Segal Consulting

University of California Retirement Plan (UCRP)

JULY 1, 2019 VALUATION PRESENTATION

Completed by Segal Consulting San Francisco

UCRS Advisory Board
November 22, 2019

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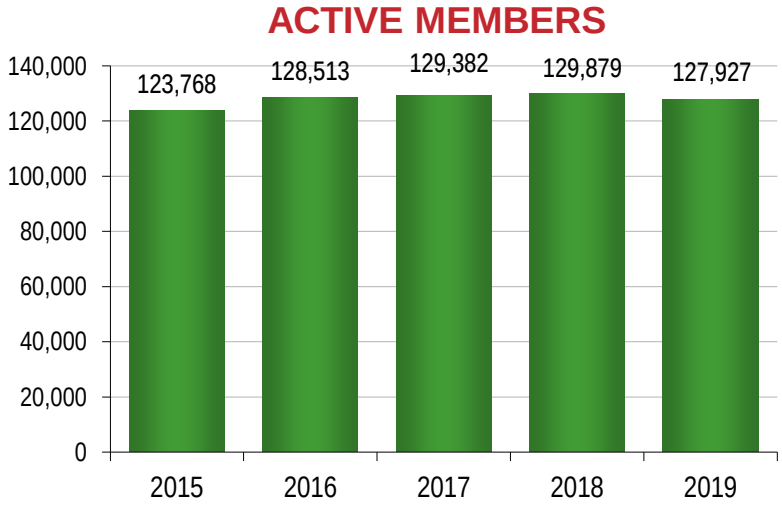
Highlights of 2019 Actuarial Valuation

- Experience Study
  - Regents approved changes in actuarial assumptions primarily as a result of recommendations from the 2014 through 2018 Actuarial Experience Study
  - Most significant changes were:
    - Reduction in investment return assumption from 7.25% to 6.75%
    - Changes in mortality assumption, including use of a generational projection
  - Impact on valuation results:
    - 3.1% of pay increase in Normal Cost
    - $7.5 billion increase in UAAL
    - 8.20% of pay increase in total funding policy contribution rate
- In September 2019 Regents approved increase in employer contribution rate of 0.50% of pay per year, for 6-years beginning July 1, 2020, for a total increase of 3.0% of pay

Highlights of 2019 Actuarial Valuation

- Approximately 6.0% market value return for 2018/19
  - Actuarial value return of 6.2% due to five-year smoothing of gains/losses
  - Market value of $70.3 billion exceeds actuarial value by $0.1 billion
- Changes in key valuation results:
  - Decrease in funded ratio (87% to 80%)
  - Increase in UAAL ($10.3 to $17.6 billion)
  - Increase in total funding policy contribution (26.3% to 33.8% of pay)
- Decrease in funded ratio and increase in UAAL and total funding policy contribution rate primarily due to changes in actuarial assumptions
- $500 million STIP to UCRP transfer occurred during 2018/19
  - Transfer is reflected in the valuation results
  - Represents an amount that along with actual contributions results in full funding of the total funding policy contributions for 2018/19

UCRP Demographics

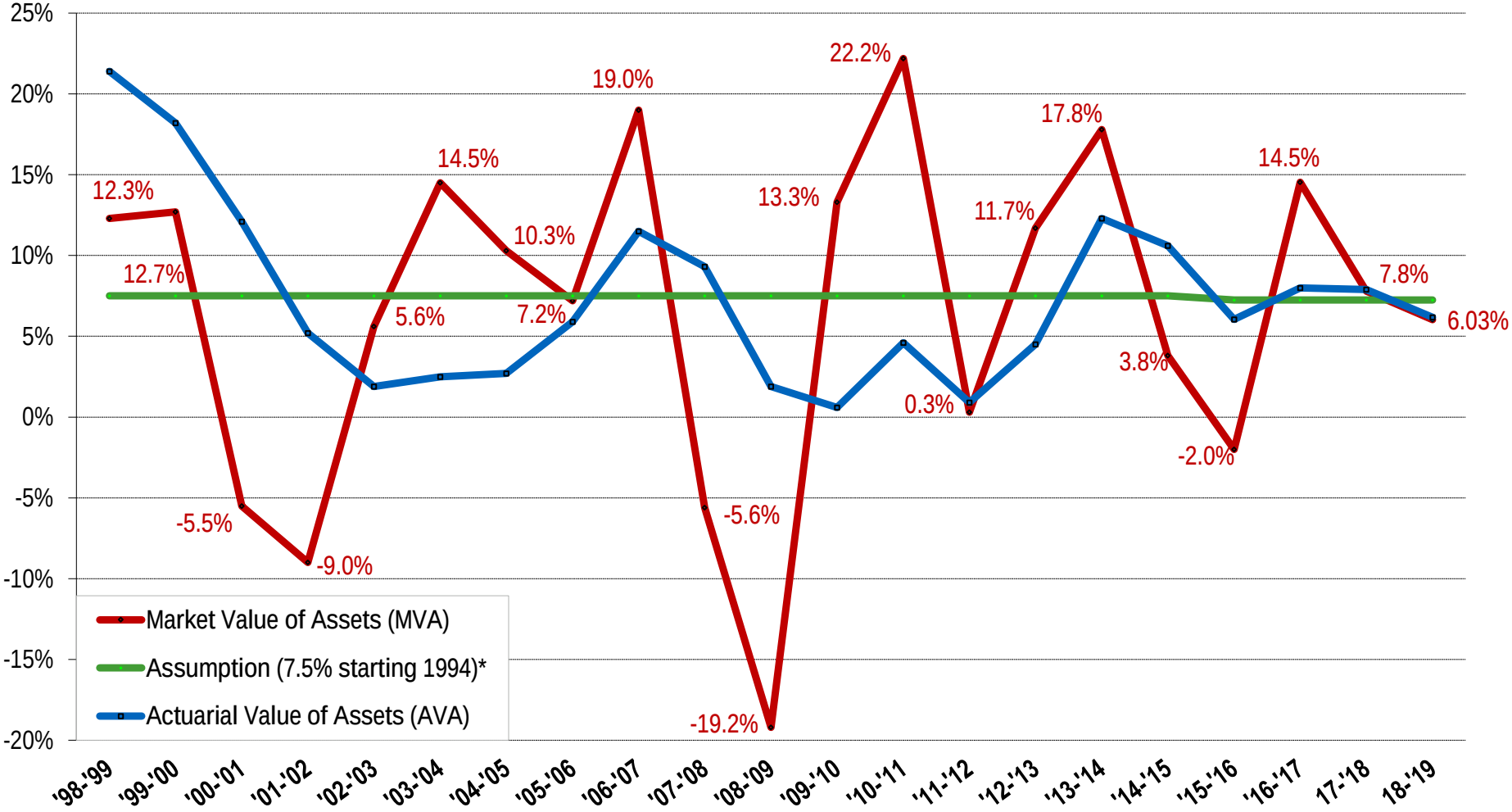


	2019	2018
Active Members	**127,927**	**129,879**
• Average Age	45.0	44.8
• Average Service	9.4	9.4
• Average Compensation	$104,250	$99,707

