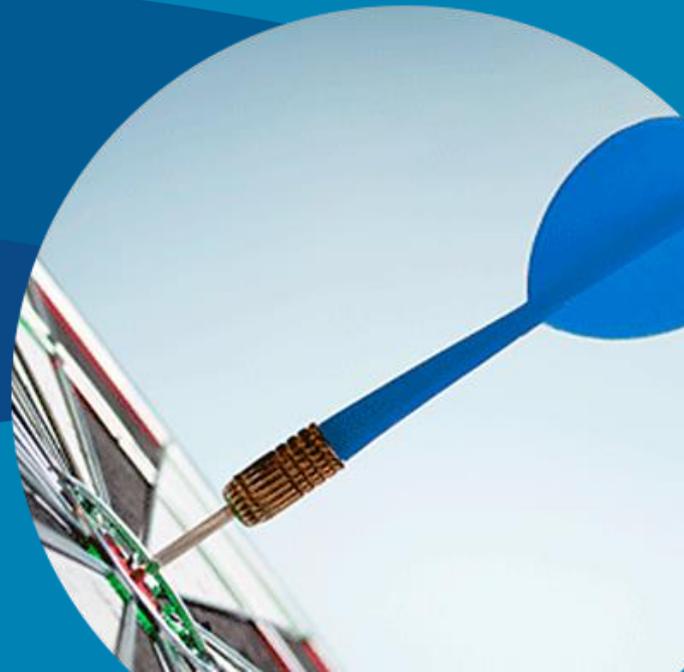


# General Assembly Retirement System of Illinois

Valuation Results as of  
June 30, 2018

October 26, 2018



# Agenda

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- Valuation Results
  - Change in actuarial assumptions
  - Funded status
  - Change in funded ratio
  - Cash flow comparison
  - Contribution requirements
  - Contribution shortfalls
- Summary
- Appendix A: Projection Results: Phase-in of investment losses in the Actuarial Value of Assets (AVA) and contribution rate variances due to changes in assumptions
- Appendix B: Membership Data

# Valuation Results: Change in Actuarial Assumptions

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- The GARS Board approved the following assumptions for use in the current valuation:
  - **Price inflation:** The rate of price inflation was reduced from 2.75 percent to 2.50 percent.
  - **Wage inflation assumption:** The wage inflation assumption was reduced from 3.00 percent to 2.75 percent, which reflects an underlying general price inflation assumption of 2.50 percent.
- The change in actuarial assumptions decreased the actuarial accrued liability as of June 30, 2018, by \$0.7 million.

# Valuation Results: Funded Status

## (\$ in millions)

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	<u>June 30, 2018</u>	<u>June 30, 2017</u>
<b>Actuarial Accrued Liability</b>	<b>\$375.8</b>	<b>\$370.8</b>
<b>Market Value of Assets (MVA)</b>	<b>\$56.8</b>	<b>\$54.3</b>
<b>Unfunded Actuarial Accrued Liability - MVA Basis</b>	<b>\$319.0</b>	<b>\$316.5</b>
<b>Funded Ratio - MVA Basis</b>	<b>15.12%</b>	<b>14.66%</b>
<b>Actuarial Value of Assets (AVA)</b>	<b>\$57.6</b>	<b>\$55.1</b>
<b>Unfunded Actuarial Accrued Liability - AVA Basis</b>	<b>\$318.2</b>	<b>\$315.7</b>
<b>Funded Ratio - AVA Basis</b>	<b>15.33%</b>	<b>14.85%</b>

# Valuation Results: Change in Funded Ratio

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<b>Funded Ratio 6/30/2017</b>	<b>14.85%</b>
<b>Expected <sup>1</sup></b>	<b>1.04%</b>
<b>Contribution Shortfall</b>	<b>-0.58%</b>
<b>Liability Experience</b>	<b>-0.05%</b>
<b>Assumption Changes</b>	<b>0.03%</b>
<b>Asset Experience (7.02% Return on AVA)</b>	<b><u>0.04%</u></b>
<b>Funded Ratio 6/30/2018</b>	<b>15.33%</b>

