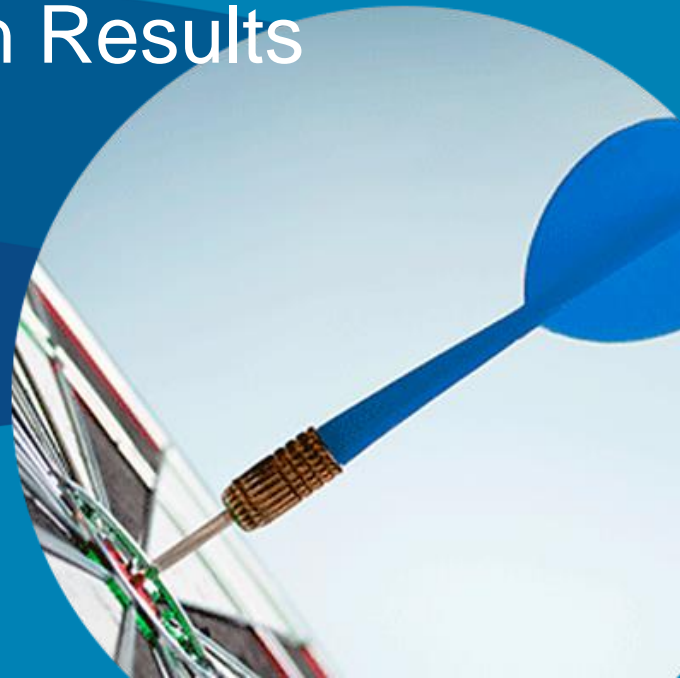


Michigan State Employees'

Retiree Health Actuarial Valuation Results as of September 30, 2018



Retiree Health Benefits

The Funding Issue

- Unlike pensions, health benefits have not been pre-funded for a long period of time
 - Pre-funding started in Fiscal Year 2013
 - Most plan sponsors nationwide have not pre-funded health benefits
 - Currently very little investment income to help pay for benefits
- Costs rise as more members retire, and health inflation outpaces general inflation
- Pre-funding contribution rates have been calculated since 1999 – but pre-funding started only recently

Full Funding Employer Contribution

- September 30, 2018 valuation
 - Establishes the employer contribution for FY 2021
 - Reflects the adoption of new assumptions in conjunction with the Experience Study covering the period October 1, 2012 through September 20, 2017
 - Including the investment return assumption which was lowered from 7.35% to 7.00%
 - Reflects investment return assumption that was lowered further from 7.00% to 6.90% in accordance with the Dedicated Gains Policy

Retiree Health Valuation Results

Full Actuarial Funding

- FY 2018 expenditures for employer paid retiree health care benefits:
 - \$402.5 million
 - Excludes retiree paid premiums
 - Excludes \$83.6 million in other governmental contributions
- FY 2018 contributions for retiree health care benefits:
 - \$688.9 million in employer contributions
 - Excludes \$83.6 million other governmental contributions
 - Excludes retiree contributions

Amounts reported above are from the 2018 SERS financial statements.

Actuarially Computed Employer Contribution FY 2021 (\$ in Millions)

- Employer contribution for FYE September 30, 2021:

	<u>FY 2021</u>
Employer Normal Cost	\$ 105.2
Amortization of UAAL ¹	<u>673.5</u>
Employer Contribution	\$ 778.7

¹Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 16 years from October 1, 2020.