	2019	2018
Retired Members (in Pay Status)	**79,084**	**75,924**
• Average Age	71.9	71.7
• Average Annual Benefit	$44,052	$42,890

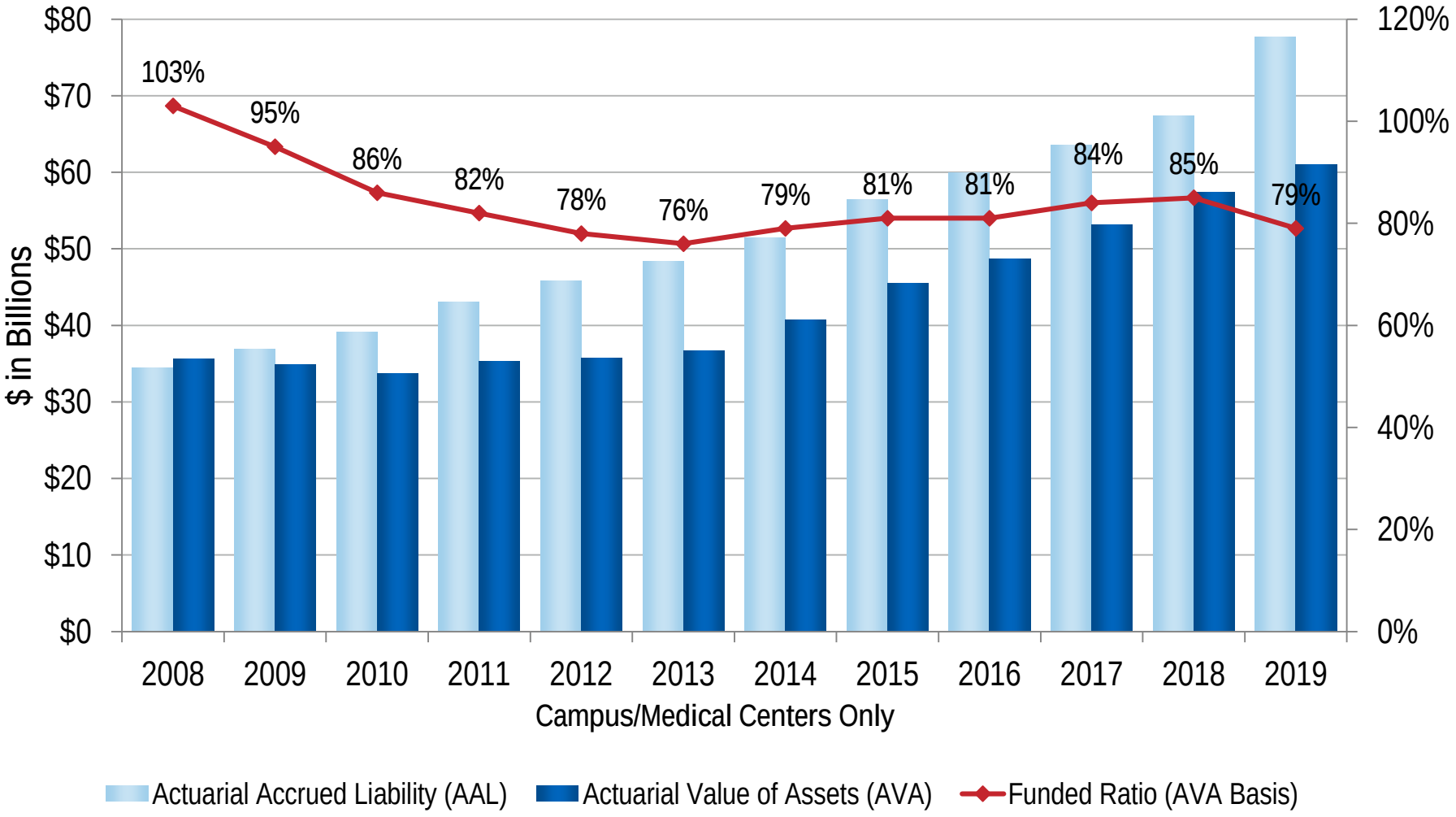
	2019	2018
Terminated Vested Members	**36,463**	**35,647**

UCRP Investment Rates of Return



***Investment rate of return assumption changed to 7.25% per annum starting July 1, 2015 and changed to 6.75% per annum starting July 1, 2019.**

UCRP Historical Funded Status and Funded Ratio (5 year smoothing) as of July 1



UCRP Valuation Results ($ in billions)

	07/01/2019	07/01/2018
Market Value of Assets (MVA)	$70.3	$66.8
Actuarial Value of Assets (AVA)	$70.2	$66.6
Actuarial Accrued Liability (AAL)	$87.8	$76.9
Unfunded AAL – AVA Basis (AAL less AVA)	$17.6	$10.3
Unfunded AAL – MVA Basis (AAL less MVA)	$17.5	$10.1
Funded Percentage (AVA Basis)	80%	87%
Funded Percentage (MVA Basis)	80%	87%
Normal Cost (beginning of year)	$2.5	$2.0
Normal Cost (% of pay, middle of year)	20.87%	17.90%
Funding Policy Contributions (% of pay)*	33.76%	26.33%

