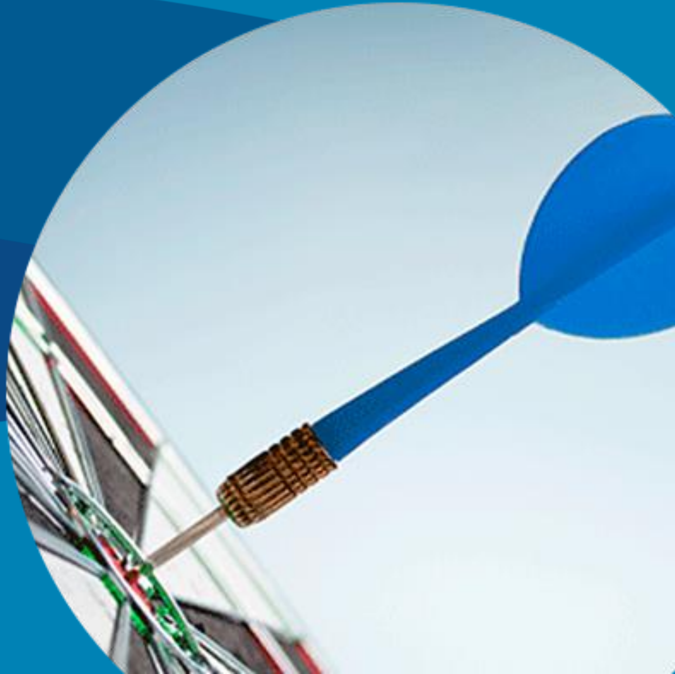
Michigan Public School Employees’

Retiree Health Actuarial Valuation Results as of September 30, 2020



Retiree Health Benefits
The Funding Issue

- Unlike pensions, health benefits have not been pre-funded for a long period of time
  - Most plan sponsors nationwide have not pre-funded health benefits either
- Costs rise as more members retire, and health inflation usually outpaces general inflation
- Pre-funding contributions have been calculated since 1999 – but full pre-funding started in Fiscal Year (FY) 2013

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September 30, 2020 Valuation

- Purpose of the September 30, 2020 is twofold:
  - Determines the actuarially computed employer contribution for FY 2023
  - Measures the retiree health plan's funding progress
- Reflects 3% of payroll active member contributions required to participate in the defined benefit retiree health program
- Reflects the investment return assumption remaining at 6.95% as the market rate of return for FY 2020 was too low to trigger the provisions of the Dedicated Gains Policy adopted by the Board of Trustees

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September 30, 2020 Valuation

- Reflects plan changes resulting from Public Act 300 of 2012
- Actuarially computed employer contributions included in this presentation do not incorporate the “contribution floor” provisions of Public Act 181 of 2018 or Public Act 92 of 2017
- Reflects payroll growth schedule for amortization purposes dictated by Public Act 181 of 2018 (2.50% payroll growth for determining FY 2023 contribution)
- Actuarially computed employer contributions in this presentation are needed in addition to any reconciliation payments as required by subsection 41(9) of MPSERS statute

FY 2020 – Expenditures vs. Contributions

- FY 2020 expenditures for employer paid retiree health care benefits:
  - $ 189.7 million
    - Excludes retiree paid premiums
    - Excludes $324.6 million in other governmental contributions
- FY 2020 contributions for retiree health care benefits:
  - $ 708.5 million – Employer contributions
    - Excludes $324.6 million in other governmental contributions
  - $ 204.8 million – Employee contributions

Above reported amounts from the MPSERS 2020 financial statements.

Actuarially Computed Employer Contribution FY 2023 ($ in Millions)

- Actuarially computed employer contribution for FYE September 30, 2023:

	FY 2023	
Employer Normal Cost	$	44.8
Amortization of UAAL[1]		240.8
Actuarially Computed Employer Contribution	$	285.6

[1] Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 16 years from October 1, 2022.