- Once fully funded, the annual employer contribution requirement decreases to the normal cost

Actuarial Gain/(Loss)

	<u>Gain/(Loss)</u>
1. Premiums. Gains and losses resulting from actual premiums in valuation year versus that assumed from prior valuation.	\$ 733,135,028
2. Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	66,888,393
3. Demographic and Other. Gains and losses resulting from demographic experience, data adjustments, timing of financial transactions, etc.	<u>124,278,002</u>
4. Composite Gain/(Loss) During Year.	\$ 924,301,423

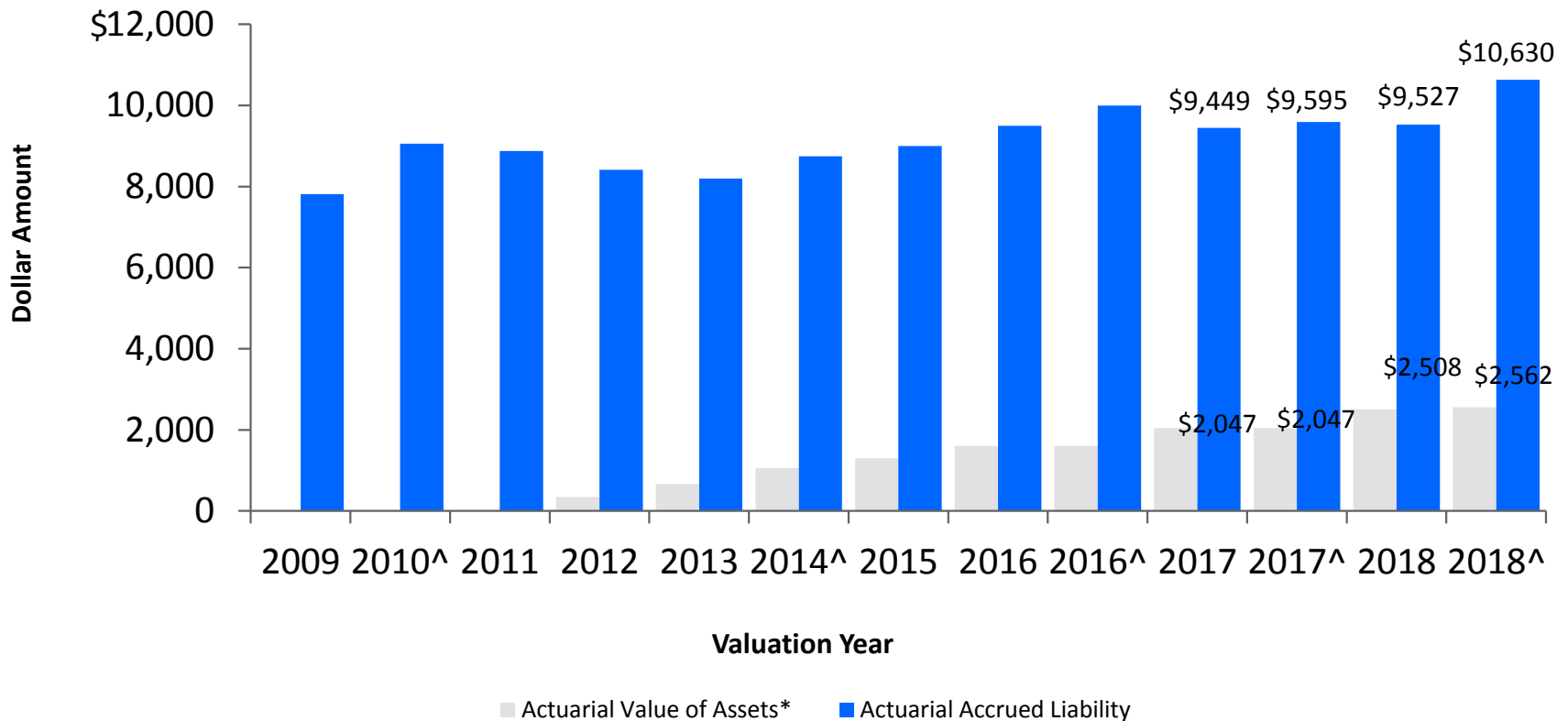
Circumstances That Would Increase Projected Costs

- Medicare funding reductions or cost shifting
- Unexpected new benefit recipients (from health benefit cutbacks of other employers)
- Medical inflation worse than assumed; the actual future contributions will depend on future per capita health cost increases (health inflation)*
- Lower than expected investment returns; bigger impact as plan assets grow
- This is not a complete list

