




Actuarial Assumption Updates and Impacts


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2020







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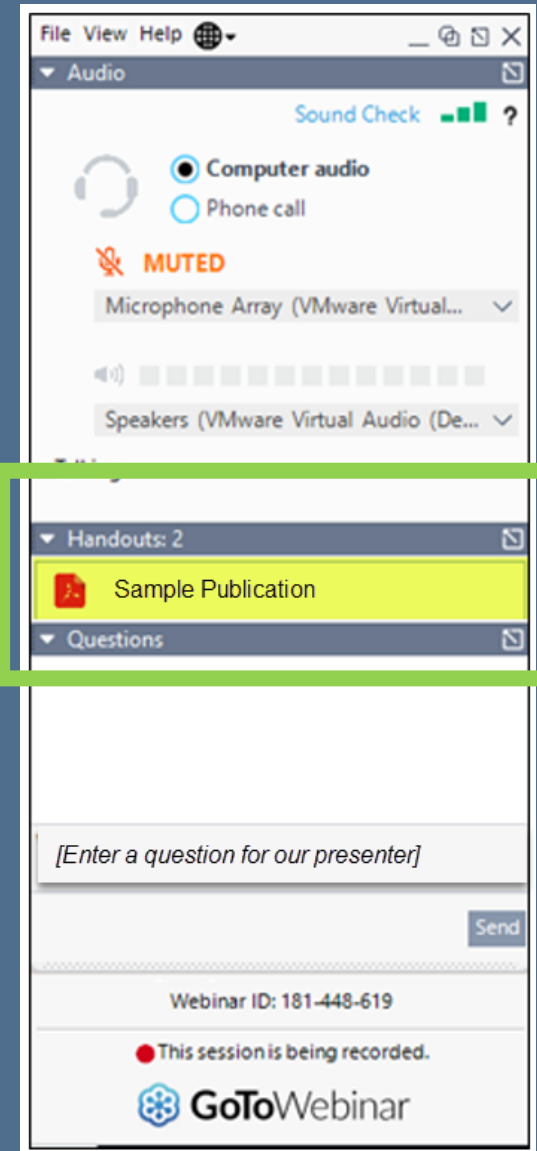
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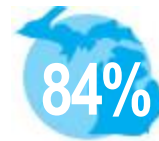
Agenda

- About MERS
- Responsible Funding Practices
- Actuarial Assumptions & Experience Study Updates
- Management Strategies and Actions

About MERS of Michigan

Our mission is to partner with those who serve Michigan communities to provide retirement benefits and related services to support a secure retirement

BY THE NUMBERS



of Michigan's pension plans participate with MERS



participants



in combined total assets

Data as of 3/31/2020

Background

- Benefits are determined at the local level
- As the Plan Fiduciary, MERS role is to ensure that each municipality's plan assets are adequate to provide for the benefits that are expected to be paid
- Our independent, elected board governs MERS with fiscal best practices which promote responsible funding





Responsible Funding Practices

Responsible Funding Practices

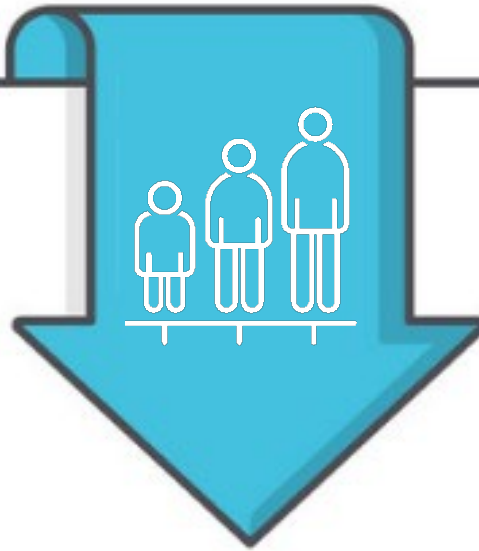
- Required contributions are calculated by an independent accredited actuary using assumptions about future events
- Your required contributions, along with other plan information, is provided to you each year in your Annual Actuarial Valuation
- An actuarial audit is performed regularly
- Assumptions fall into two categories — **economic and demographic**
- As part of our fiduciary responsibility and fiscal best practices, we perform an **Experience Study** every five years to compare actual experience of the plan with the assumptions to determine if changes are needed

