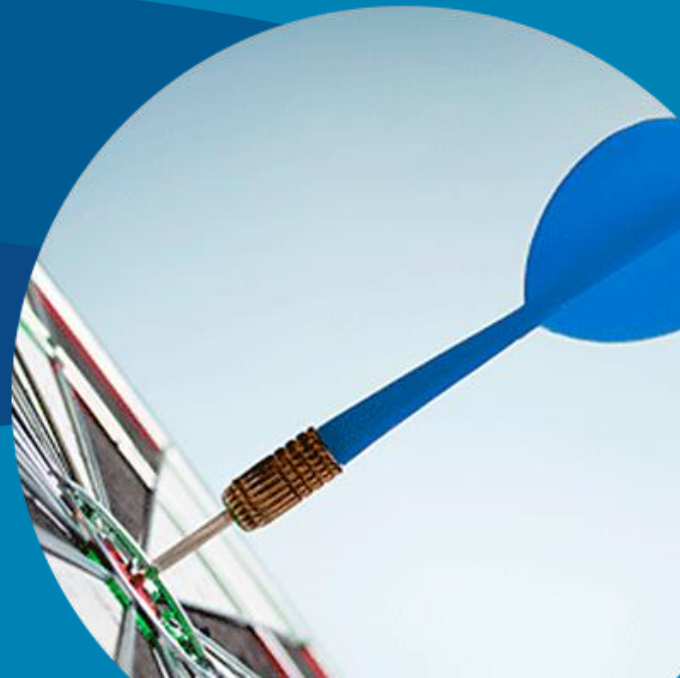
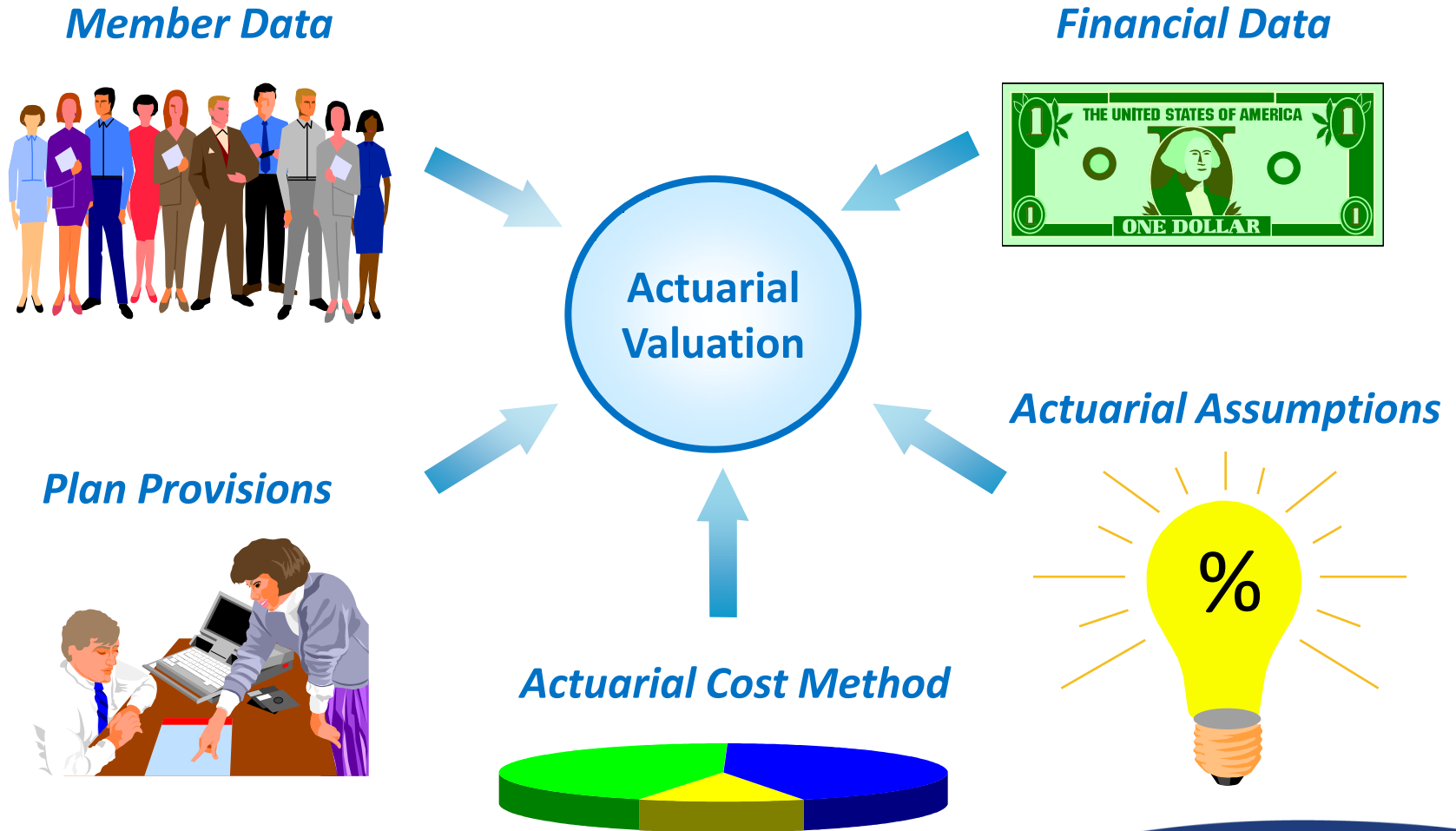


