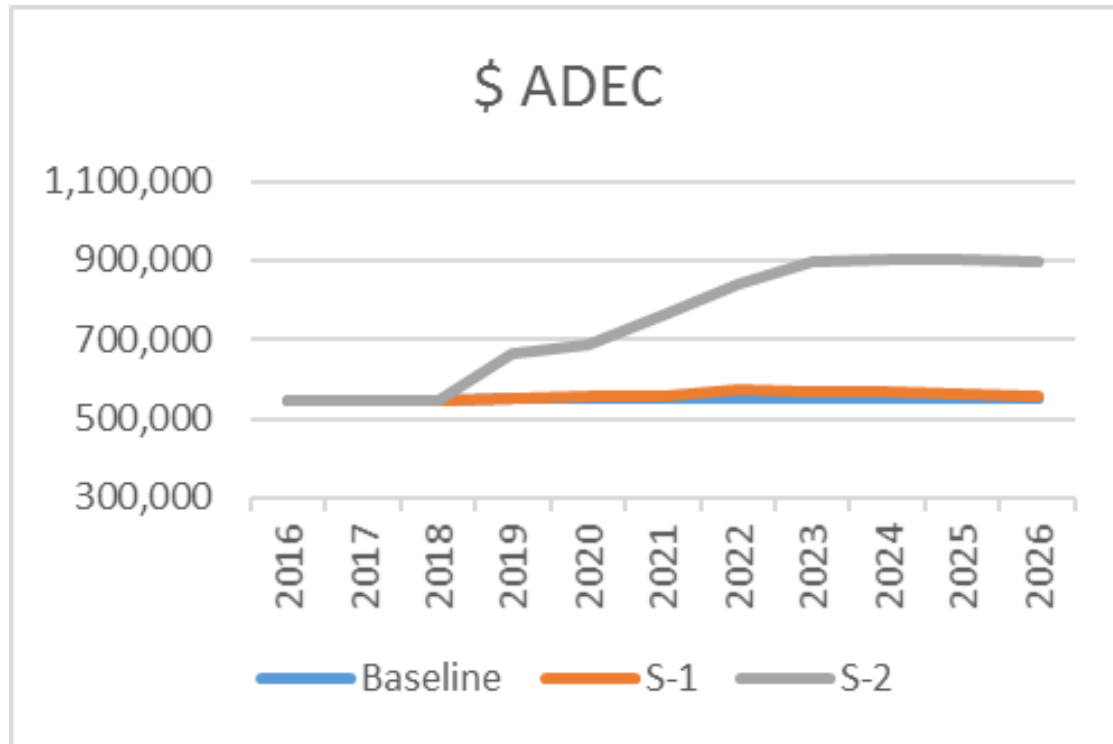
- Pros (AAA ratings positive):
  - Help the system recover from negative events more quickly
  - Believe favorable view by actuarial community
  - Ratings agencies may appreciate aggressive paydown of UAAL
  
- Cons (possible ratings negative):
  - Shorter paydowns could lead to significantly higher employer contribution rates in a negative economic environment
  - Could lead to rating agency concern about state's ability to meet obligations if contribution rates too high

# Scenario "A-1" (S-2)

25-year amortization period

-3.50% return on investments in FY 2018, -13.00% in FY 2019

7.50% return on investments in all future years



100% funded ratio projected as of 6/30/2040 valuation (S-2)