* *Per capita costs are projected to increase 8.25% the first year, graded down to 3.50% in the tenth and later years.*

Health Assets & Accrued Liabilities

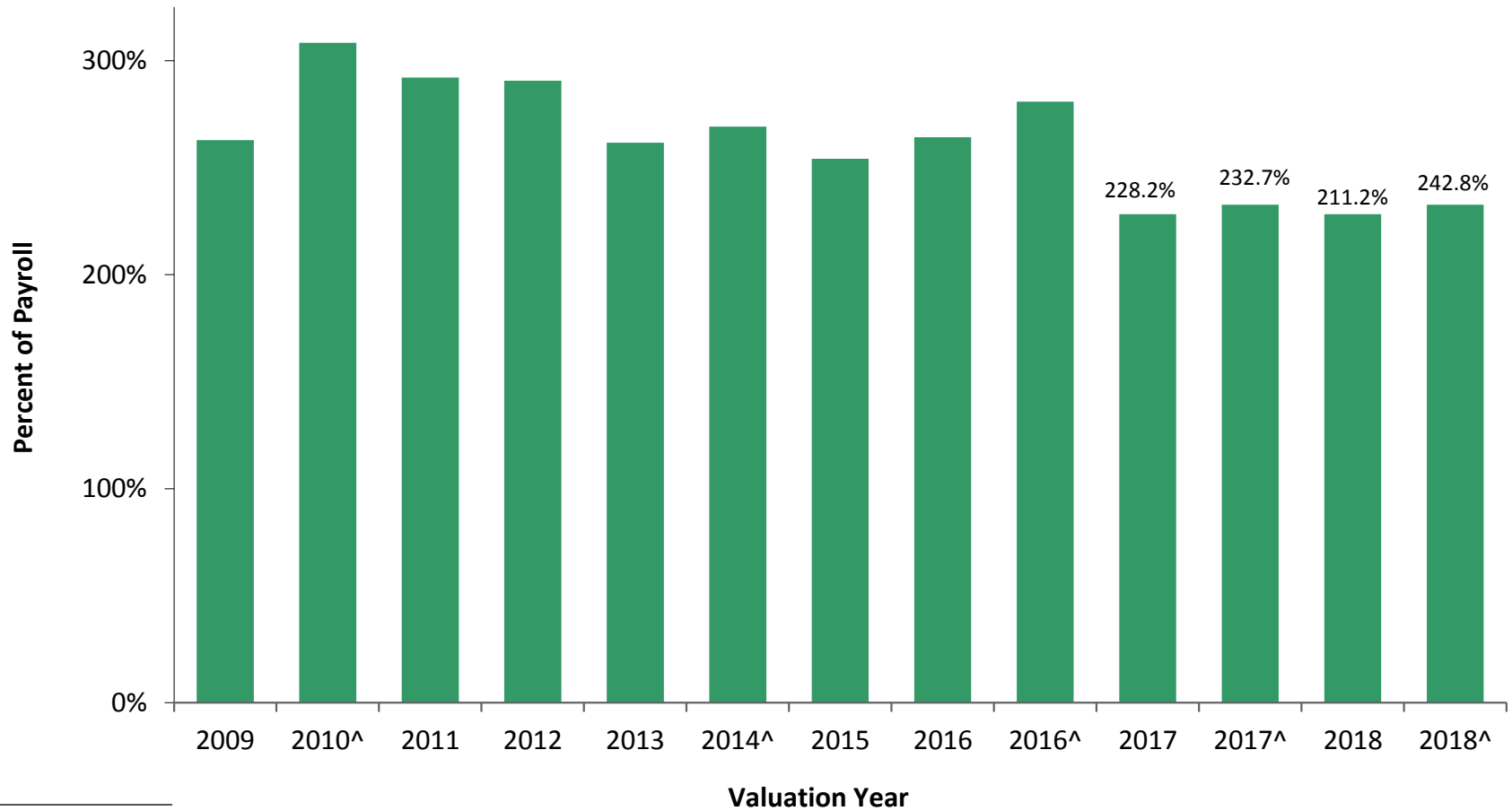
Full Actuarial Funding (\$ Amounts in Millions)



[^] Reflects assumption changes.