* Campus and Medical Centers Segment only

Future Expectations

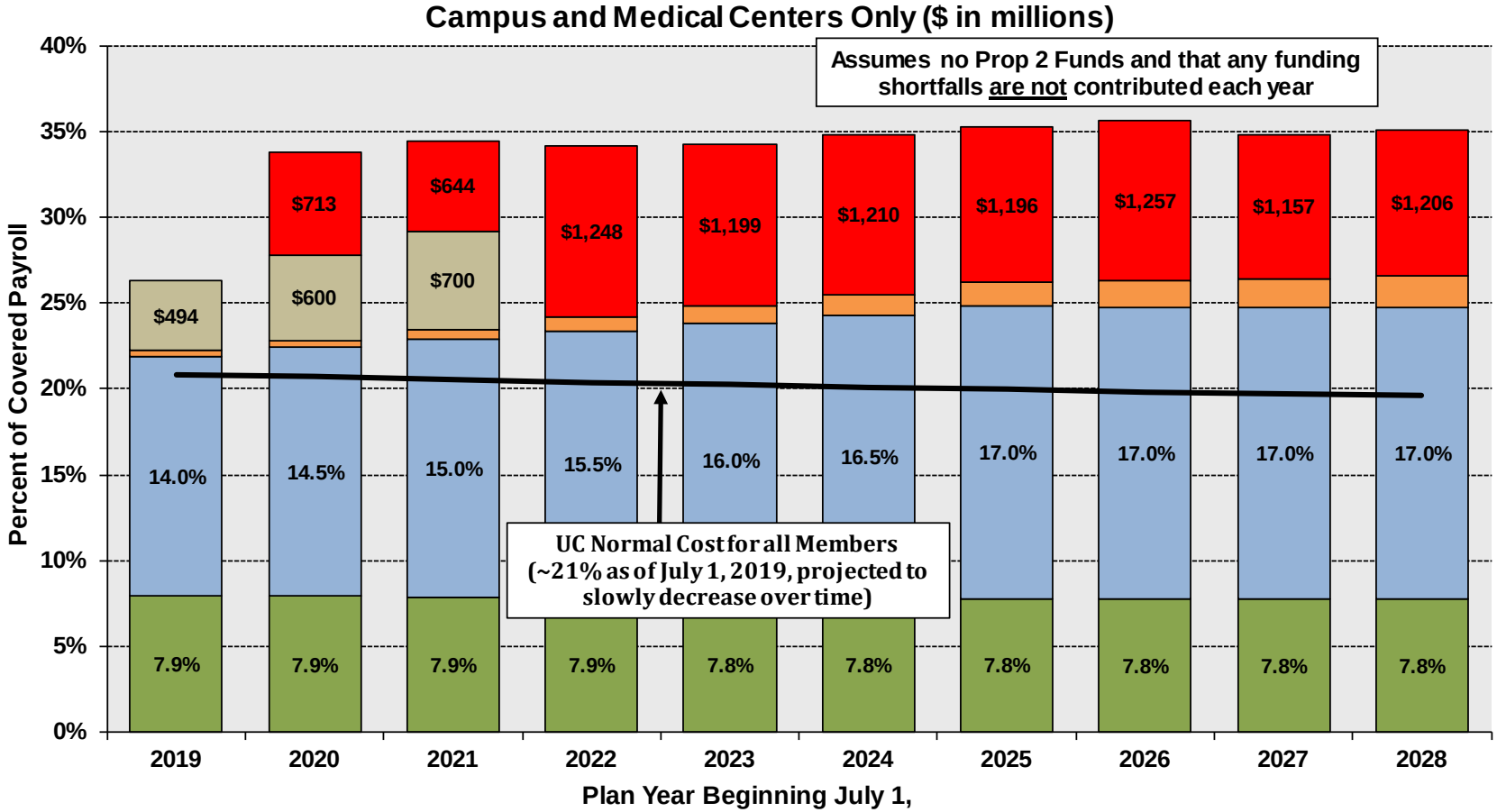
- Projections are included in valuation report (Appendix A)
  - Compares Approved and Total Funding Policy Contributions
  - Shows how current shortfall increases future Funding Policy Contributions
  - No increases in member contribution rates are reflected
- Projected funded status
  - Assets, liabilities, funded ratio
  - Assuming only Approved Contributions are made
  - Assuming full Total Funding Policy Contributions are made
- Scenario #1
  - Illustrates what would happen if all assumptions are met
  - 6.75% market value return per year beginning July 1, 2019
  - 35% Savings Choice election rate

Future Expectations

- Scenario #2
  - Illustrates what would happen if market returns are unfavorable for one year
  - 0% market value return during 2018/2019
  - 35% Savings Choice election rate
- Scenario #3
  - Illustrates what would happen if more new hires elect Savings Choice
  - 6.75% market value return per year beginning July 1, 2019
  - 45% Savings Choice election rate

Projected Contribution Amounts
Campus and Medical Center Segment Only

Scenario #1: 6.75% Market Return Per Year Beginning July 1, 2019 and 35% Savings Choice Election

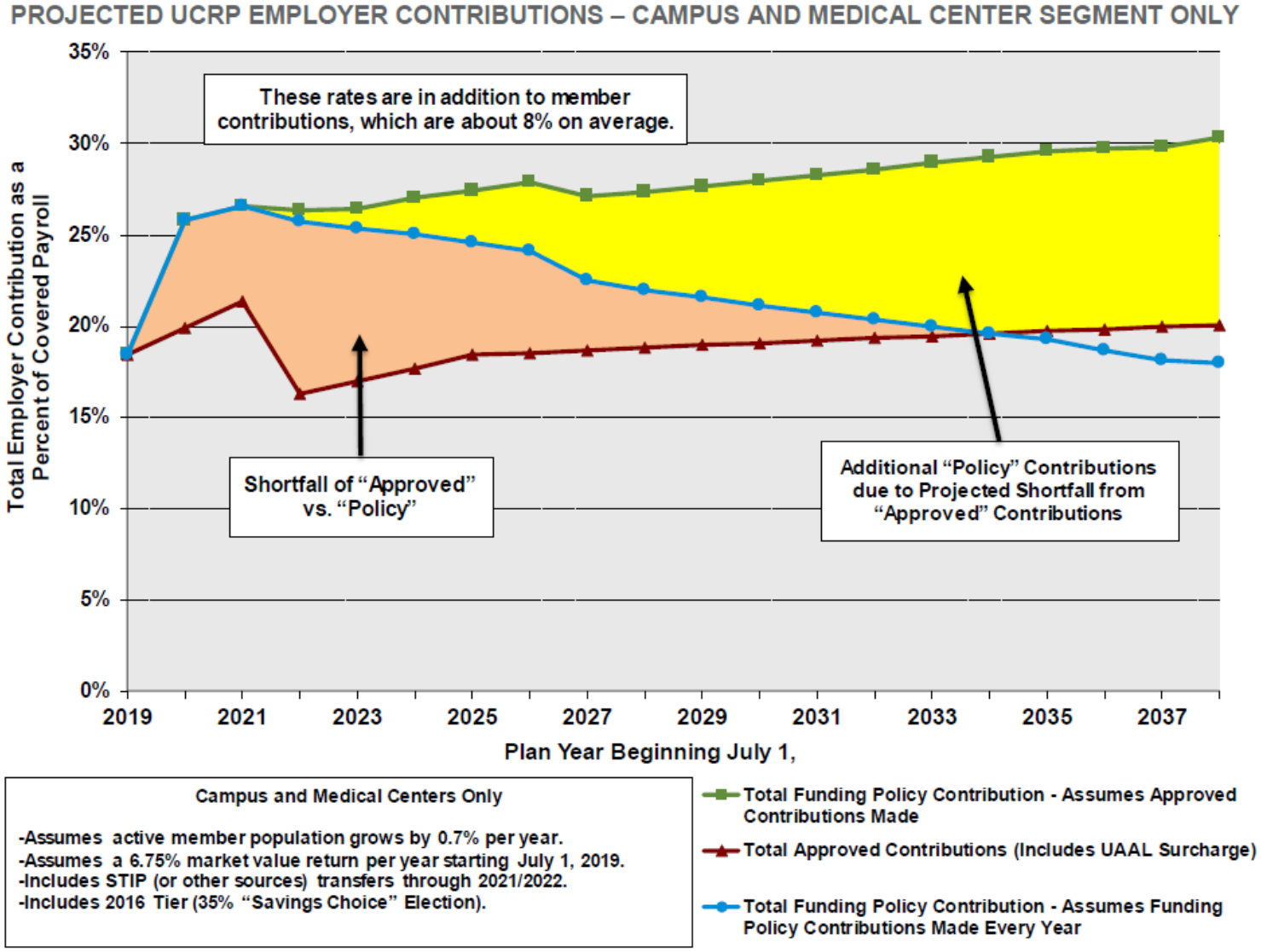


-Assumes total UCRP and Savings Choice active member population grows by 0.7% per year.
-Assumes market value return of 6.75% per year starting July 1, 2019.
-Includes adopted actuarial assumptions effective with the July 1, 2019 valuation.
-Includes employer contribution rate increases from 14% to 17% effective July 1, 2020 with a six-year phase-in.
-Includes STIP (or other sources) transfers through 2021/2022 and assumes only approved contributions are made.
-Includes 2016 Tier and a 35% Savings Choice election rate.