<sup>1</sup> *Assumes total contributions equal to normal cost plus interest*

# Valuation Results: Cash Flow Comparison

## (\$ in millions)

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	FYE 2018	Projected FYE 2019	Projected FYE 2020	Projected FYE 2021	Projected FYE 2022
Employer Contribution	\$21.2	\$23.2	\$25.8	\$26.9	\$27.1
Employee Contribution	\$1.3	\$1.2	\$1.1	\$1.1	\$1.1
Benefits	(\$23.3)	(\$25.4)	(\$26.2)	(\$26.9)	(\$27.7)
Expenses	(\$0.3)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.4)
Net Cash Flow	(\$1.1)	(\$1.4)	\$0.3	\$0.7	\$0.1

- In fiscal years 2019, and 2023 through 2039, benefits are projected to exceed State and employee contributions.
- From 2019 to 2031, the percentage of investment income needed to pay ongoing benefits is projected to increase from approximately 37.2 percent to 89.6 percent.
  - This implies that a lower level of investment income is projected to be available for potential asset growth.

# Valuation Results:

## Contribution Requirements (\$ in millions)

### FY 2020 State contribution

Basic Funding

Amount

\$ 25.8

Rate

257.784%

### Compares to FY 2019 contribution

Basic Funding

Amount

\$ 23.2

Rate

227.669%

# Valuation Results:

## Contribution Shortfalls (\$ in millions)

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<u>FYE 2020</u>	<u>Amount</u>	<u>Rate</u>
Actuarially Determined Contribution	\$ 34.4	344.432%
Basic funding	<u>25.8</u>	<u>257.784%</u>
Shortfall	\$ 8.6	86.648%
<u>FYE 2019</u>	<u>Amount</u>	<u>Rate</u>
Actuarially Determined Contribution	\$ 32.7	320.116%
Basic funding	<u>23.2</u>	<u>227.669%</u>
Shortfall	\$ 9.5	92.447%

- The Actuarially Determined Contribution (ADC), is equal to the Normal Cost plus a 20-year level percent of capped payroll closed-period amortization of the Unfunded Actuarial Accrued Liability. As of June 30, 2018, the remaining amortization period is 17 years.

# Experience Study

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- Pursuant to Public Act 99-0232, GARS is required to conduct an actuarial experience review once every three years. Under this schedule, an experience review for the period from July 1, 2015 through June 30, 2018, will be performed after completion of the June 30, 2018, actuarial valuation with expected implementation of the recommended assumptions beginning with the June 30, 2019, actuarial valuation.

# Summary

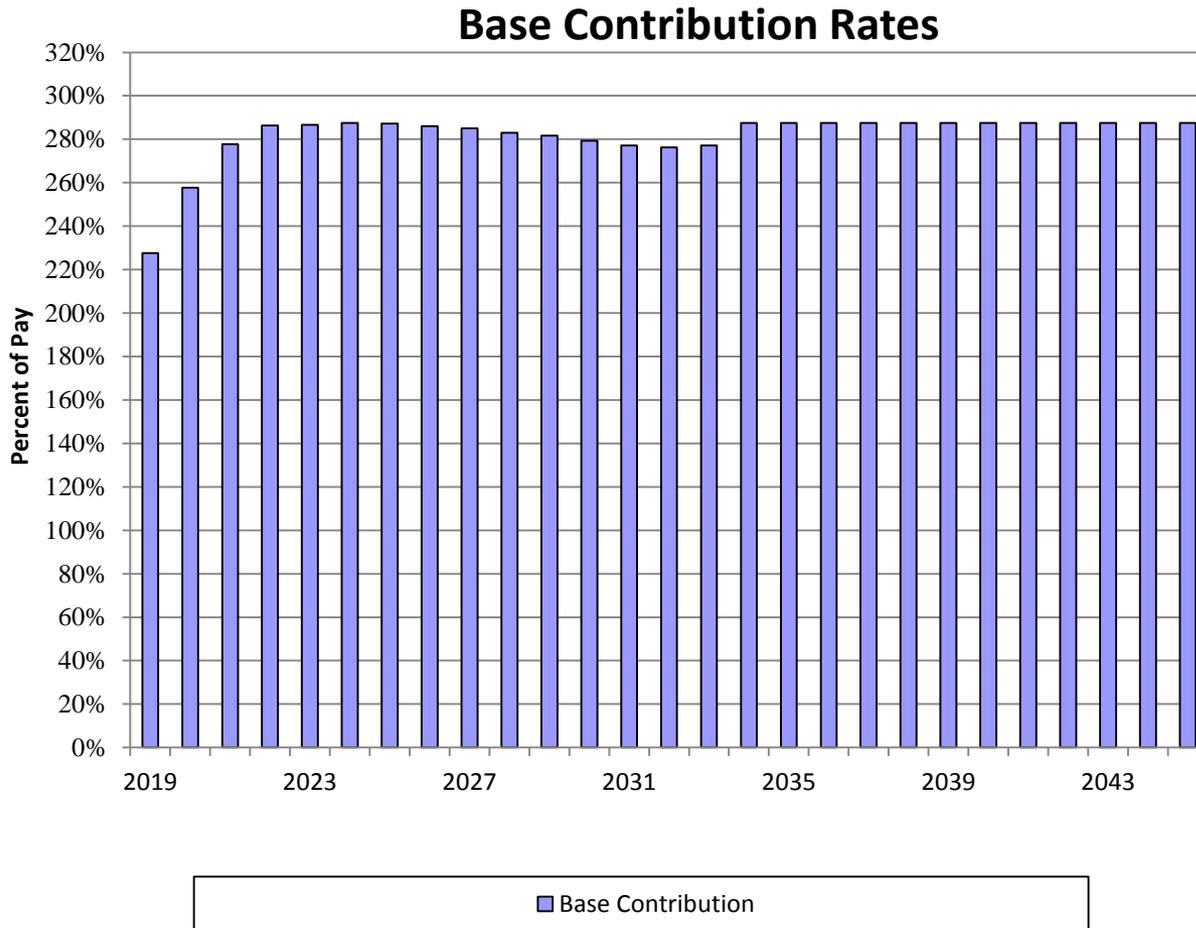
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- Lower than expected retiree mortality and a contribution shortfall decreased the funded ratio and increased the State's contribution requirement.
- Funded ratio is projected to increase slowly from 15.3% in 2018 to 27.7% in 2033, and then increase rapidly to 90% by 2045.