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

Actuarial Gain/(Loss) ($ in Millions)

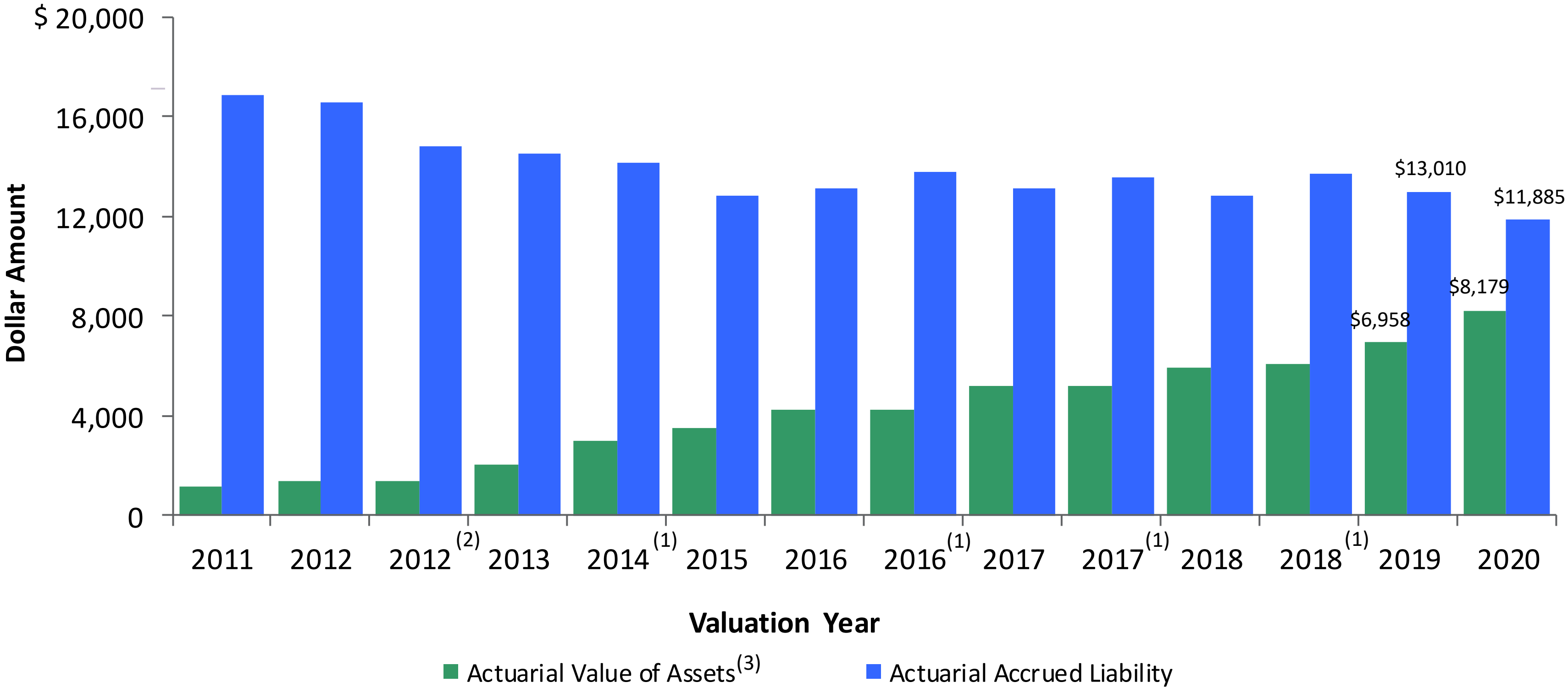
		Gain/(Loss)
1. **Premiums.** Gains and losses resulting from actual premiums in valuation year versus that assumed from prior valuation.	$	1,302.8
2. **Investment Income.** If there is greater investment income than assumed, there is a gain. If less income, a loss.		(42.4)
3. **Demographic and Other.** Gains and losses resulting from demographic experience, data adjustments, timing of financial transactions, etc.		568.3
4. **Composite Gain/(Loss) During Year.**	$	1,828.8