- Funding Policy Shortfall
- STIP Transfers
- DC UAAL Surcharge
- Employer Contribution
- Average Member Contribution
- Normal Cost

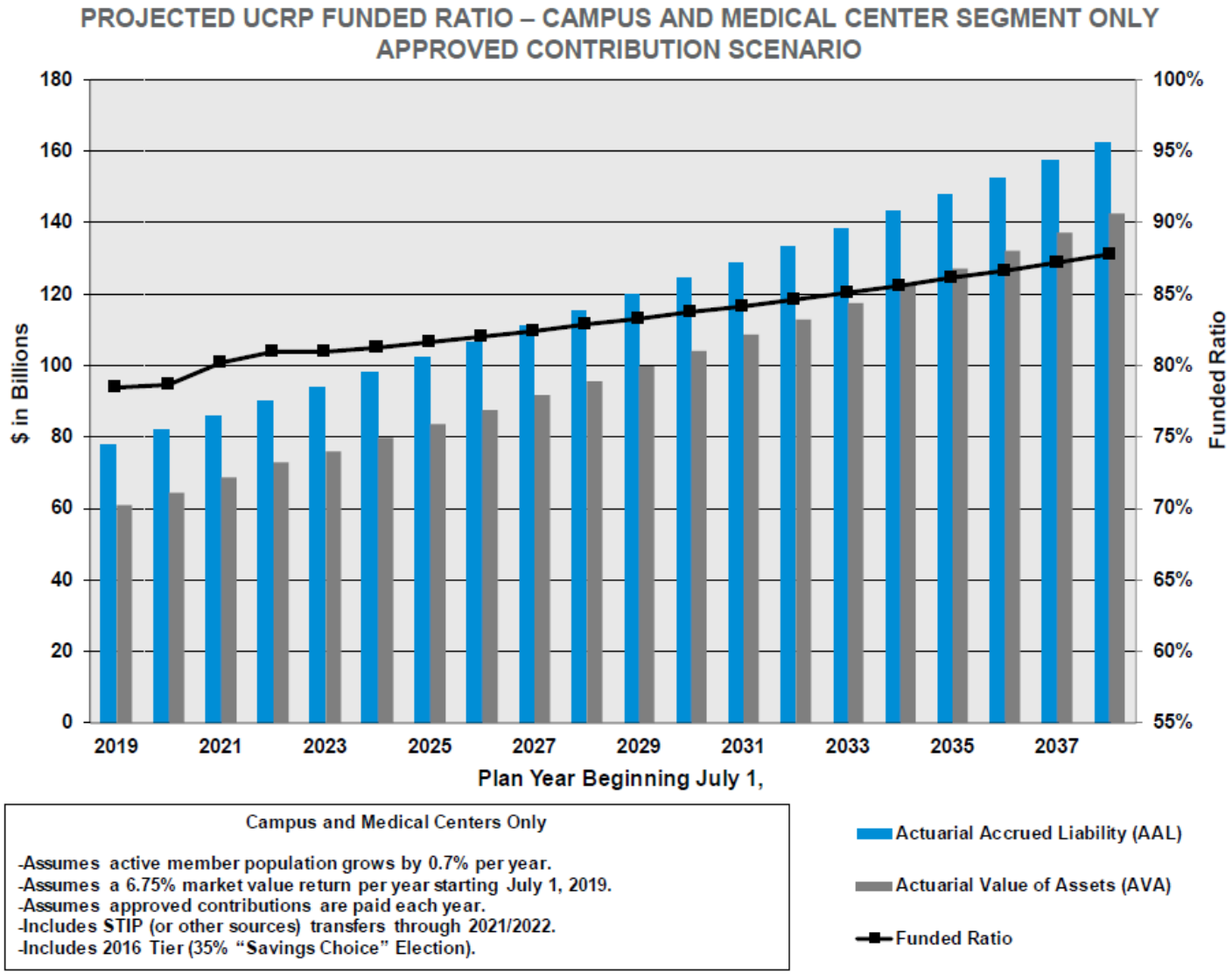
Projected UCRP Employer Contributions Campus and Medical Center Segment Only

Scenario #1: 6.75% Market Return Per Year Beginning July 1, 2019 and 35% Savings Choice Election



Projected UCRP Funded Status
Campus and Medical Center Segment Only

Scenario #1: 6.75% Market Return Per Year Beginning July 1, 2019 and 35% Savings Choice Election