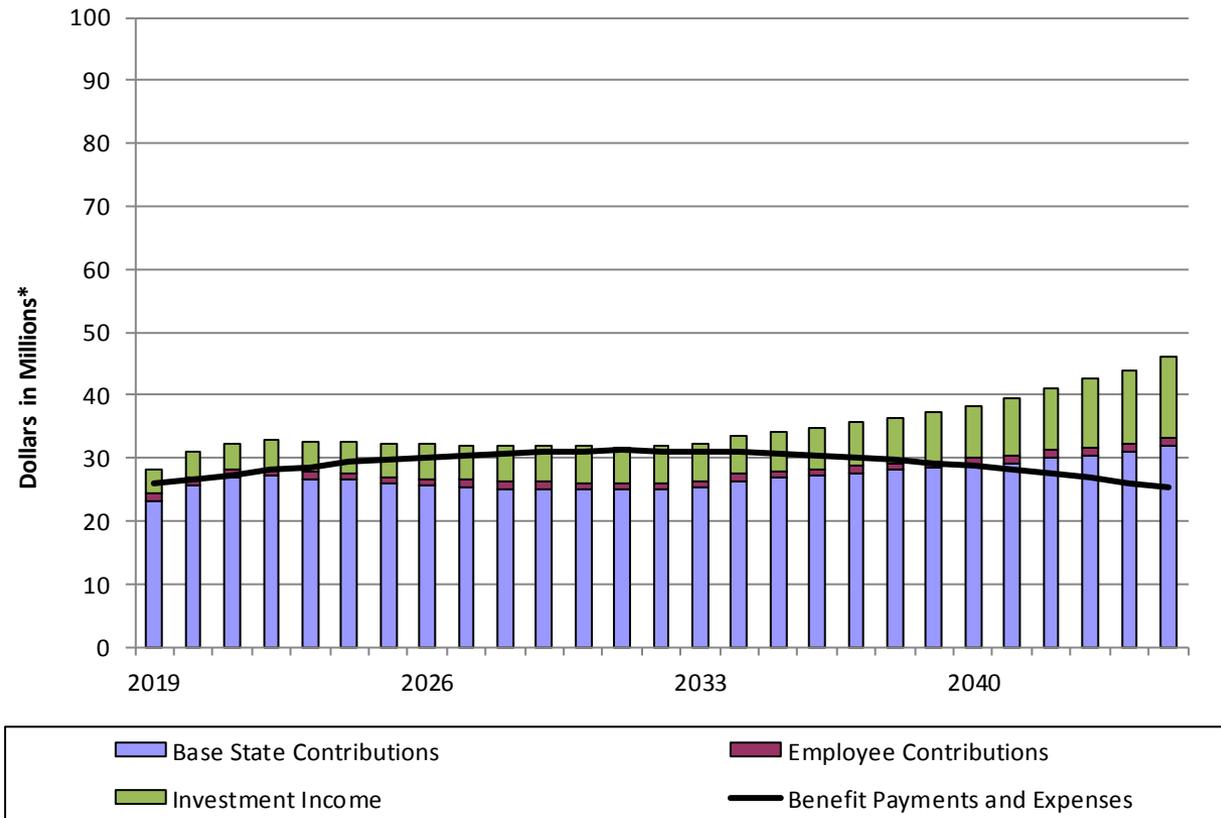
# Appendix A: Projection Results: Phase-in of Investment Losses in the AVA and Contribution Rate Variances due to Smoothing of Changes in Assumptions