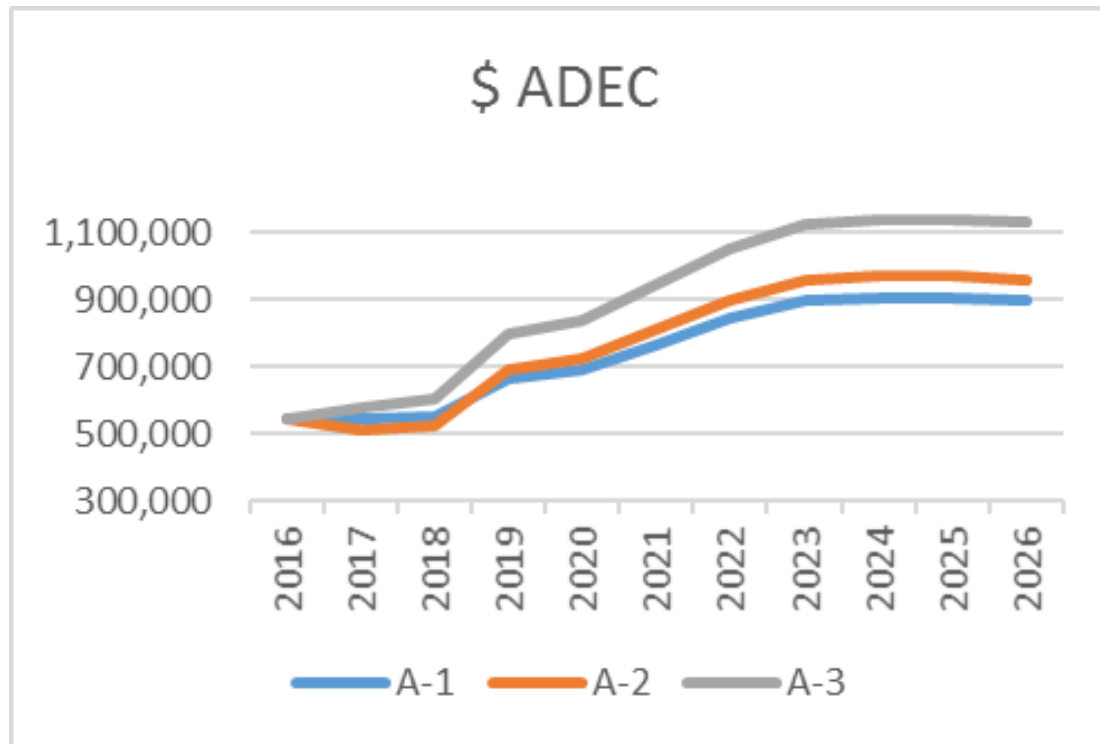


# Scenarios “A-2” and “A-3”

20- and 15-year amortization periods

-3.50% return on investments in FY 2018, -13.00% in FY 2019

7.50% return on investments in all future years

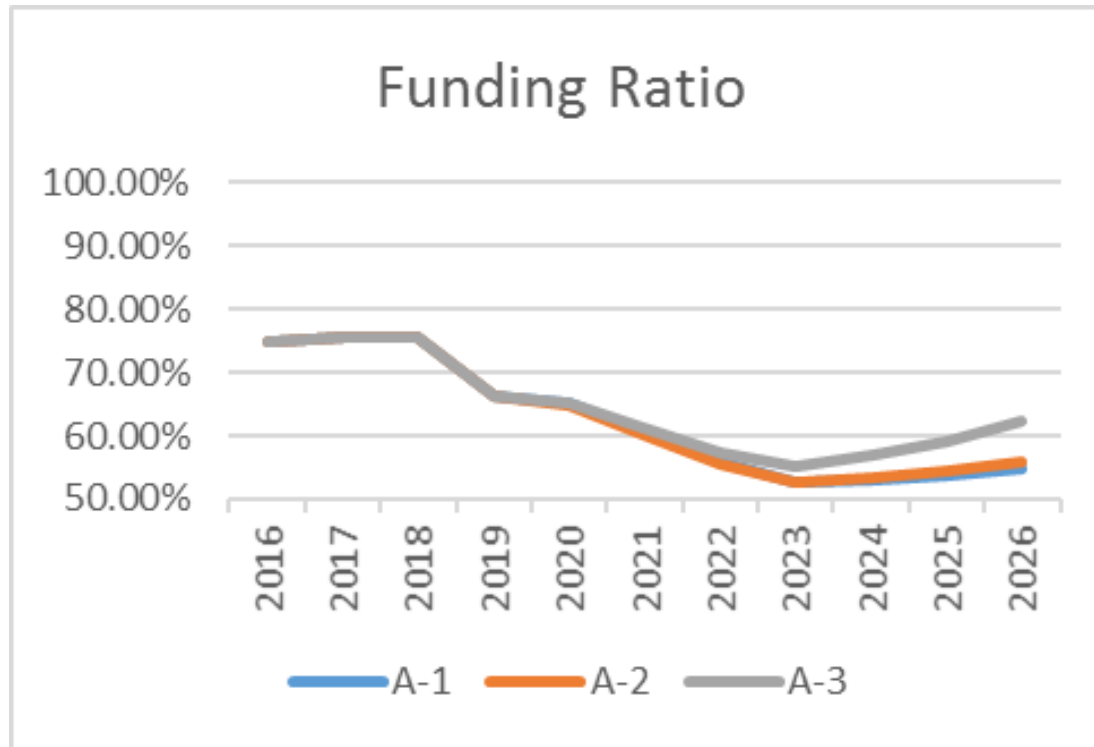


# Scenarios “A-2” and “A-3”

20- and 15-year amortization periods

-3.50% return on investments in FY 2018, -13.00% in FY 2019

7.50% return on investments in all future years



100% funded ratio projected as of 6/30/2039 valuation (A-2) and 6/30/2034 valuation (A-3)