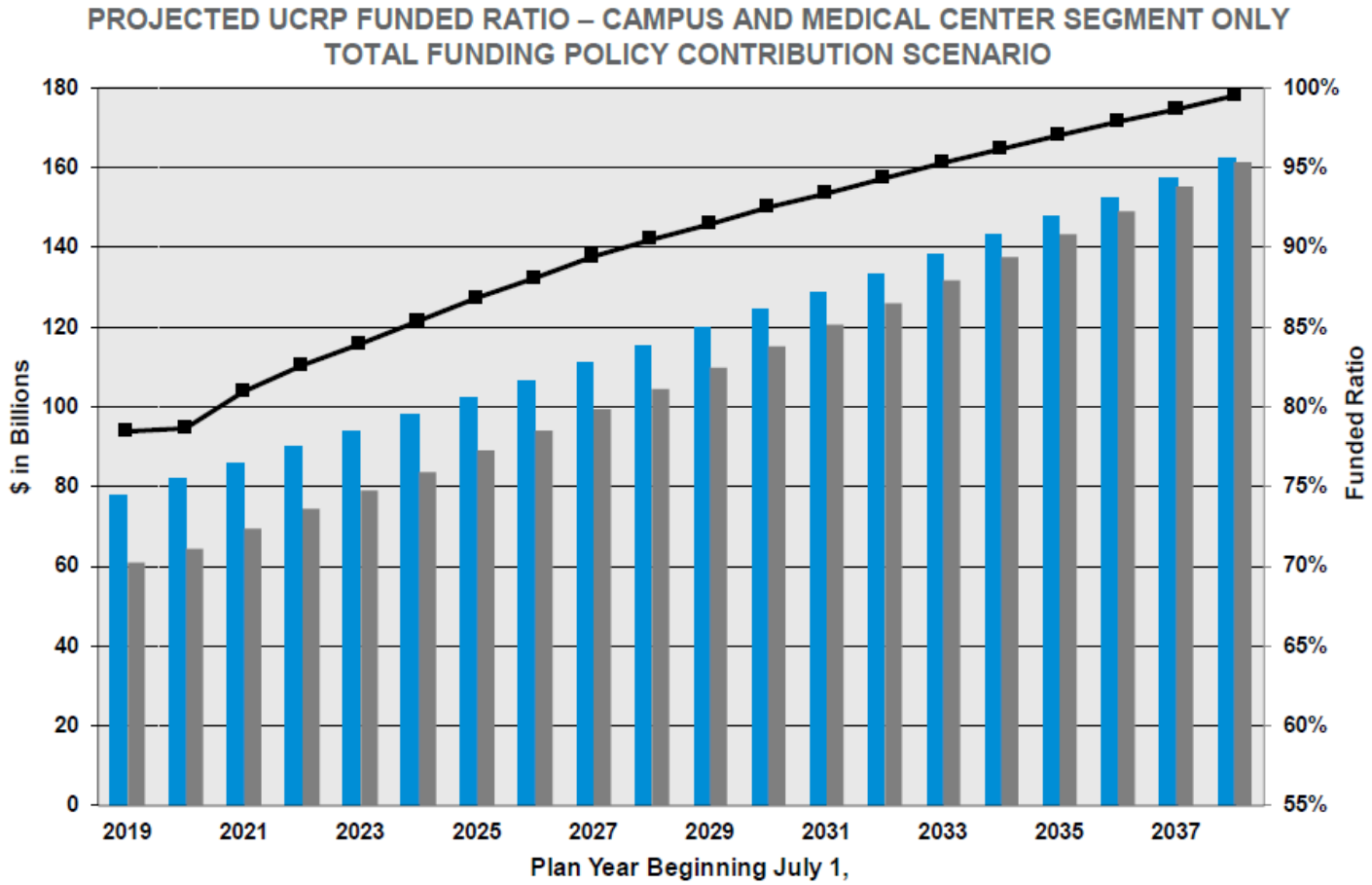


Campus and Medical Centers Only

-Assumes active member population grows by 0.7% per year.
-Assumes a 6.75% market value return per year starting July 1, 2019.
-Assumes approved contributions are paid each year.
-Includes STIP (or other sources) transfers through 2021/2022.
-Includes 2016 Tier (35% "Savings Choice" Election).

Projected UCRP Funded Status
Campus and Medical Center Segment Only

Scenario #1: 6.75% Market Return Per Year Beginning July 1, 2019 and 35% Savings Choice Election



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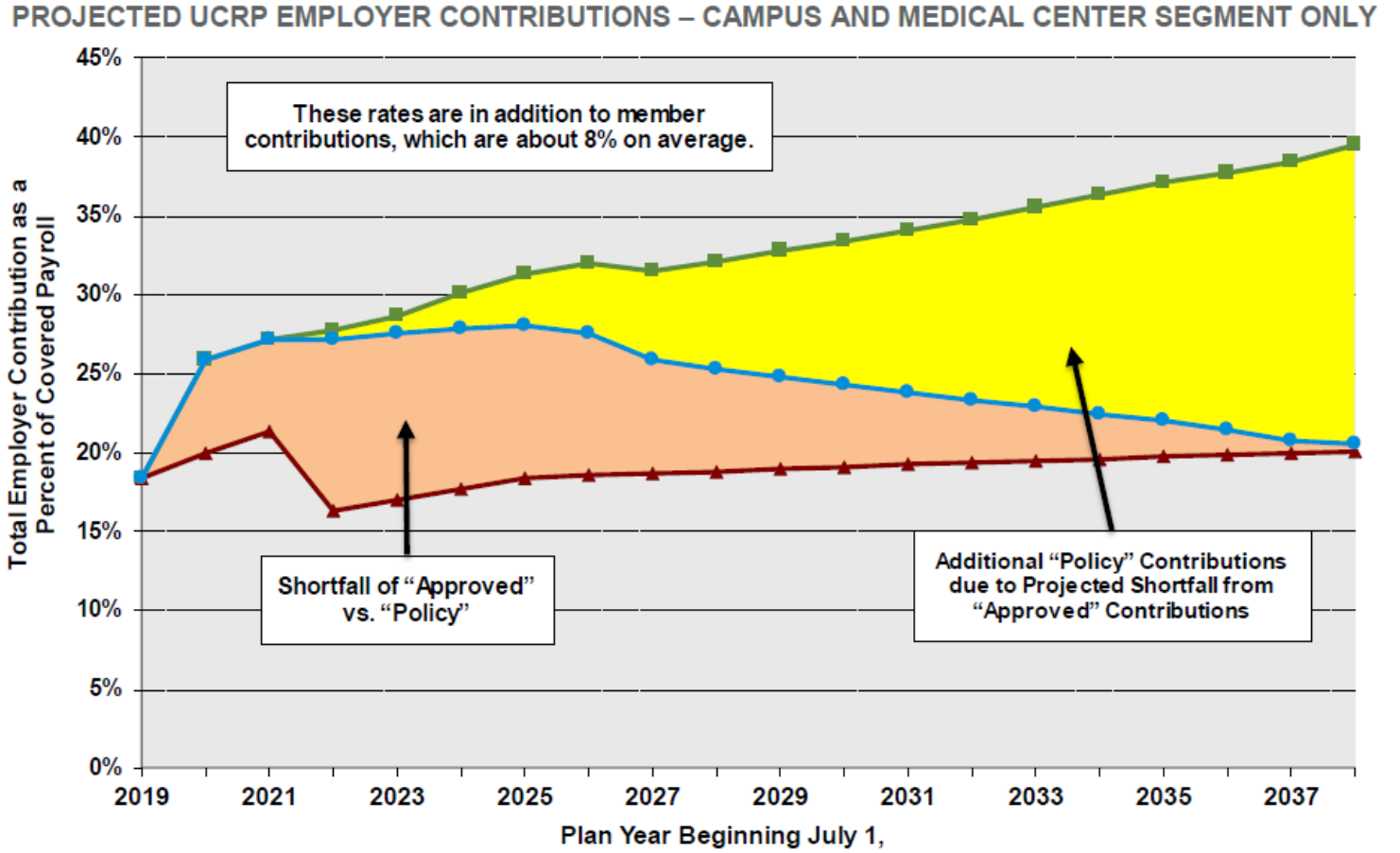
Projected UCRP Employer Contributions Campus and Medical Center Segment Only

Scenario #2: 0% Actual Market Return for 2019/2020 and 35% Savings Choice Election



Campus and Medical Centers Only

- Assumes active member population grows by 0.7% per year.
- Assumes a 0% market value return for 2019/2020 and a 6.75% market value return per year starting July 1, 2020.
- Includes STIP (or other sources) transfers through 2021/2022.
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Projected UCRP Funded Status
Campus and Medical Center Segment Only