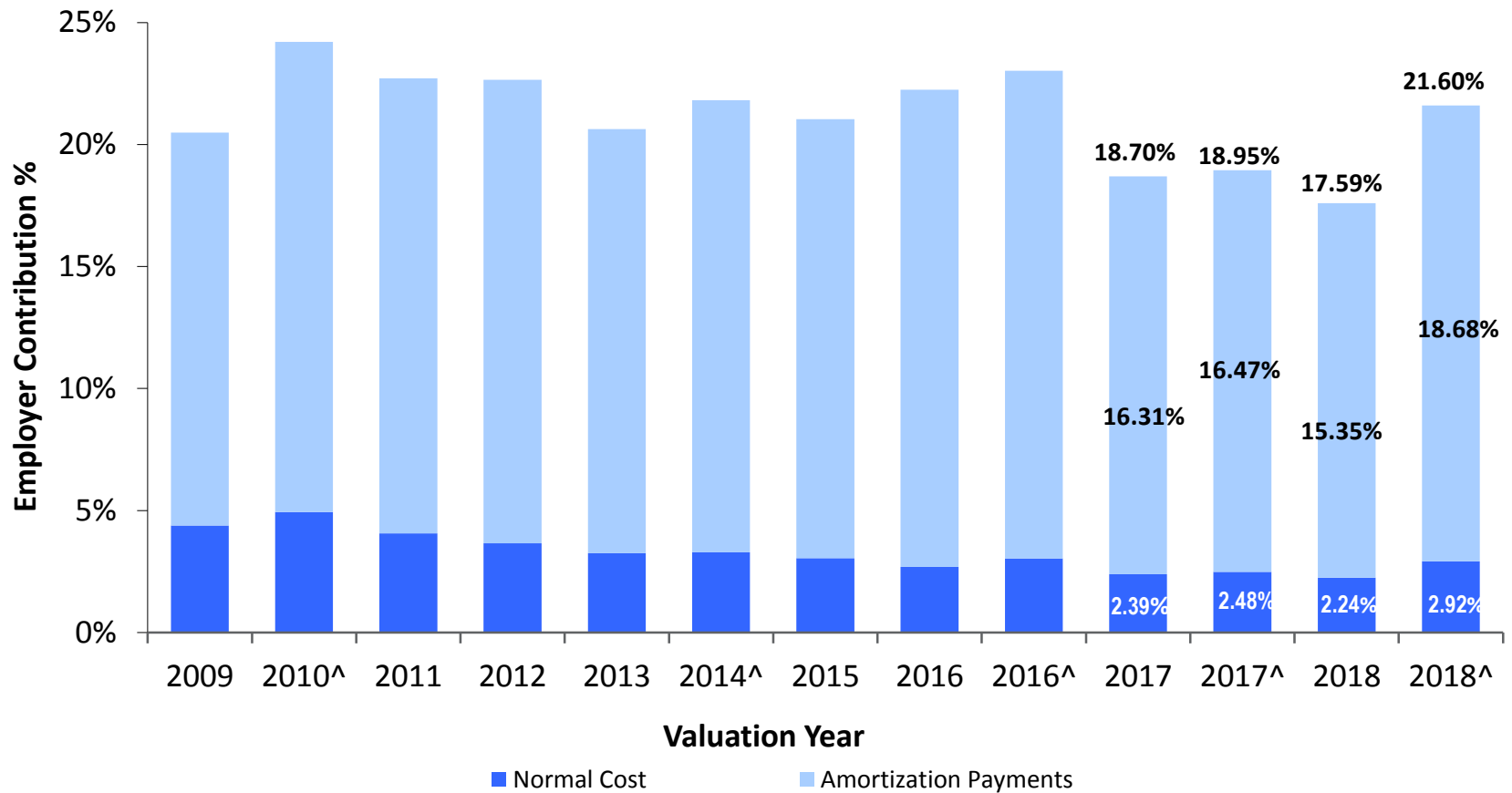
* The actuarial value of assets was set equal to the market value of assets prior to 2018.