***Funding Policy Actions to Consider:***  
***Assumed Rate of Return***

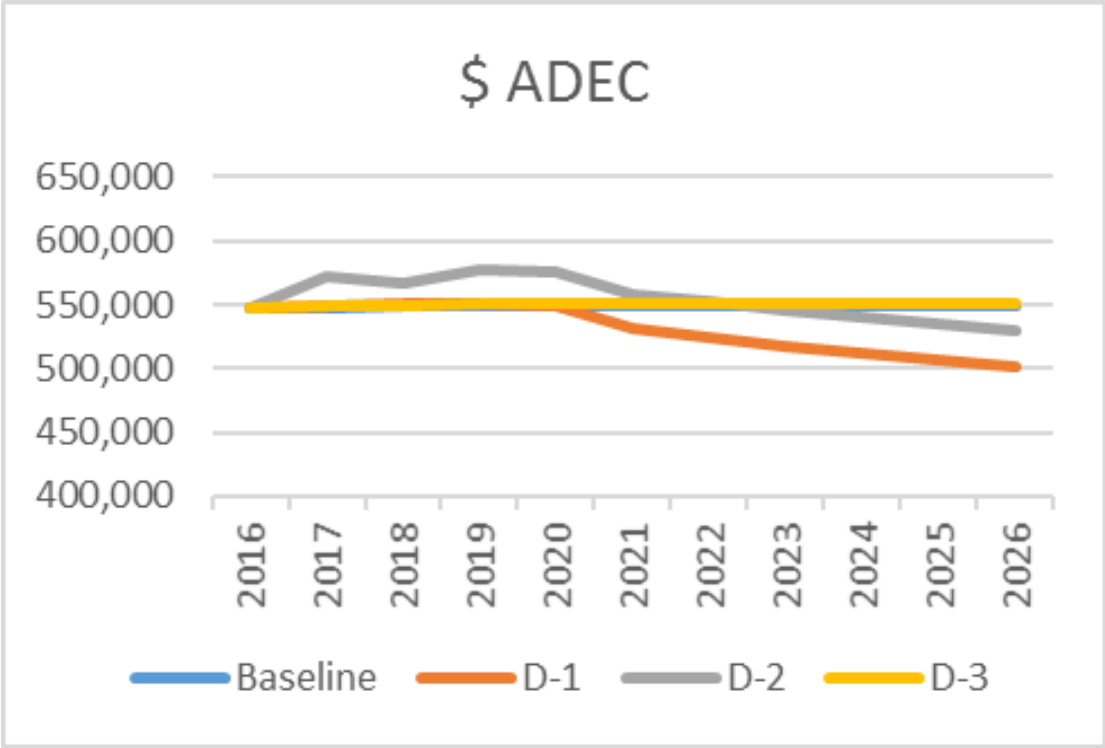
# *Proposal*

Consider lowering the assumed rate of return below 7.50%

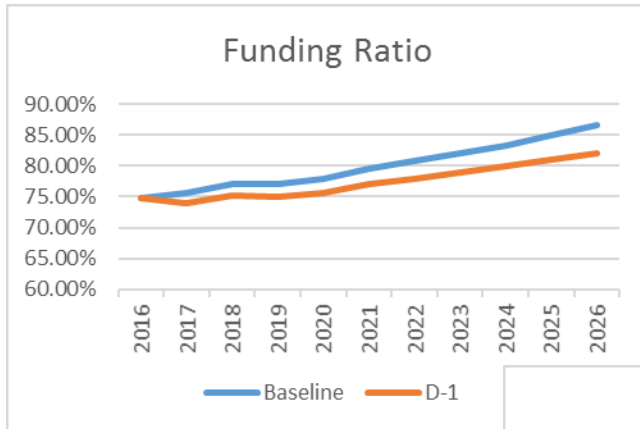
- Pros:
  - Believe favorable view by actuarial community
  - Closer to being in line with rating agencies' analysis
  - Many peer systems have lowered rates already
  - Allows DIS a little more flexibility in asset allocation
  - Possibly better aligned with market outlook in intermediate term
  
- Cons:
  - Increases actuarially calculated liability and lowers funding ratio
  - Can lead to increased employer contribution rates

# Scenario Descriptions

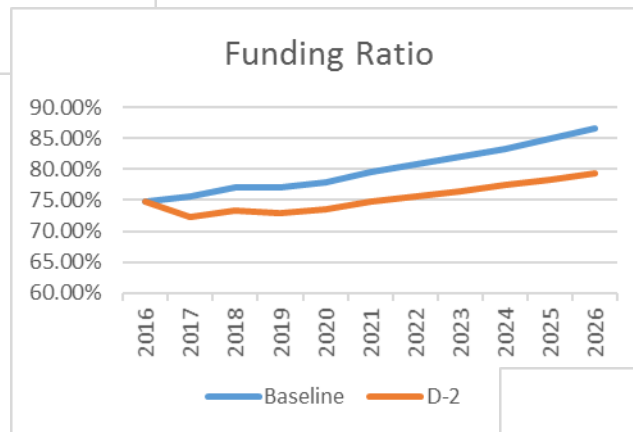
- D-1: 7.25% investment return assumption
- D-2: 7.00% investment return assumption
- D-3: phased decrease in investment return assumption from 7.50% to 7.00%



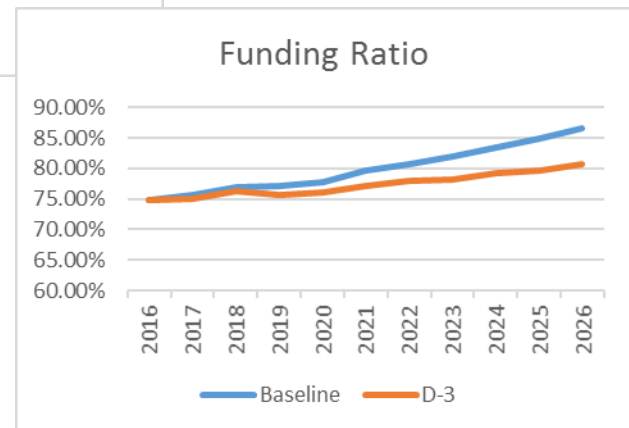
# Funding Ratio Impact



100% funded as of  
6/30/2036 (D-1)