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# Projection Results: Phase-in of Investment Losses in the AVA and Contribution Rate Variances due to Smoothing of Changes in Assumptions: Contributions - Rate



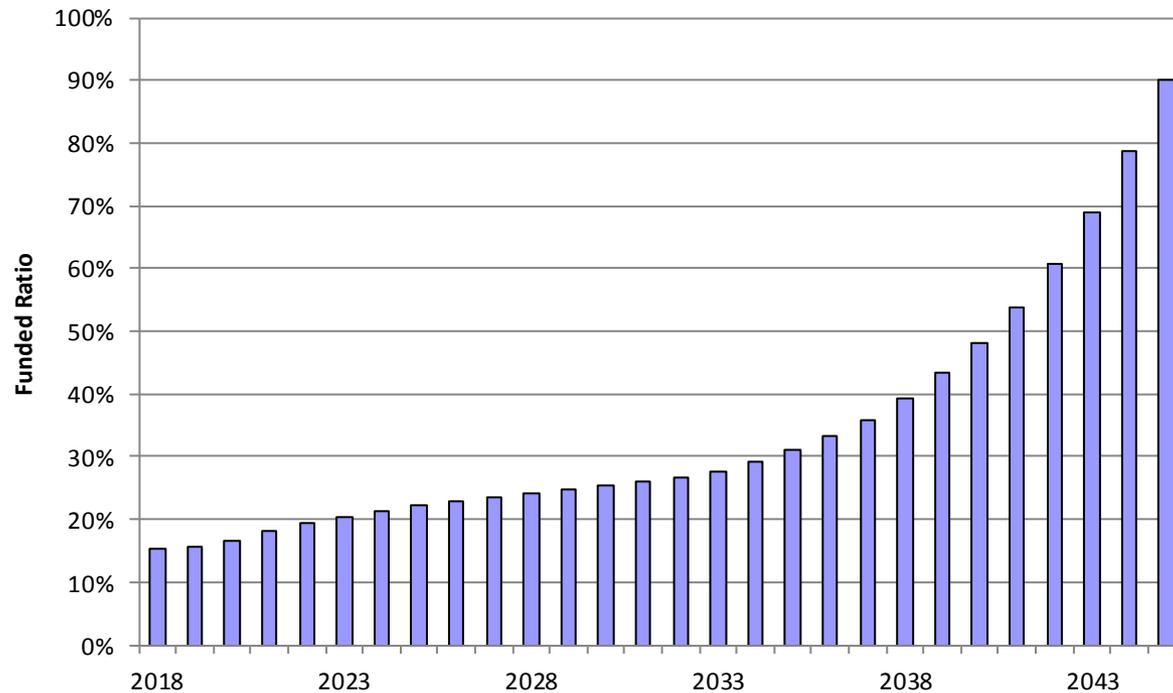
# Projection Results: Phase-in of Investment Losses in the AVA and Contribution Rate Variances due to Smoothing of Changes in Assumptions: Cash Flow Comparison