# Military Retirement Provisions

Pension Actuarial Valuation Results  
as of September 30, 2017  
Experience Study  
October 1, 2015 – September 30, 2017



# Actuarial Valuation Process



# Select Valuation Results

	Results as of	
	<u>September 30, 2017</u>	<u>September 30, 2016</u>
Total Computed Employer Contribution	\$ 3,542,423	\$ 4,421,691
Amortization Period of UAAL (years)	19	20
Total Accrued Liability	\$ 49,950,120	\$ 49,674,928
Funding Value of Assets	<u>4,602,232</u>	<u>3,696,232</u>
Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 45,347,888	\$ 45,978,696
	Plan Membership as of	
	<u>September 30, 2017</u>	<u>September 30, 2016</u>
Current Employees	10,394	10,144
Retired Members Including Beneficiaries	4,362	4,325
Inactive Employees <sup>(1)</sup>	<u>563</u>	<u>470</u>
<b>Total Participants</b>	<b>15,319</b>	<b>14,939</b>

<sup>(1)</sup> Inactive counts include Army inactive employees only. Air inactive employees were not provided.

# Military Retirement System

## Other Annual Valuation Comments

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- Valuation results based upon a 7.50% discount rate
- Computed employer contribution is for fiscal year 2020
  - Normal cost component includes an administrative expense contribution of \$481,605
  - Reflects a scheduled additional employer contribution of \$11 million in FY 2018
- UAAL amortization period of 19 years
- Fiscal year 2017 benefit payments were reported to be \$4,089,801

# Experience Study Process

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- Our analysis was based upon data submitted for the 2015 through 2017 annual valuations
- Analysis of demographic assumptions limited to withdrawal and retirement experience of M-Day members
- Economic assumption analysis similar to that performed for the other 4 Systems that ORS administers

# Recommendations - Economic

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- Adopt a 2.25% price inflation assumption.
- The preferred investment return assumption is 6.75%. However, the alternate assumption of 7.0% is also reasonable.
- Adopt a 2.75% wage inflation assumption.

# Recommendations – Non-Economic

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- Change the rates of age and service retirement:
  - No change in rates for Special Duty members.
  - Decrease rates for M Day members.
- Change the rates of withdrawal (termination of membership before being eligible to retire):
  - First 5 Years of Service:
    - No change in rates for Special Duty members.
    - Decrease rates for M Day members.
  - Over 5 Years of Service:
    - No change in rates.
- Adopt the RP-2014 mortality tables (Healthy Annuitant and Employees) adjusted for mortality improvement back to the observation period base year of 2006. For healthy retiree mortality, use 93% of the male rates and 99% of the female rates. Adopt the MP-2017 mortality improvement scale.
  - Same mortality basis as Michigan State Police Retirement System

# Recommendations - Other

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- Continue using the same asset valuation method.
- Continue using the entry age cost method and current amortization method.



# Effect on Valuation Results – Pension Valuation as of September 30, 2017

	Present Assumptions	Alternate #1 Assumptions	Alternate #2 Assumptions
<b>Investment Return</b>	<b>7.50%</b>	<b>7.00%</b>	<b>6.75%</b>
<b>Wage Inflation</b>	<b>3.50%</b>	<b>2.75%</b>	<b>2.75%</b>
<b>Mortality Assumptions</b>	<b>Current</b>	<b>Proposed</b>	<b>Proposed</b>
<b>All Other Assumptions</b>	<b>Current</b>	<b>Proposed</b>	<b>Proposed</b>
Employer Normal Cost \$	\$165,592	\$237,188	\$252,577
Administrative and Legal Expenses	<u>481,605</u>	<u>481,605</u>	<u>481,605</u>
Total Normal Cost \$	647,197	718,793	734,182
Total Actuarial Accrued Liability	\$49,950,120	\$51,381,336	\$52,759,359
Funding Value of Assets	<u>4,602,232</u>	<u>4,602,232</u>	<u>4,602,232</u>
Unfunded Actuarial Accrued Liabilities	45,347,888	46,779,104	48,157,127
Funded Ratio - Total	9.2%	9.0%	8.7%
Amortization Payment \$	\$2,895,226	\$2,916,604	\$2,992,989
Total Computed Employer Contribution \$ <sup>(1)</sup>	\$3,542,423	\$3,635,397	\$3,727,171

(1) Contribution amounts presented above would be for fiscal year (FY) 2020 but are illustrative only. Actual FY 2020 contribution amounts are based on pre-experience study results. Our expectation is that the proposed set of actuarial assumptions would first be used for the September 30, 2018 valuation.

# Disclaimers

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- This presentation is intended to be used in conjunction with the September 30, 2017 pension actuarial valuation report and October 1, 2015 through September 30, 2017 Experience Study report. This presentation should not be relied upon for any other purpose other than the purpose described in those reports.
- 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.