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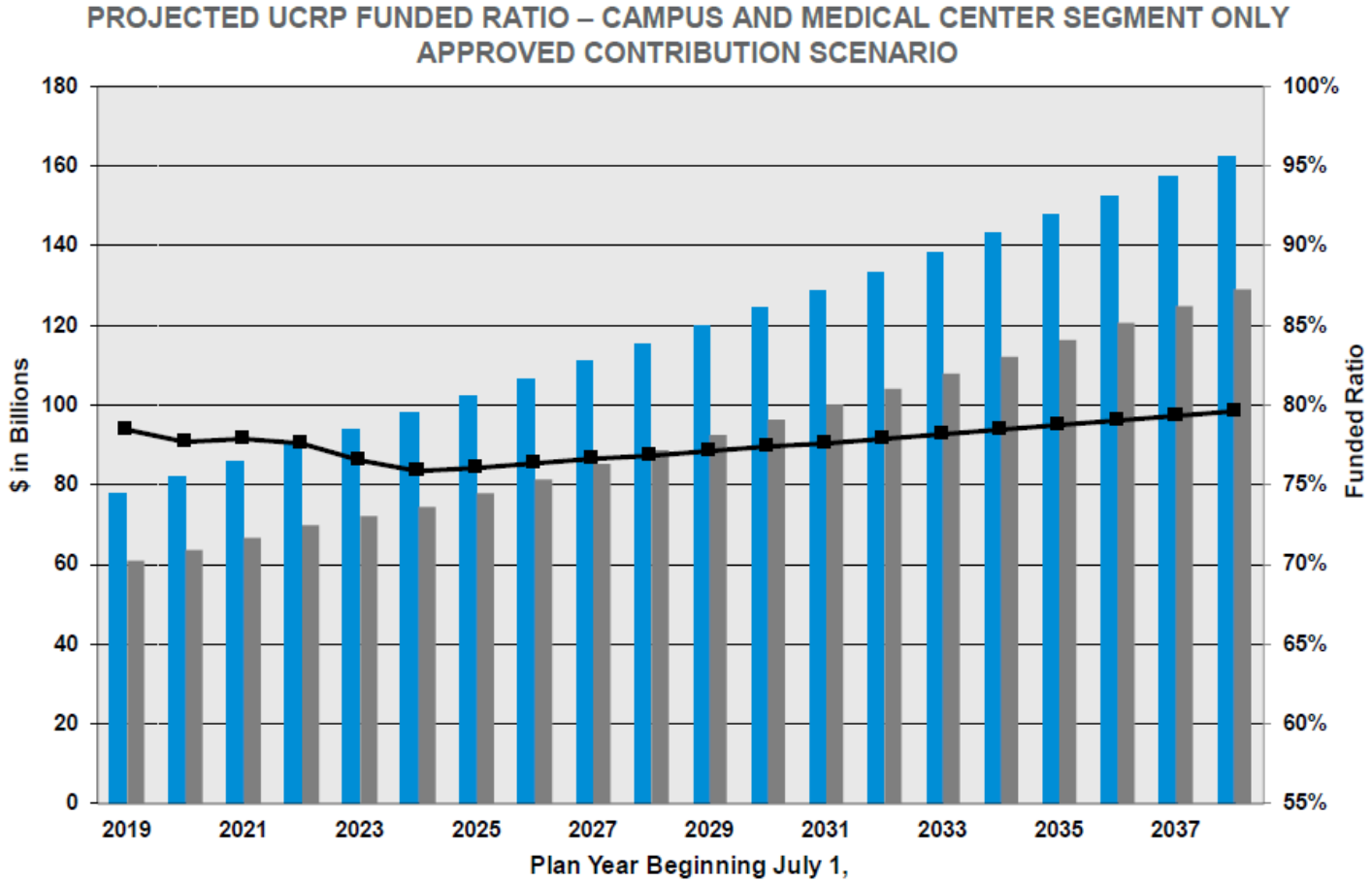

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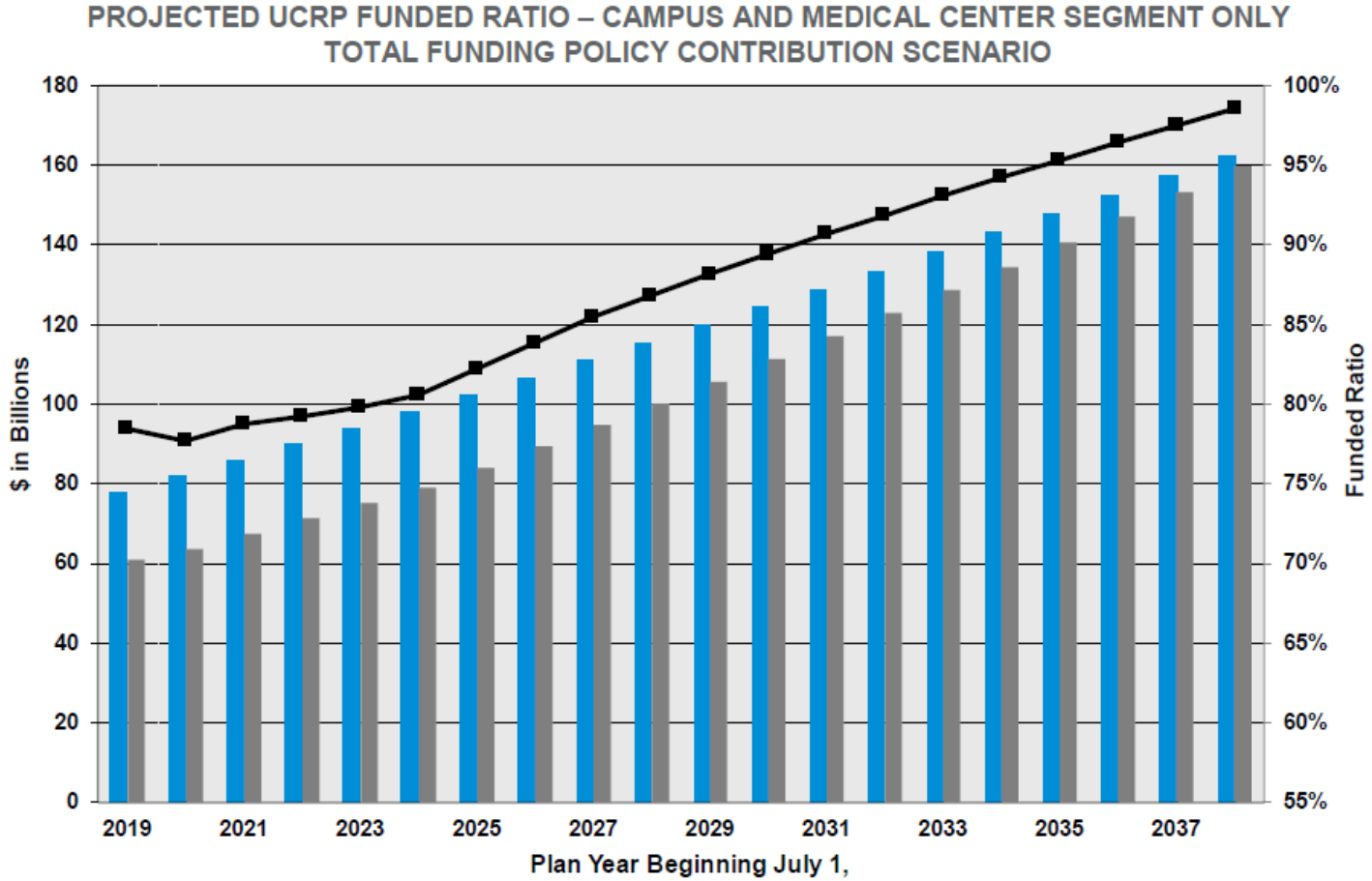