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)*
- Active member population decline (contribution rates as a percentage of payroll would increase)
- Lower than expected investment returns; bigger impact as plan assets grow
- This is not a complete list

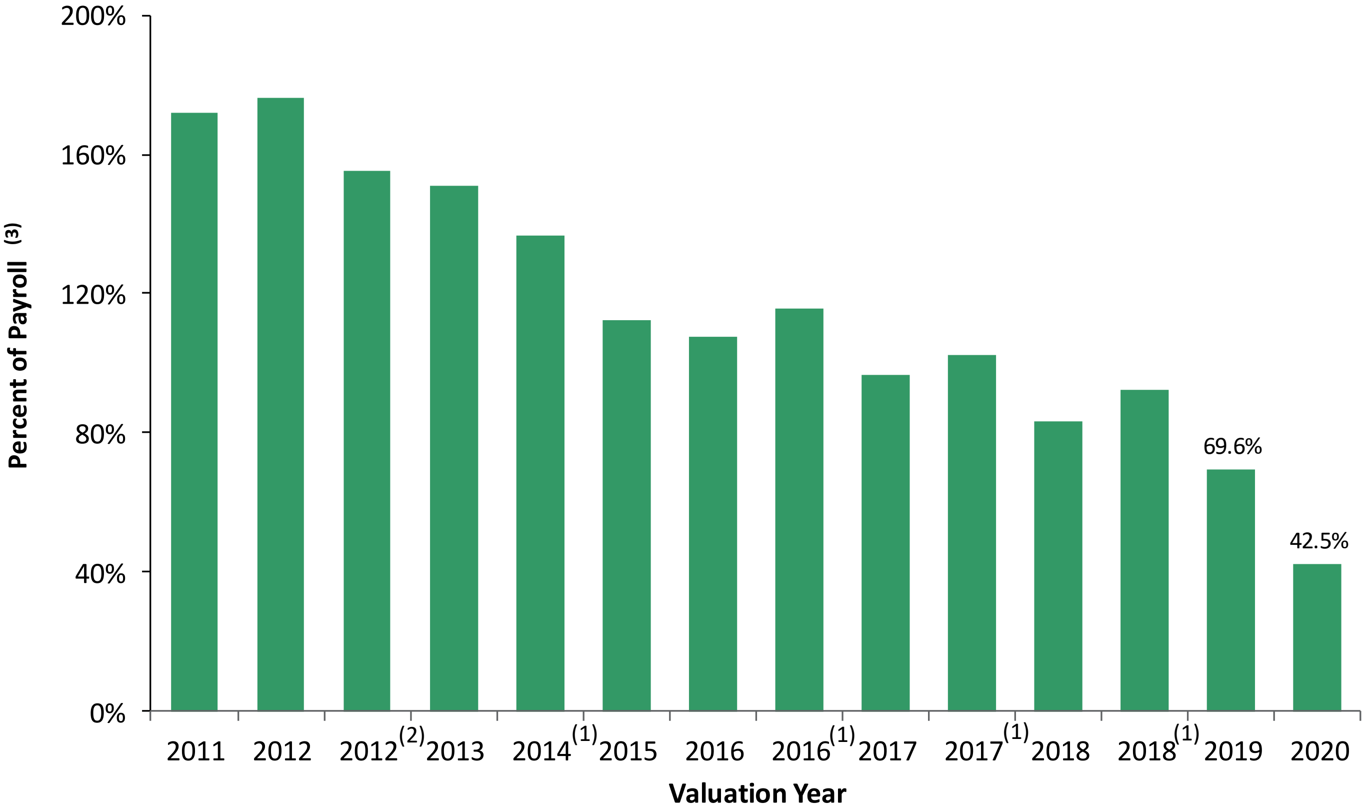
* *Pre-65 per capita costs are projected to increase 7.75% the first year (5.25% for post-65 per capita costs), graded down to 3.5% in the fifteenth year.*

