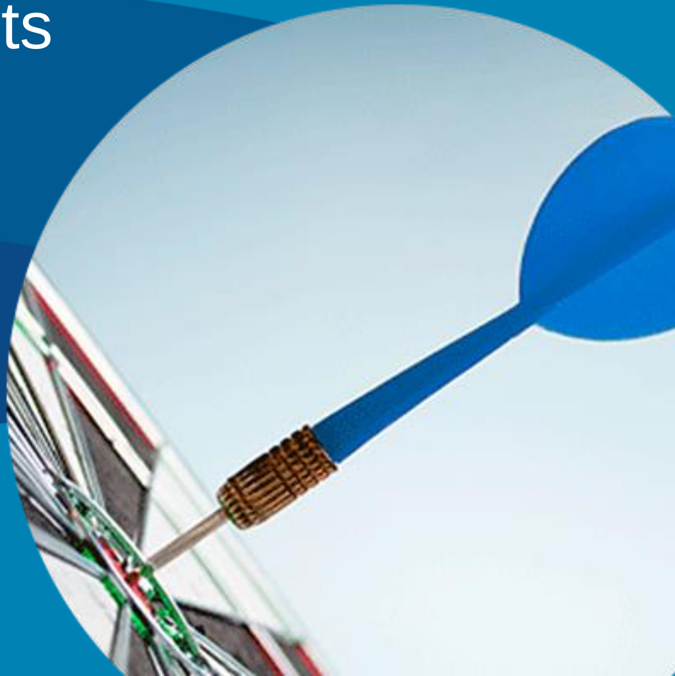
Michigan State Police

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
  - Reported that full funding began in fiscal year 2013
  - Most public plan sponsors nationwide have not pre-funded health benefits either
  - Currently, very little investment income is available to help pay the benefits
- Costs rise as more members retire, and health inflation outpaces general inflation
- Pre-funding contributions have been calculated since 1999 – but pre-funding started only recently

September 30, 2018 Valuation

- September 30, 2018 valuation establishes the required employer contribution for FY 2021
- Reflects the adoption of new assumptions in conjunction with the Experience Study covering the period October 1, 2012 – September 30, 2017
  - Including a 7.0% investment return assumption
  - Last year's valuation used a 7.40% investment return assumption
- Reflects investment return assumption that was lowered further from 7.00% to 6.90% in accordance with the Dedicated Gains Policy

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September 30, 2018 Valuation

- Reflects the following provisions of Public Act 674 of 2018
  - Change in amortization period used for financing the UAAL (18 years)
  - Gradual transition from level percent of payroll to level dollar amortization of the UAAL
- Employer contributions included in this presentation do not incorporate the "contribution floor" provisions of Public Act 674 of 2018

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Retiree Health Valuation Results
Full Actuarial Funding

- FY 2018 expenditures for employer paid retiree health care benefits:
  - $33.6 million
    - Excludes retiree paid premiums
    - Excludes $3.5 million in other governmental contributions

- FY 2018 contributions for retiree health care Benefits:
  - $56.8 million
    - Excludes $3.5 million in other governmental contributions

Amounts reported above are from the 2018 SPRS financial statements.

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Actuarially Computed Employer Contribution FY 2021 ($ in Millions)

- Required employer contribution for FYE September 30, 2021:

		FY 2021
Employer Normal Cost	$	9.6
Amortization of UAAL[1]		44.6
Employer Contribution	$	54.2

[1]Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 18 years from October 1, 2020.

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

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Actuarial Gain/(Loss) ($ in Millions)

		Gain/(Loss)
1. **Premiums.** Gains and losses resulting from actual premiums in valuation year versus that assumed from prior valuation.	$	56.0
2. **Investment Income.** If there is greater investment income than assumed, there is a gain. If less income, a loss.		5.4
3. **Demographic and Other.** Gains and losses resulting from demographic experience, data adjustments, timing of financial transactions, etc.		3.8
4. **Composite Gain/(Loss) During Year.**	$	65.2

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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 3.5% in the tenth and later years.*