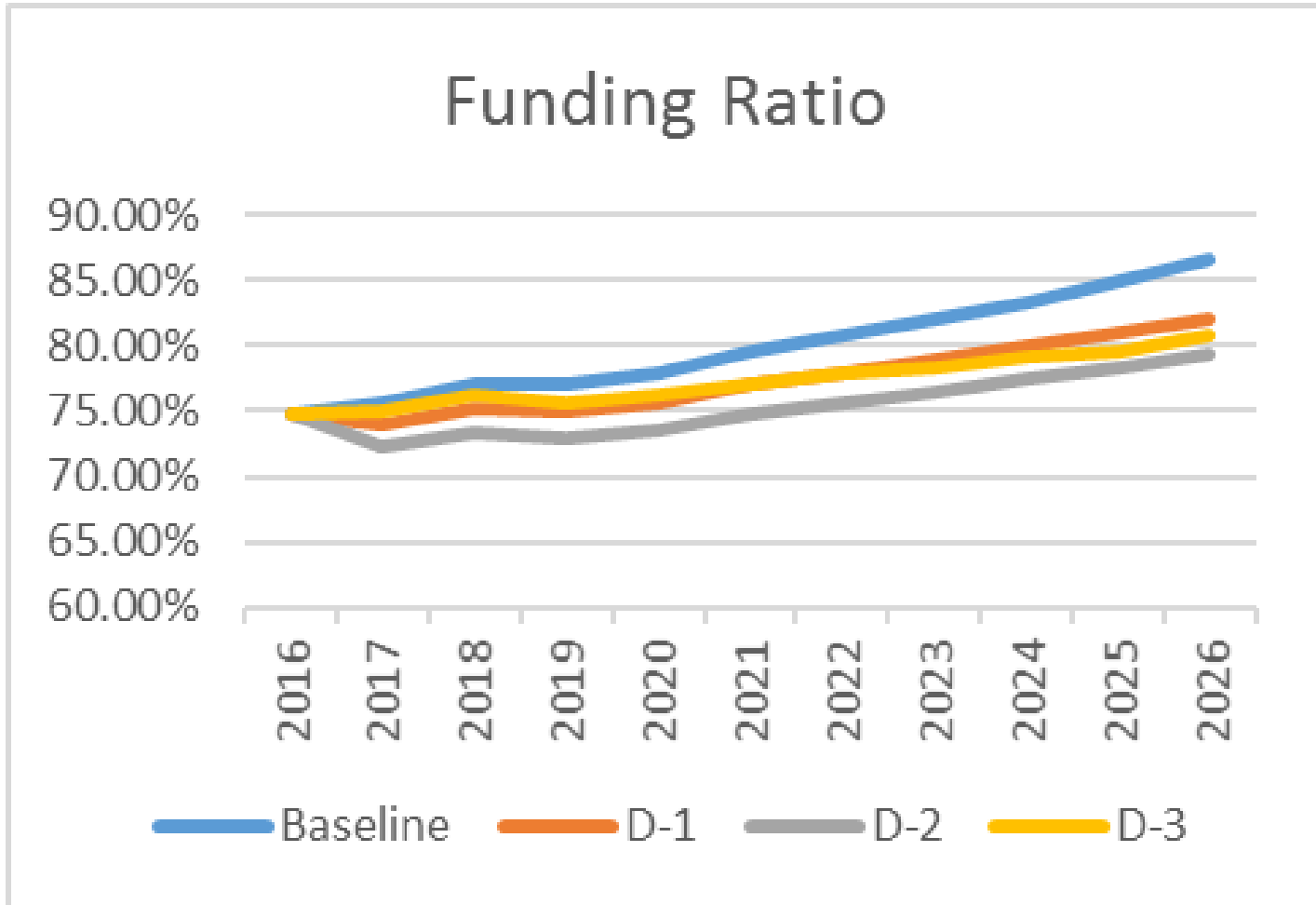


100% funded as of  
6/30/2038 (D-2)



100% funded as of  
6/30/2036 (D-3)

# Funding Ratio Combined



# ***COLA's Analysis***



# Scenario Descriptions

C-1: 3% COLA effective 7/1/2018; no future COLA's

C-2: 1% COLA effective 7/1/2018; no future COLA's

C-3: 3% COLA effective 7/1/2018 on pension income  $\leq$ \$30,000; no future COLA's

C-4: 1% COLA effective 7/1/2018, 7/1/2019, 7/1/2020, 7/1/2021, 7/1/2022; no future COLA's

C-5: prefund and pay 1% COLA every year beginning 7/1/2019

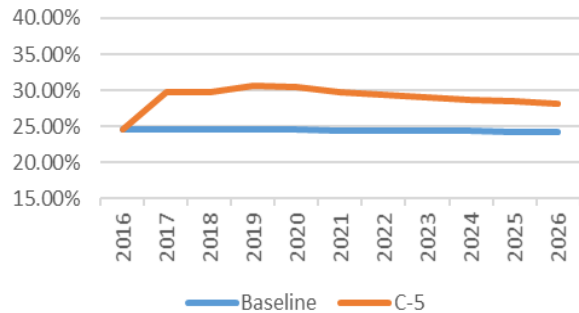
C-6: one-time 3% "13<sup>th</sup> check" effective 7/1/2018 on pension income  $\leq$ \$30,000; no future COLA's

# Prefunding (“C-5”)

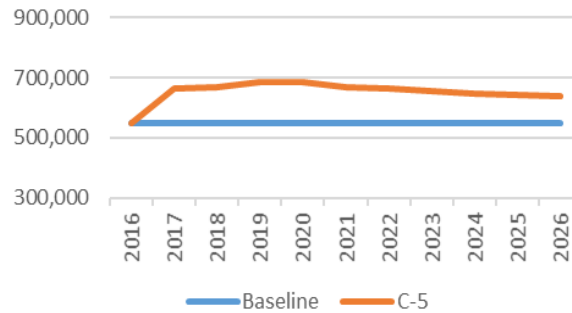
C-5: Prefund and pay 1% COLA each year beginning 7/1/2019