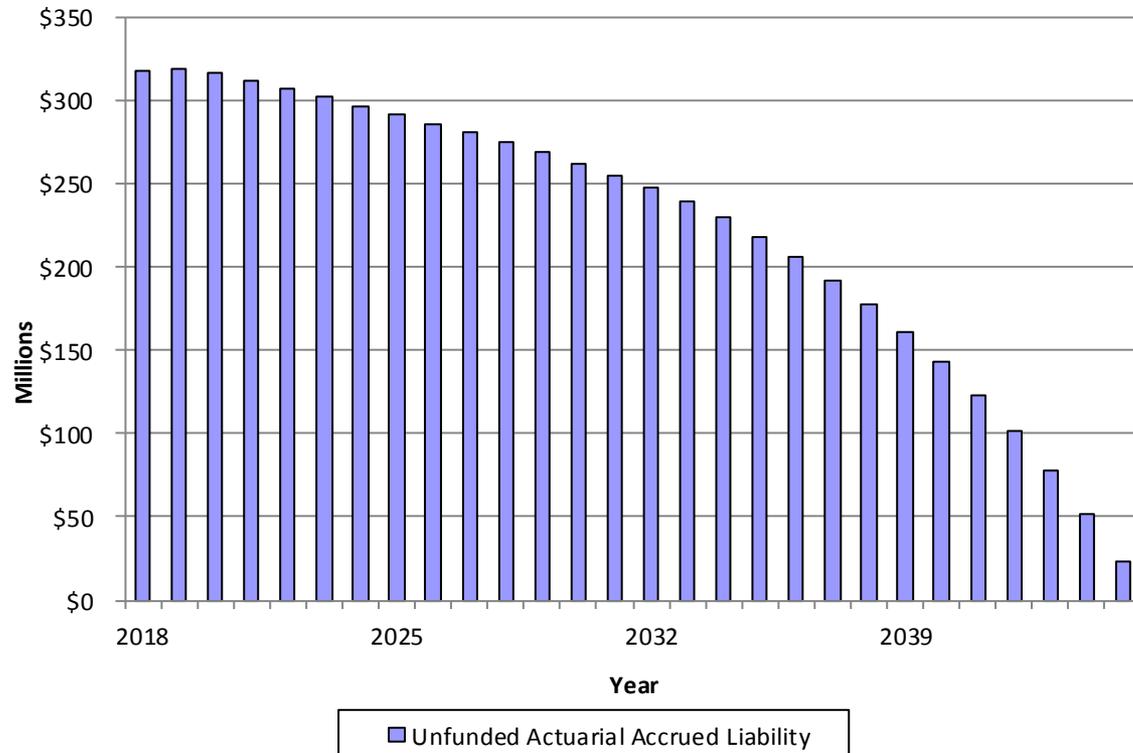
*\*Future dollar amounts are based on assumed inflationary increases.*

# Projection Results: Phase-in of Investment Losses in the AVA and Contribution Rate Variances due to Smoothing of Changes in Assumptions: Funded Ratio

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# Projection Results: Phase-in of Investment Losses in the AVA and Contribution Rate Variances due to Smoothing of Changes in Assumptions: Unfunded Actuarial Accrued Liability



# Appendix B: Membership Data

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# Active Members

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	<u>June 30, 2018</u>	<u>June 30, 2017</u>
<b>Number as of Valuation Date</b>	<b>132</b>	<b>135</b>
<b>Covered Uncapped Payroll for Fiscal Year</b>	<b>\$10.711 Million</b>	<b>\$10.996 Million</b>
<b>Average Annual Earnings</b>	<b>\$81,144</b>	<b>\$81,454</b>

# Current Benefit Recipients

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	<u>June 30, 2018</u>	<u>June 30, 2017</u>
<b>Retirees</b>	<b>302</b>	<b>300</b>
<b>Survivors</b>	<b>115</b>	<b>121</b>
<b>Reversionary</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>417</b>	<b>421</b>
<b>Total Benefits</b>	<b>\$23.392M</b>	<b>\$22.633M</b>
<b>Average Benefits</b>	<b>\$56,097</b>	<b>\$53,760</b>

# Questions

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# Disclosures

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- Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this presentation concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- The actuary submitting this presentation (Alex Rivera, FSA, EA, MAAA) 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 contained herein.
- The primary purpose of the actuarial valuation is to measure the financial position of GARS.

# Disclosures

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- The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The major actuarial assumptions used in this analysis were provided by and are the responsibility of GARS. We are unable to judge the reasonableness of some of these assumptions without performing a substantial amount of additional work beyond the scope of the assignment.
- Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.
- This is one of multiple documents comprising the actuarial report for the GARS actuarial valuation. Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the full actuarial valuation report as of June 30, 2018.
- If you need additional information to make an informed decision about the contents of this presentation, or if anything appears to be missing or incomplete, please contact us before relying on this presentation.