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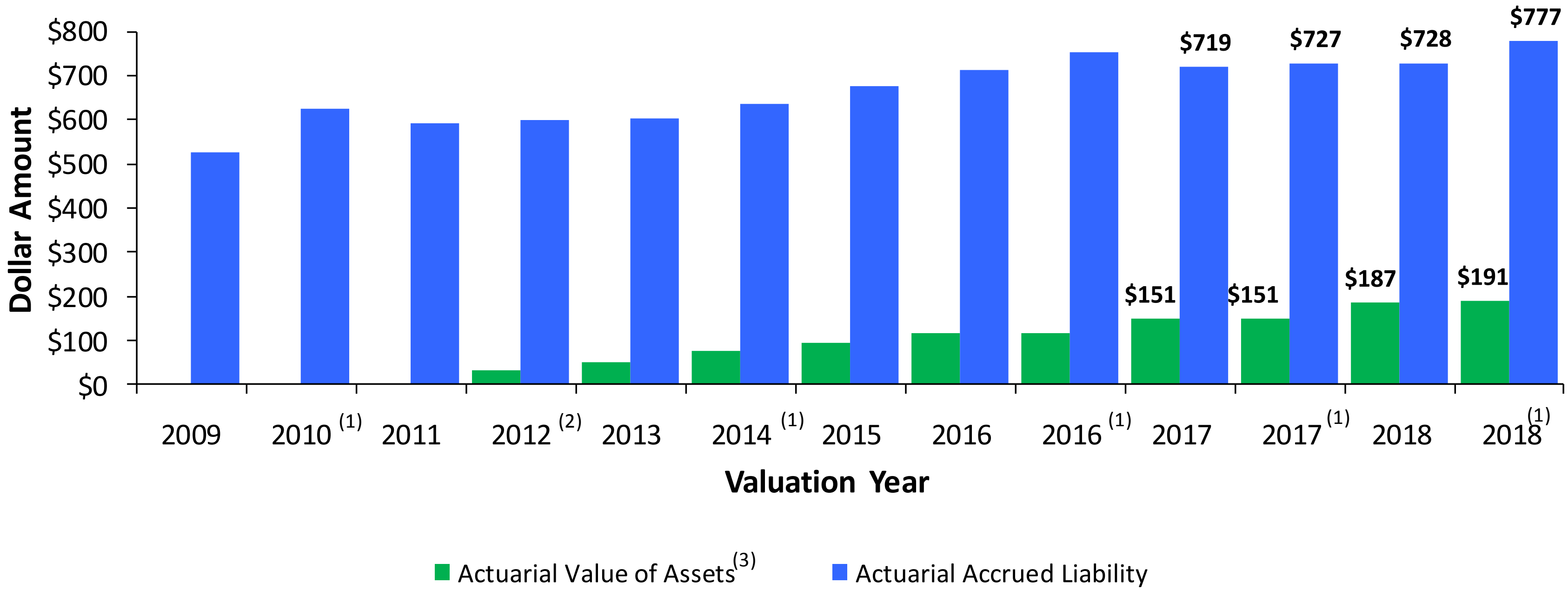
Health Assets & Accrued Liabilities Full Actuarial Funding (Amounts in Millions)



(1) Reflects assumption changes

(2) Revised benefit provisions

(3) Actuarial value of assets were equal to the market value of assets prior to 2018