Val Year	OP/NP	diff	GSEPS	diff	Est ADEC	diff	Fund Rt	diff
6/30/2016	24.66%	n/a	21.66%	n/a	547,677	n/a	74.74%	n/a
6/30/2017	29.79%	5.17%	26.32%	4.66%	664,123	116,550	70.52%	-5.18%
6/30/2018	29.81%	5.23%	26.38%	4.72%	667,060	118,585	71.34%	-5.68%
6/30/2019	30.57%	6.03%	27.18%	5.52%	686,759	138,080	70.96%	-6.14%
6/30/2020	30.50%	6.00%	27.14%	5.48%	686,183	137,354	71.76%	-6.06%
6/30/2021	29.76%	5.31%	26.45%	4.79%	669,232	120,585	73.49%	-6.08%
6/30/2022	29.41%	5.00%	26.14%	4.48%	661,907	113,111	74.75%	-5.98%
6/30/2023	29.05%	4.68%	25.82%	4.16%	654,392	105,268	76.10%	-5.89%
6/30/2024	28.75%	4.41%	25.55%	3.89%	648,155	98,765	77.45%	-5.93%
6/30/2025	28.45%	4.14%	25.28%	3.62%	641,554	92,199	78.86%	-6.05%
6/30/2026	28.16%	3.88%	25.02%	3.36%	637,970	88,810	80.35%	-6.26%

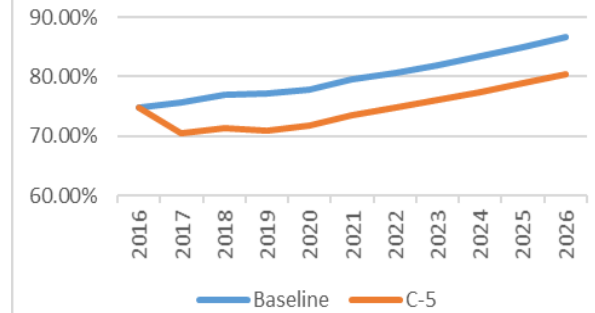
OP\_NP



\$ ADEC



Funding Ratio



Additional UAAL: \$1.261 billion  
 100% funded ratio projected as of 6/30/2035 valuation

## Scenarios C-1 thru C-4, C-6

C-1: 3% COLA effective 7/1/2018; no future COLA's

C-2: 1% COLA effective 7/1/2018; no future COLA's

C-3: 3% COLA effective 7/1/2018 on pension income  $\leq$ \$30,000; no future COLA's

C-4: 1% COLA effective 7/1/2018, 7/1/2019, 7/1/2020, 7/1/2021, 7/1/2022; no future COLA's

C-6: one-time 3% "13<sup>th</sup> check" effective 7/1/2018 on pension income  $\leq$ \$30,000; no future COLA's

Changes to the ADEC are minor ( $<$ \$200,000 per year) under each of these scenarios relative to the baseline

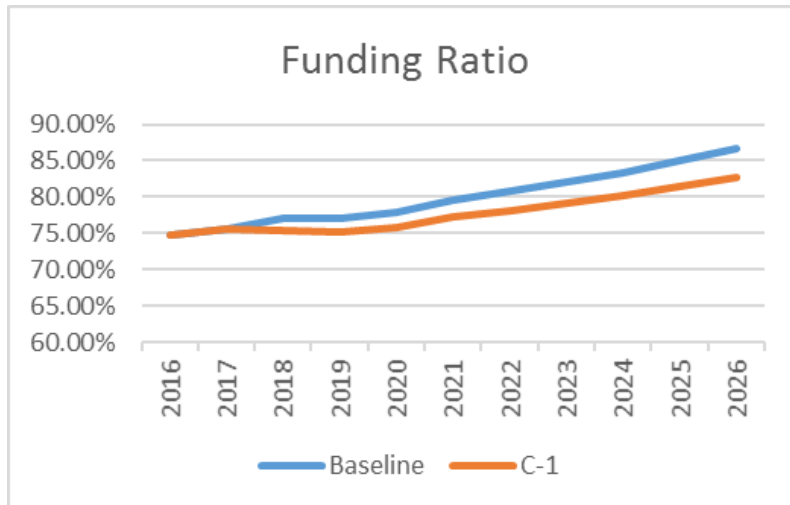
The costs are evident in the additional UAAL added to the system, which leads to changes in the funding ratio and additional time needed to reach 100% funding

# Funding Ratio Impact

C-1: 3% COLA effective 7/1/2018

Additional UAAL: \$372 million (25-year amortization)

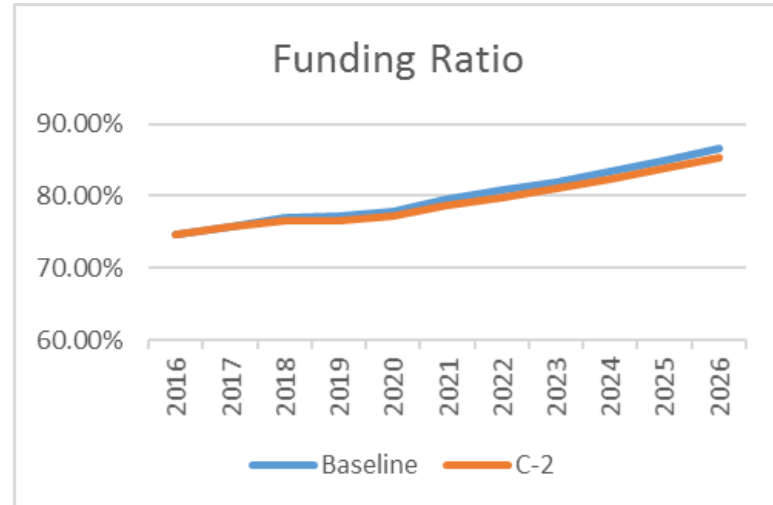
100% funding: 6/30/2034 (+2 years)



C-2: 1% COLA effective 7/1/2018

Additional UAAL: \$124 million (25-year amortization)

100% funding: 6/30/2033 (+1 year)