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



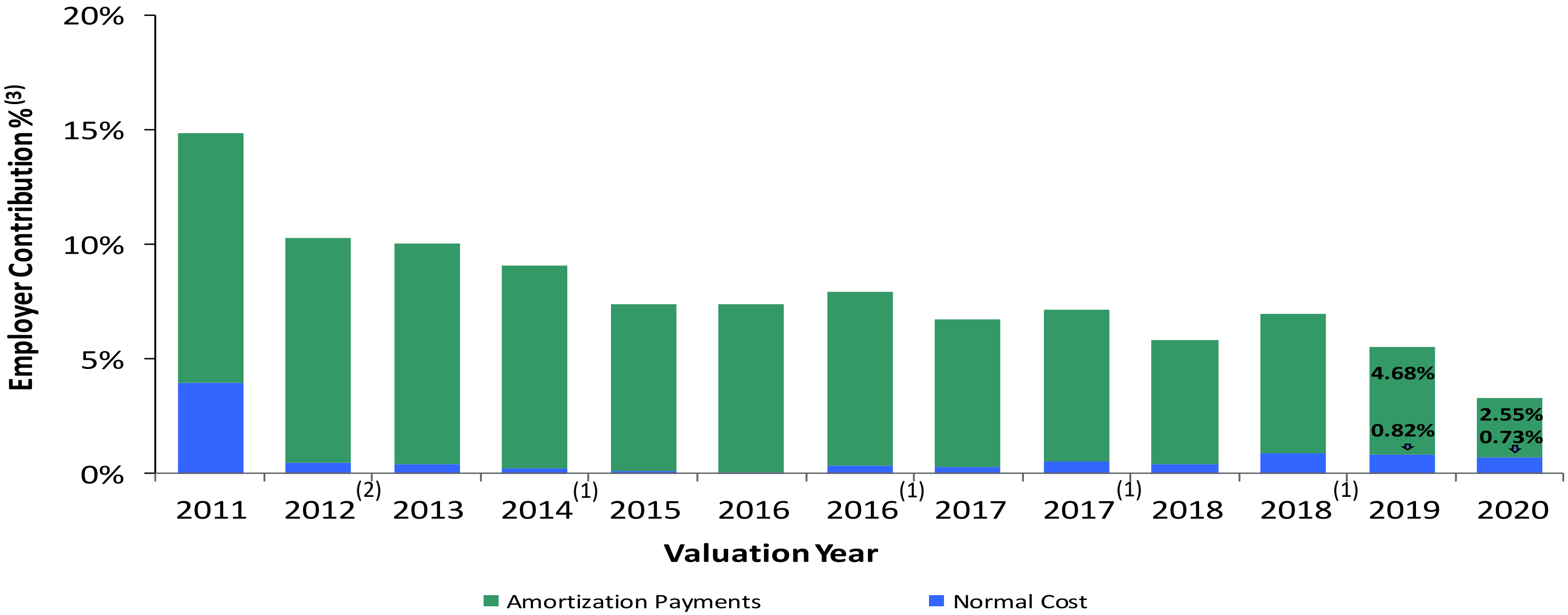
(1) Reflects assumption changes (not including trend assumption)
(2) Reflects plan changes resulting from Public Act 300 of 2012
(3) Actuarial value of assets were equal to the market value of assets prior to 2018