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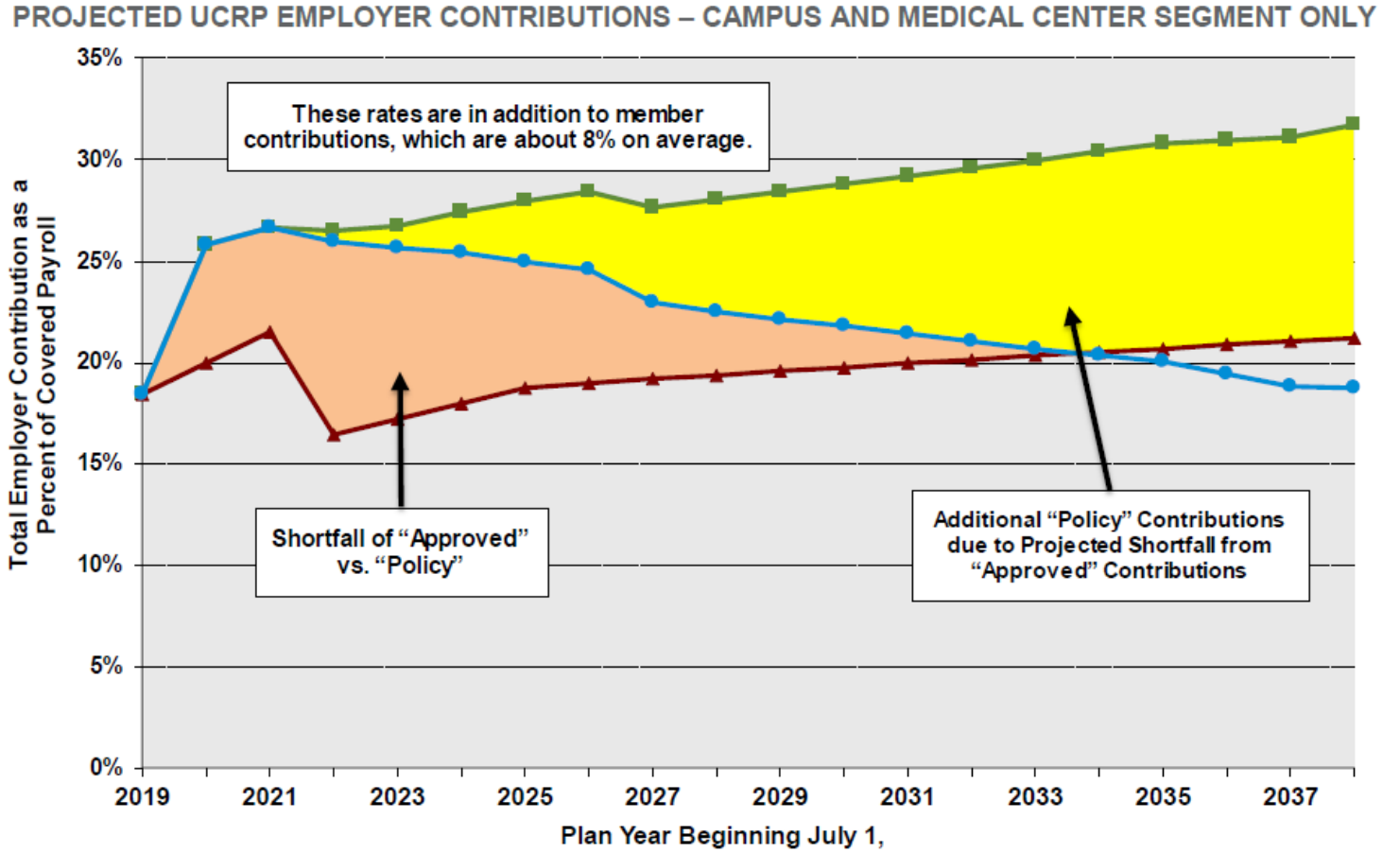
Projected UCRP Employer Contributions Campus and Medical Center Segment Only

Scenario #3: 6.75% Market Return Per Year Beginning July 1, 2019 and 45% Savings Choice Election



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- Assumes a 6.75% market value return per year starting July 1, 2019.
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Projected UCRP Funded Status
Campus and Medical Center Segment Only

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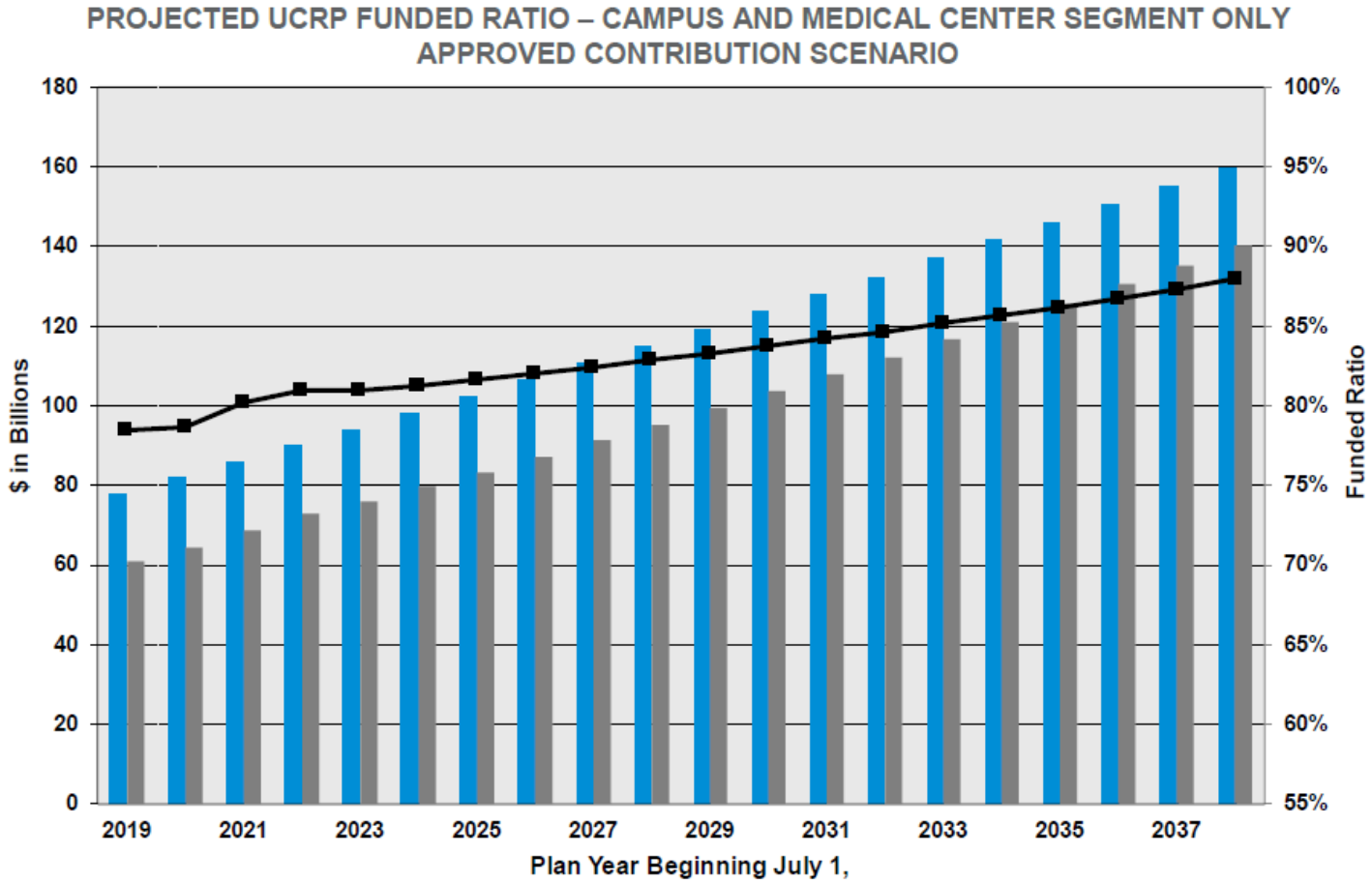