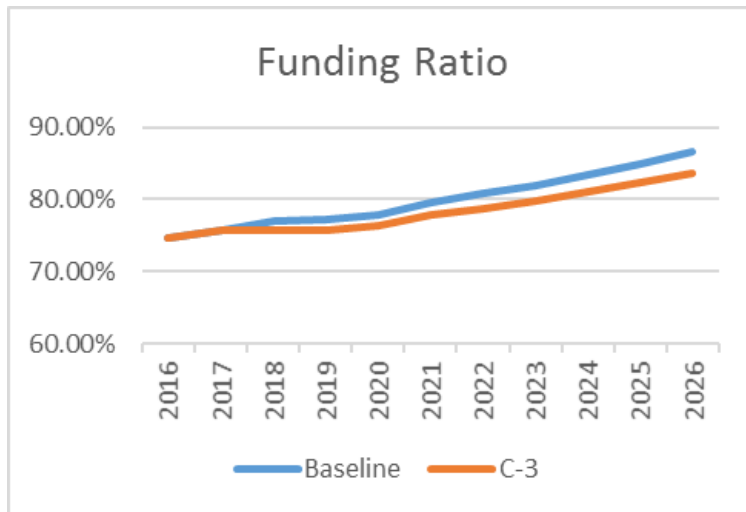


# Funding Ratio Impact

C-3: 3% COLA effective 7/1/2018 on pension income  $\leq$  \$30,000

Additional UAAL: \$279 million (25-year amortization)

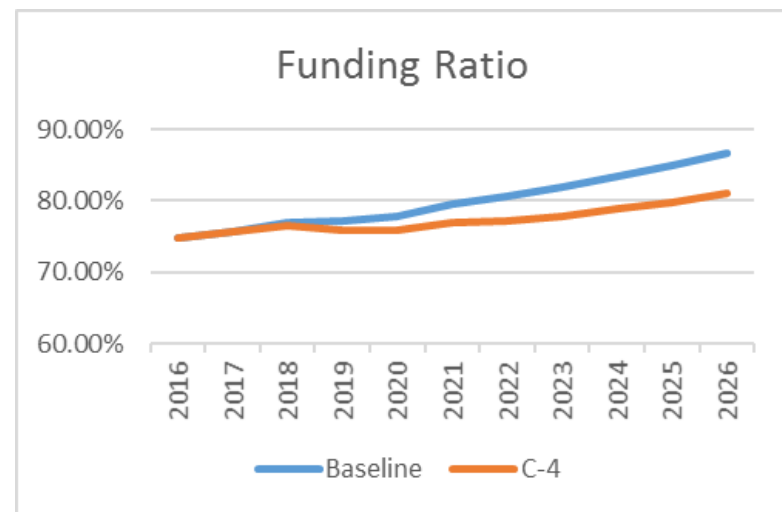
100% funding: 6/30/2034 (+2 years)



C-4: 1% COLA effective 7/1/18, 19, 20, 21, 22

Additional UAAL: ~\$124 million X 5 (25-year amortization)

100% funding: 6/30/2035 (+3 years)



C-6: one-time 3% “13<sup>th</sup> check” effective 7/1/18 on pension income  $\leq$  \$30,000

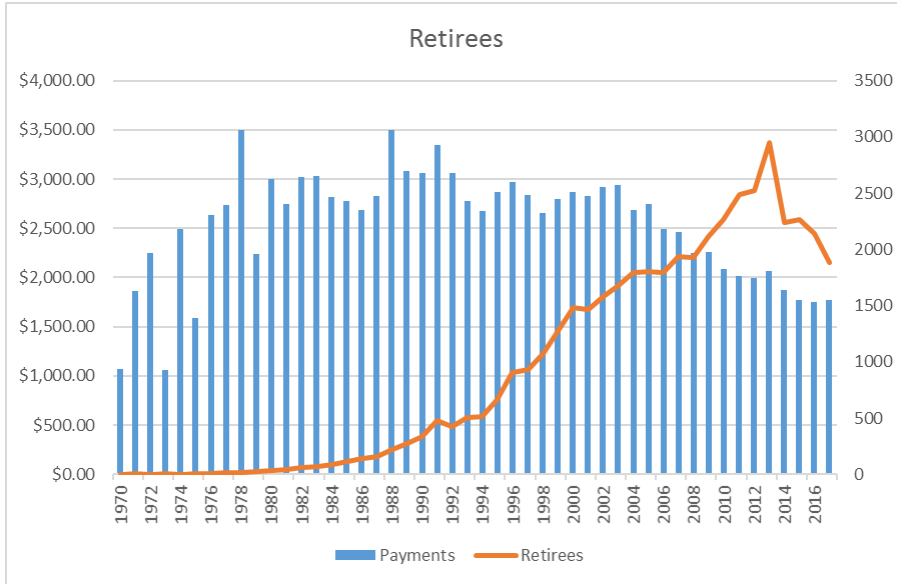
Additional UAAL: \$29 million

De minimus impact on ADEC and funding ratio

100% funding: 6/30/2032 (same year)