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



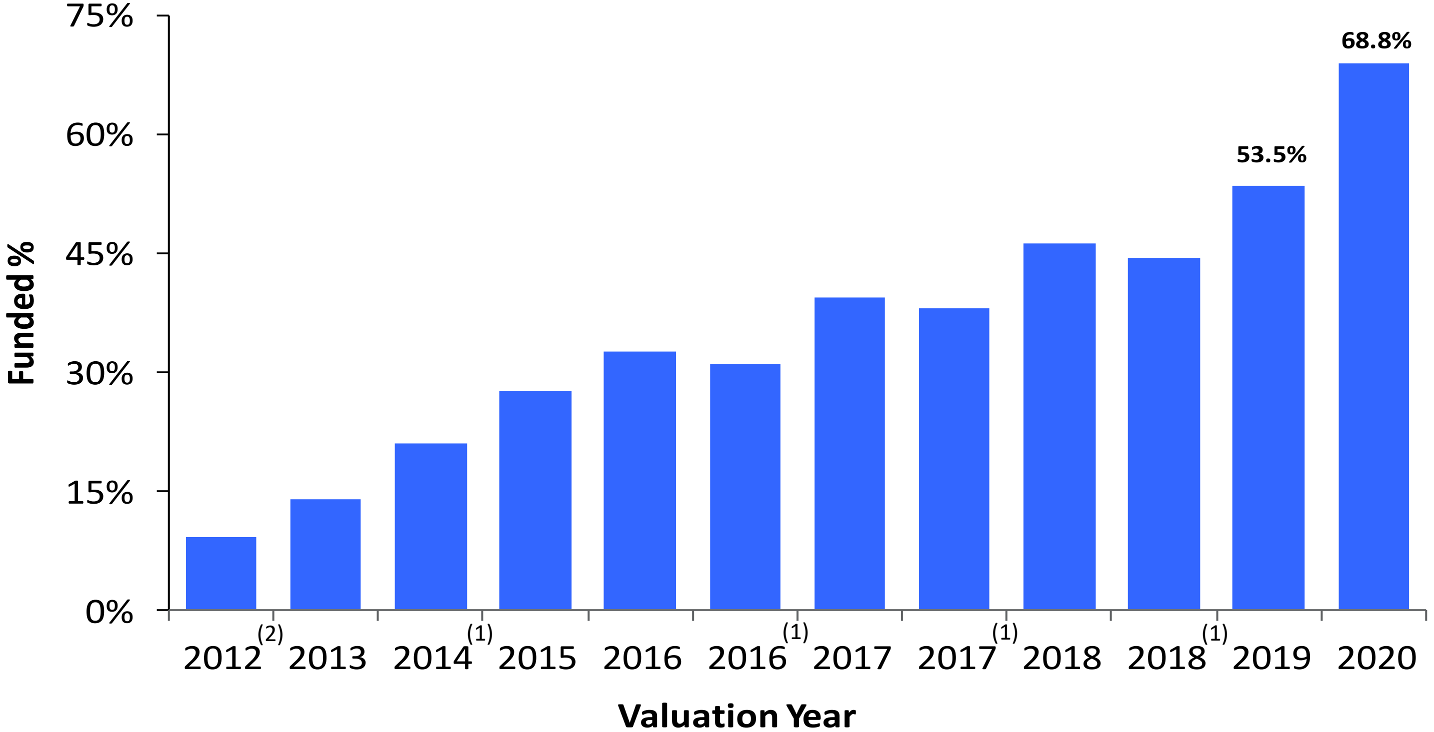
(1) Reflects assumption changes (not including trend assumption)
(2) Reflects plan changes resulting from Public Act 300 of 2012
(3) Percentage of total MPSERS payroll (including both PHF and non-PHF members)

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



(1) Reflects assumption changes (not including trend assumption or changes in amortization payroll growth)
(2) Reflects plan changes resulting from Public Act 300 of 2012
(3) Starting with the 2012 valuation year, (a) the normal cost is expressed as a percentage of non-PHF active member payroll, (b) the Amortization Payment is expressed as a percentage of total MPSERS active member payroll (including PHF and non-PHF), and (c) the required employer contribution is for the fiscal year beginning two years after the valuation date

Funded Percent



(1) Reflects assumption changes (not including trend assumption)
(2) Reflects plan changes resulting from Public Act 300 of 2012

Disclaimers

- This presentation is intended to be used in conjunction with the September 30, 2020 retiree health actuarial valuation report. 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.

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