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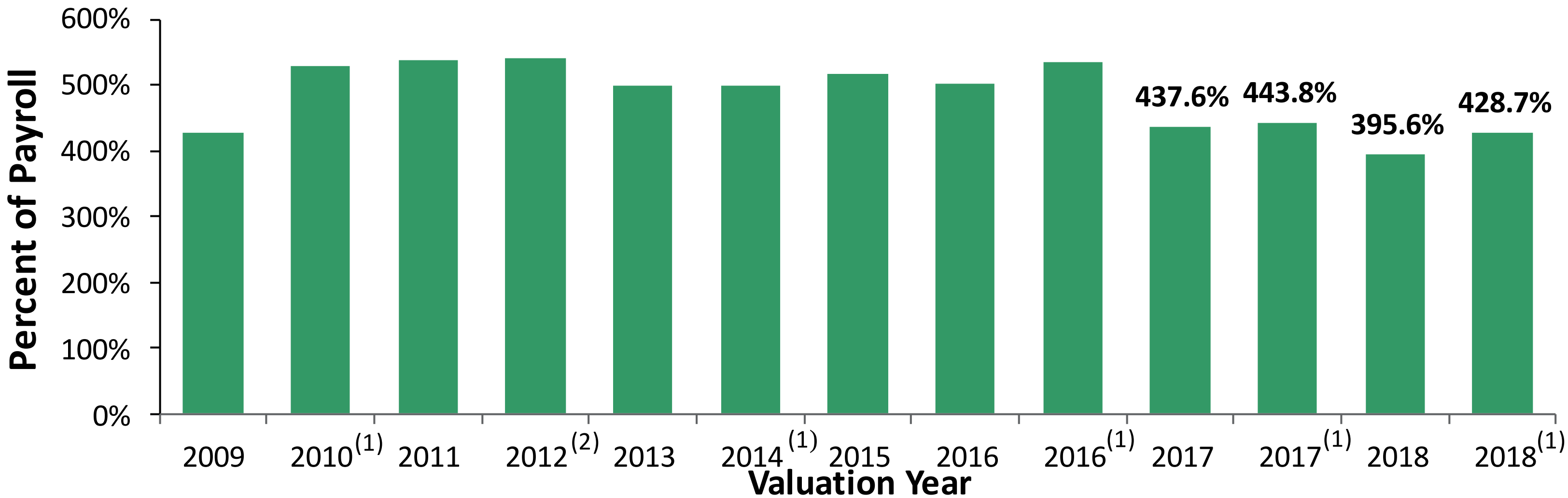
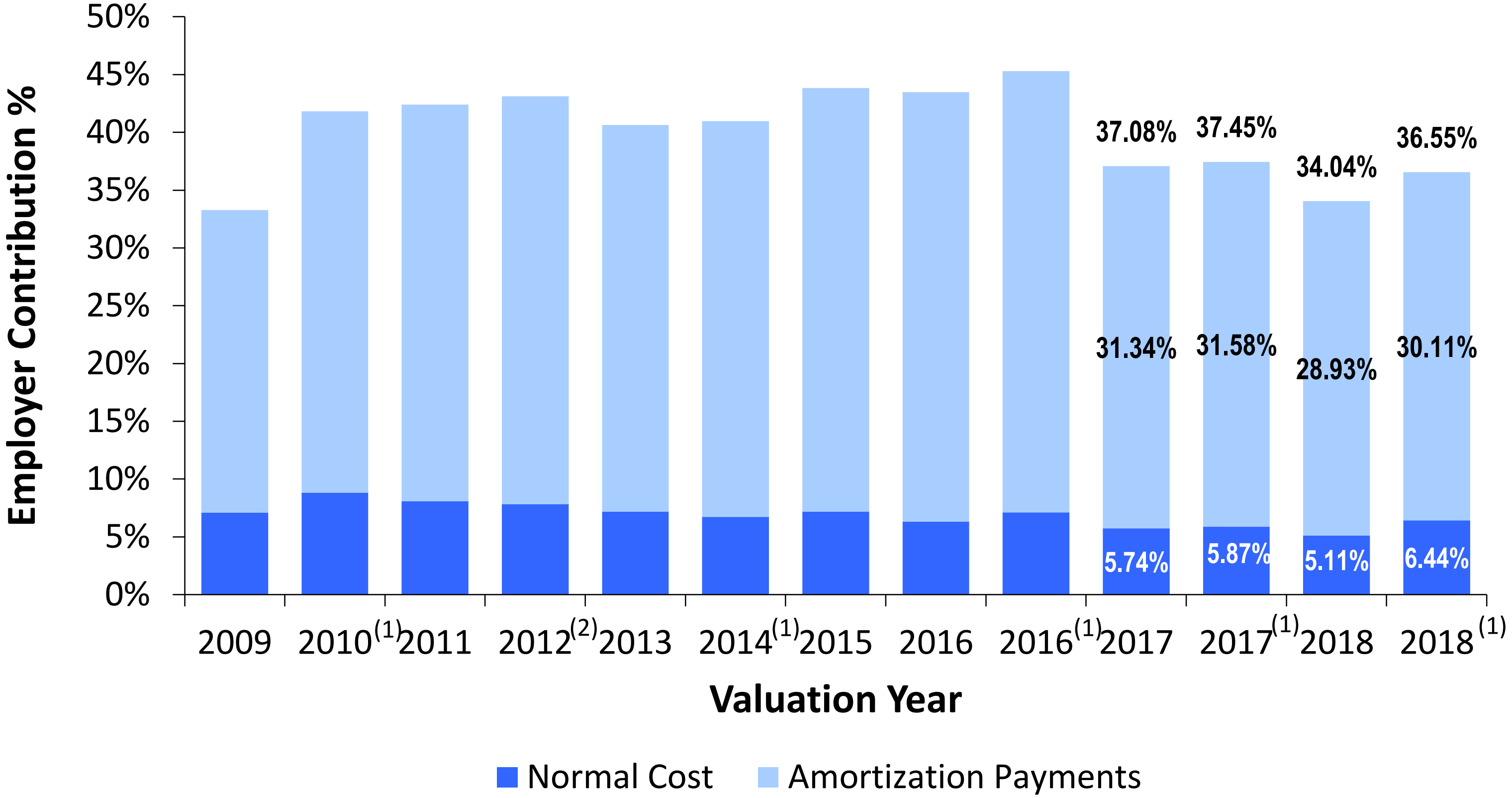
Unfunded Accrued Liabilities as %'s of Payroll – Full Actuarial Funding