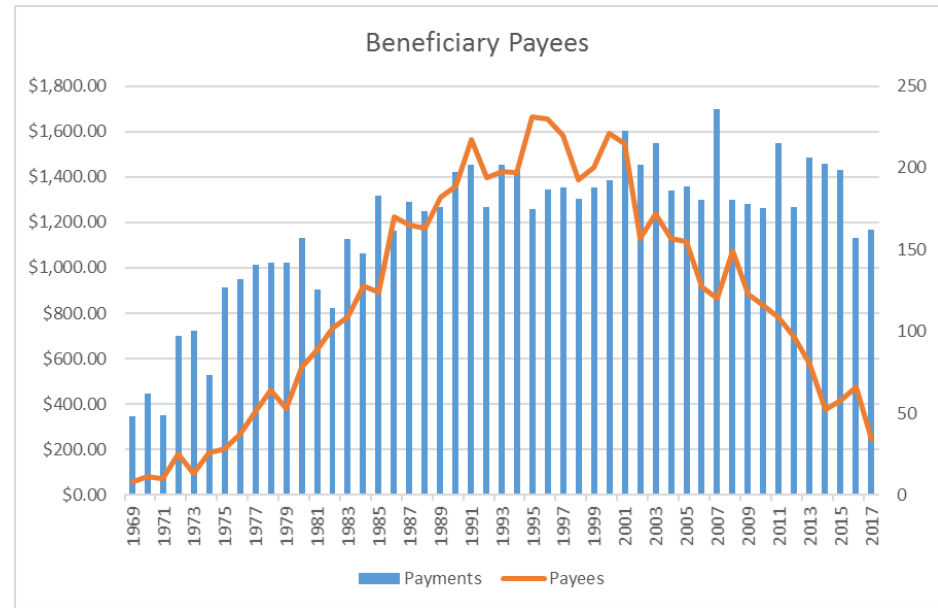
# ***Additional Data***

# Payee Information

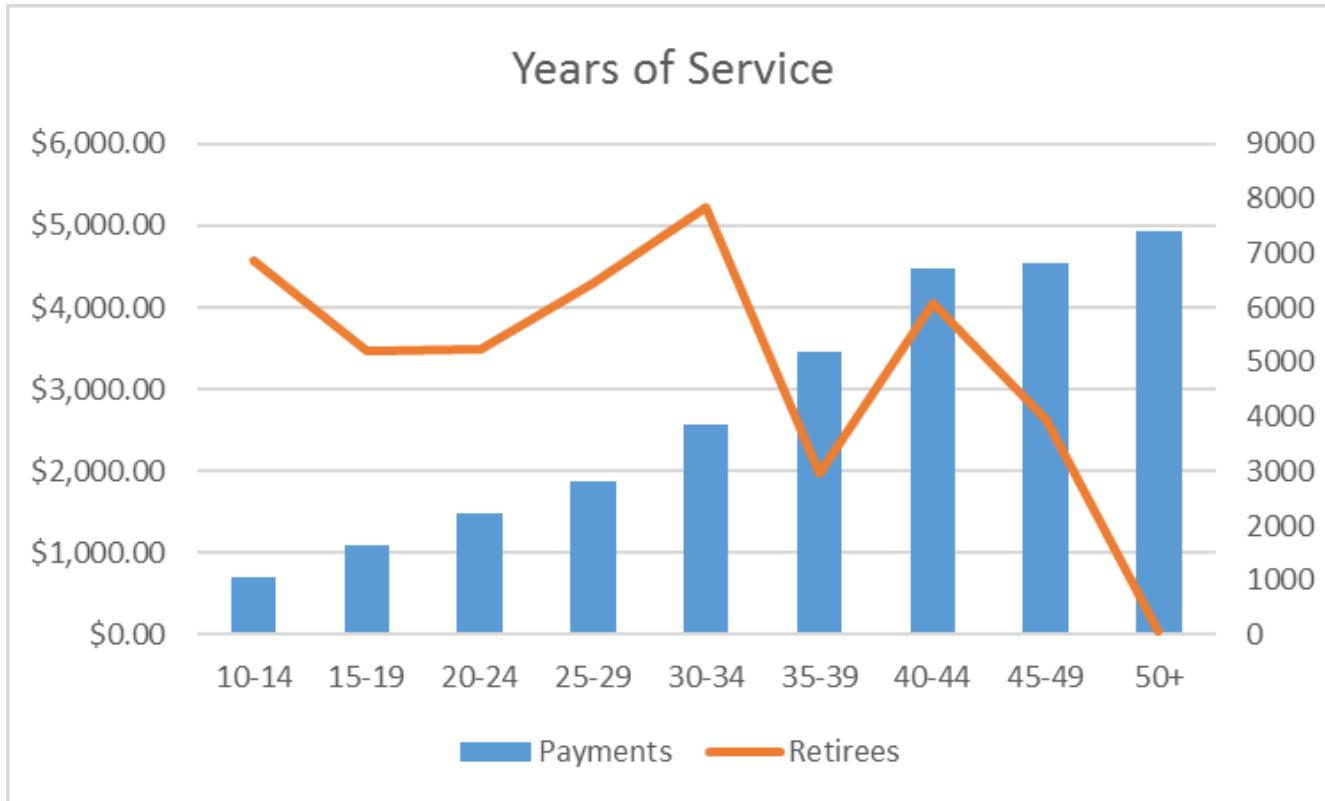


Retirees: 44,677

Beneficiary Payees: 5,950



# Payee Information

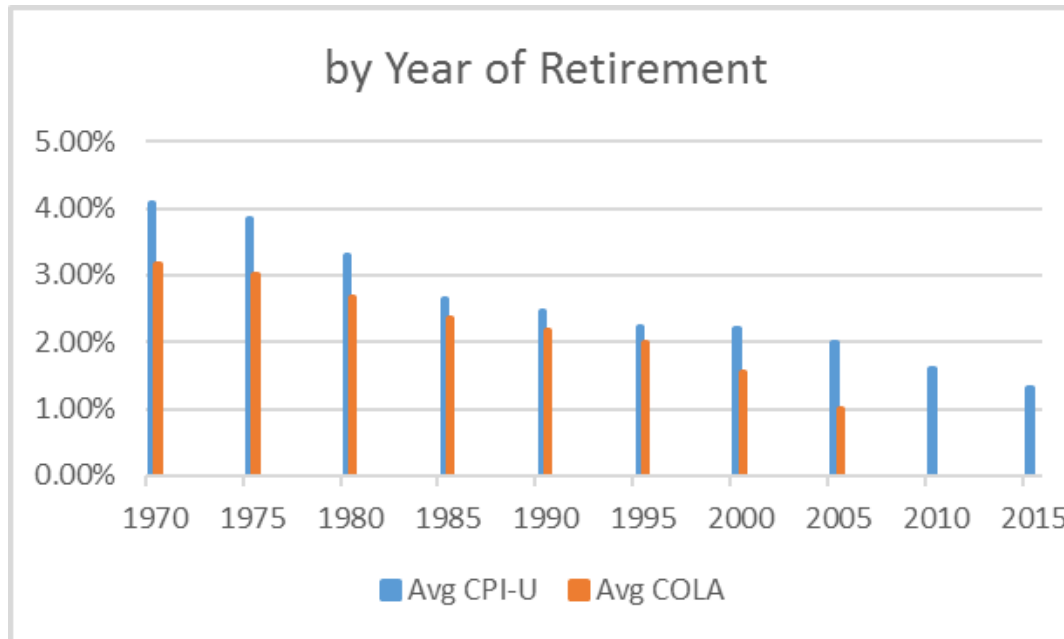


< 30 YOS: 23,735

>= 30 YOS: 20,870

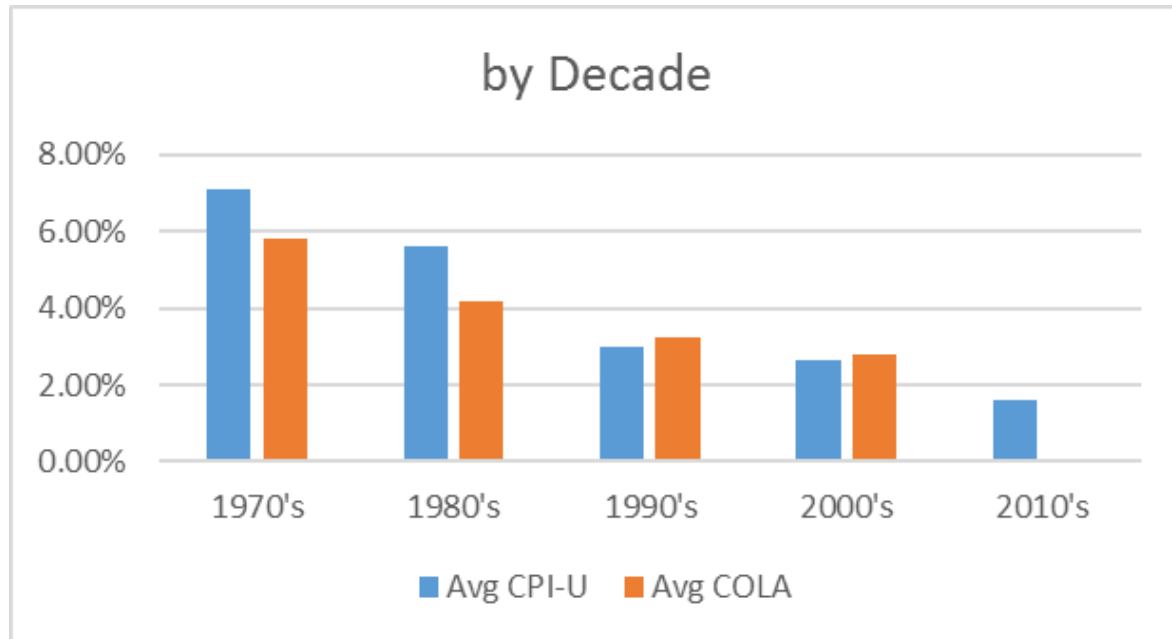


# Inflation and COLA's



<u>Ret. Year</u>	<u>Avg CPI-U</u>	<u>Avg COLA</u>	<u>diff</u>
1/1/1970	4.08%	3.18%	-0.90%
1/1/1975	3.85%	3.01%	-0.84%
1/1/1980	3.30%	2.66%	-0.64%
1/1/1985	2.65%	2.36%	-0.29%
1/1/1990	2.47%	2.18%	-0.29%
1/1/1995	2.22%	2.00%	-0.22%
1/1/2000	2.19%	1.56%	-0.63%
1/1/2005	2.00%	1.00%	-1.00%
1/1/2010	1.61%	0.00%	-1.61%
1/1/2015	1.32%	0.00%	-1.32%

# Inflation and COLA's



<u>Decade</u>	<u>Avg CPI-U</u>	<u>Avg COLA</u>	<u>diff</u>
1970's	7.07%	5.82%	-1.25%
1980's	5.61%	4.16%	-1.45%
1990's	2.97%	3.24%	0.27%
2000's	2.66%	2.80%	0.14%
2010's	1.61%	0.00%	-1.61%

# ***Next Steps***

## *Next Steps*

- Currently working on draft actuarial valuation reports
- Special Board meetings (all systems): propose for March 15, 2018, after Investment Committee meeting
  - Consider changes to the Funding policies for each system
- Annual Board meetings (all systems): April 19, 2018
  - Review and approve valuation reports
  - Consider payment of COLA's or other post-retirement adjustments
- I'm available, as always, to answer questions

# *Questions*