Unfunded Accrued Liabilities as %'s of Payroll – Full Actuarial Funding



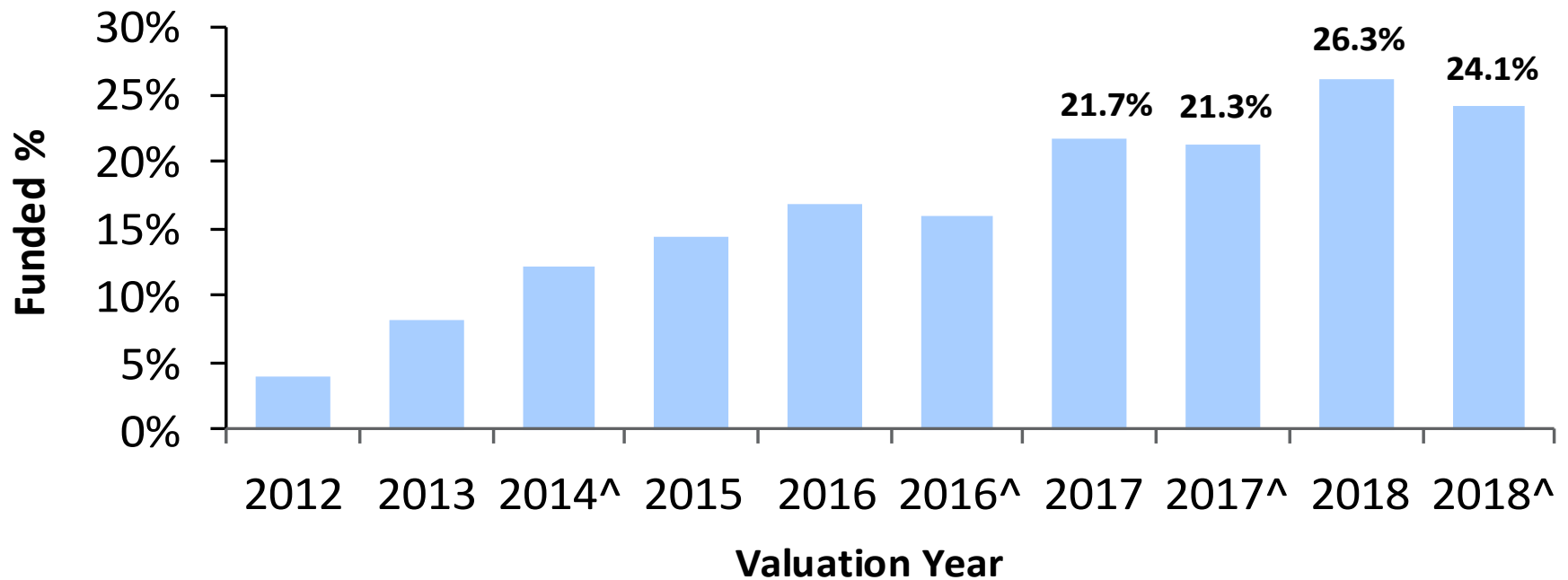
[^] Reflects assumption changes.

Computed Employer Contributions Expressed as Percents of Payroll (Full Actuarial Funding)



[^] Reflects assumption changes.

Funding Percent



[^] Reflects assumption changes.

Disclaimers

- This presentation is intended to be used in conjunction with the September 30, 2018 retiree health annual actuarial valuation report issued for SERS in 2019. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- The actuaries submitting this presentation (Mita Drazilov and Louise Gates) are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.