(1) Reflects assumption changes

(2) Revised benefit provisions

Required Employer Contributions as Percents of Payroll (Full Actuarial Funding)



(1) Reflects assumption changes

(2) Revised benefit provisions

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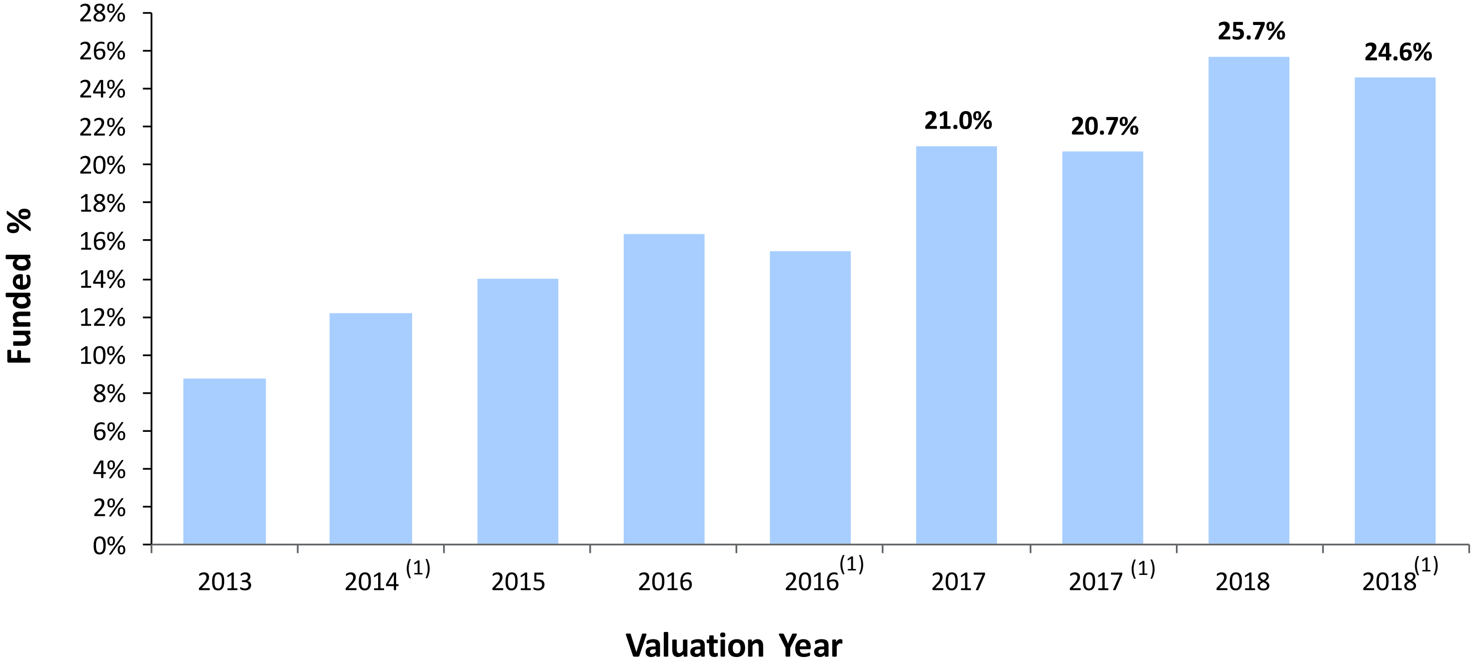
Funded Percent



(1) Reflects assumption changes

(2) Revised benefit provisions

Disclaimers

- This presentation is intended to be used in conjunction with the September 30, 2018 retiree health annual actuarial valuation report issued on April 25, 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 (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.