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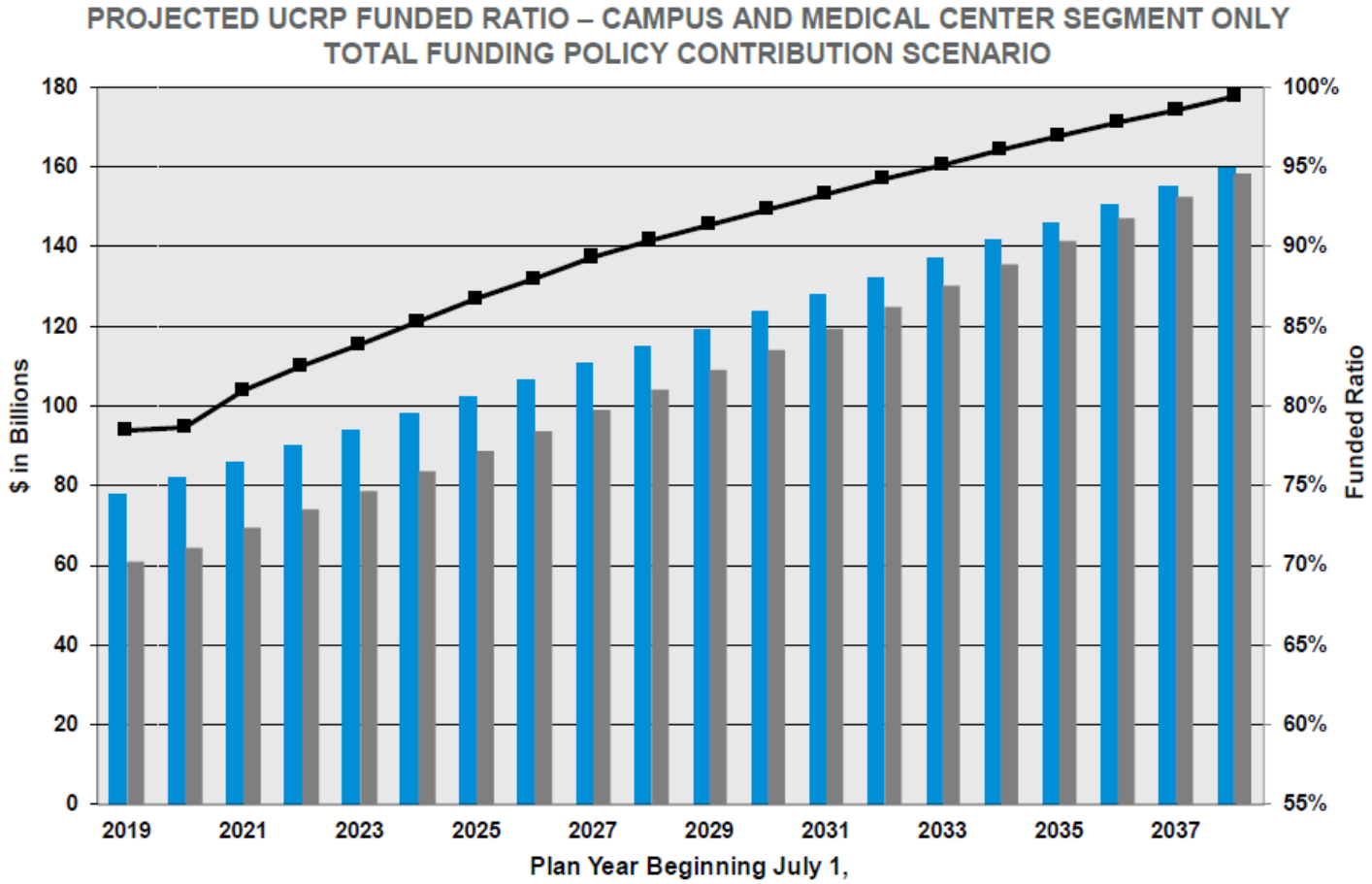

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-Includes 2016 Tier (45% "Savings Choice" Election).

Assumptions and Methods Used in Projections

- Unless otherwise noted, the cost calculations and projections were made using generally accepted actuarial practices and are based on July 1, 2019 actuarial valuation results. This includes the participant data and actuarial assumptions on which this valuation was based.
  Here are some of the important assumptions used:
  - Campus and medical center segment only.
  - Scenario #1 and #3 assumes market value returns of 6.75% per year beginning July 1, 2019. Scenario #2 assumes a 0% market value return during 2019/20 and returns of 6.75% per year thereafter.
  - Reflects choice of either UCRP 2016 Tier or defined contribution (Savings Choice) plan for all new hires on or after July 1, 2019, with the exception of new hires under CNA who enter the Modified 2013 Tier. There is an employer contribution, currently equal to 6% of compensation, towards UCRP's UAAL on behalf of employees that elect the Savings Choice plan.
  - Scenario #1 and #2 assumes an election rate of 35% Savings Choice and 65% Pension Choice for new hires on or after July 1, 2019. Scenario #3 assumes an election rate of 45% Savings Choice and 55% Pension Choice for new hires on or after July 1, 2019. Cost of choice of 0.6% of payroll added to UCRP's Normal Cost for new hires in all Scenarios.

Assumptions and Methods Used in Projections

- Assumes a 0.7% per year growth in total active member population.
- Transfers from STIP of up to $500 million in 2019/20, $600 million in 2020/21, and $700 million in 2021/22 are reflected in all Scenarios.
- Employer contribution rate to UCRP is equal to 14% of compensation, increasing by 0.50% per year, for six years starting Jul 1, 2020 to an ultimate rate of 17%.
- Total of UCRP employer and member contribution rates are assumed to be no greater than the Total Funding Policy Contribution rate for any year with the exception that the employer contribution rate can be no less than the member contribution rate.
- Demographics for future new entrants are assumed to be the same as those for members hired during the two years prior to July 1, 2019.

Other Information

- Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.
- All calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary who is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.