Funding Policy Goals & Priorities



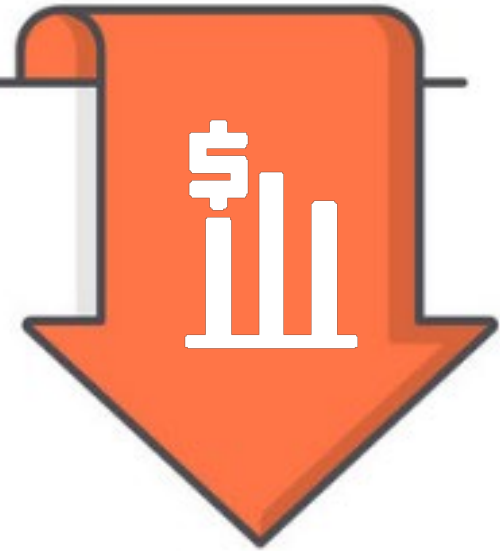
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Adequacy



2

Intergenerational
Equity

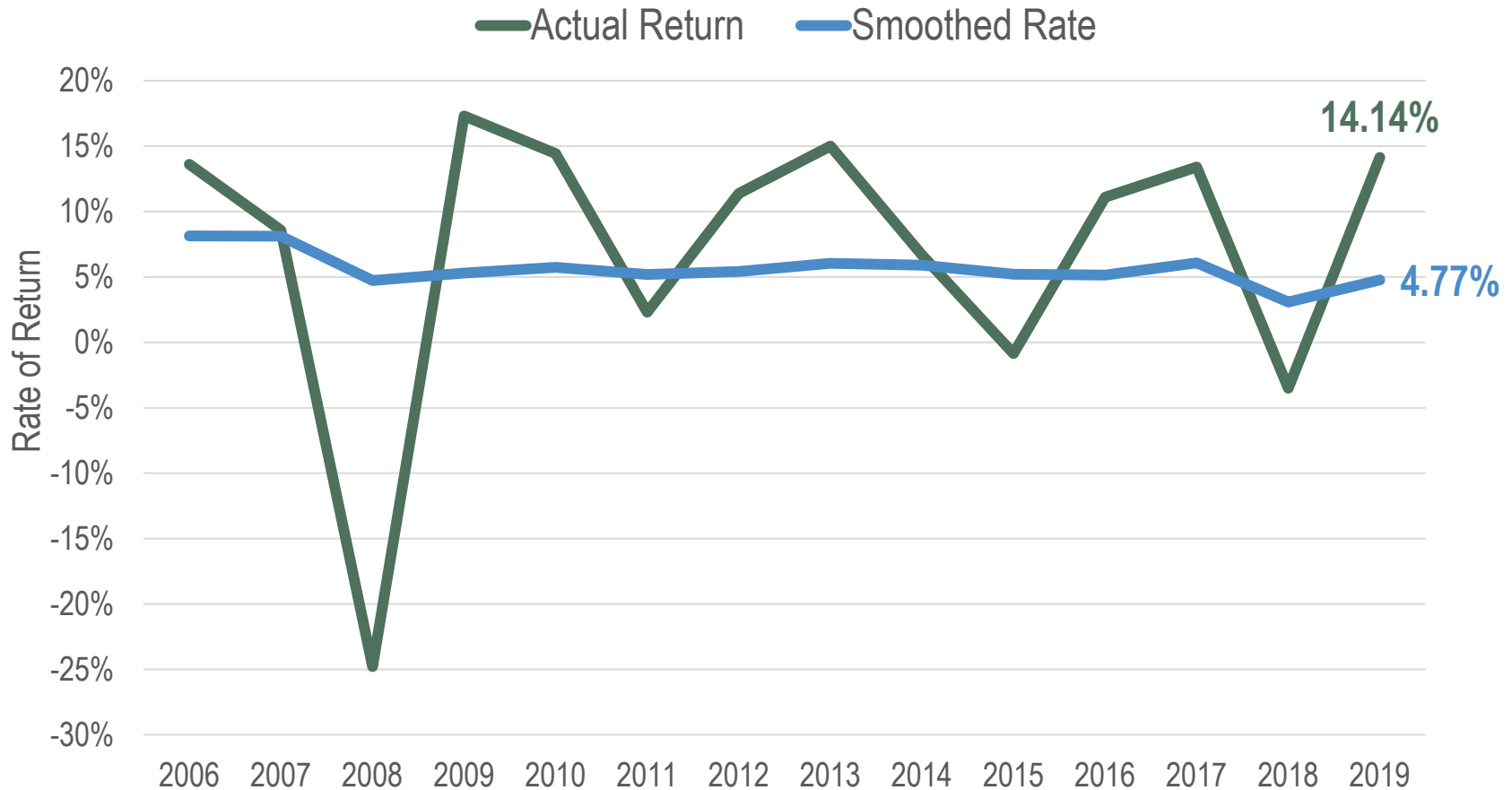


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Contribution
Stability

Effect of Smoothing

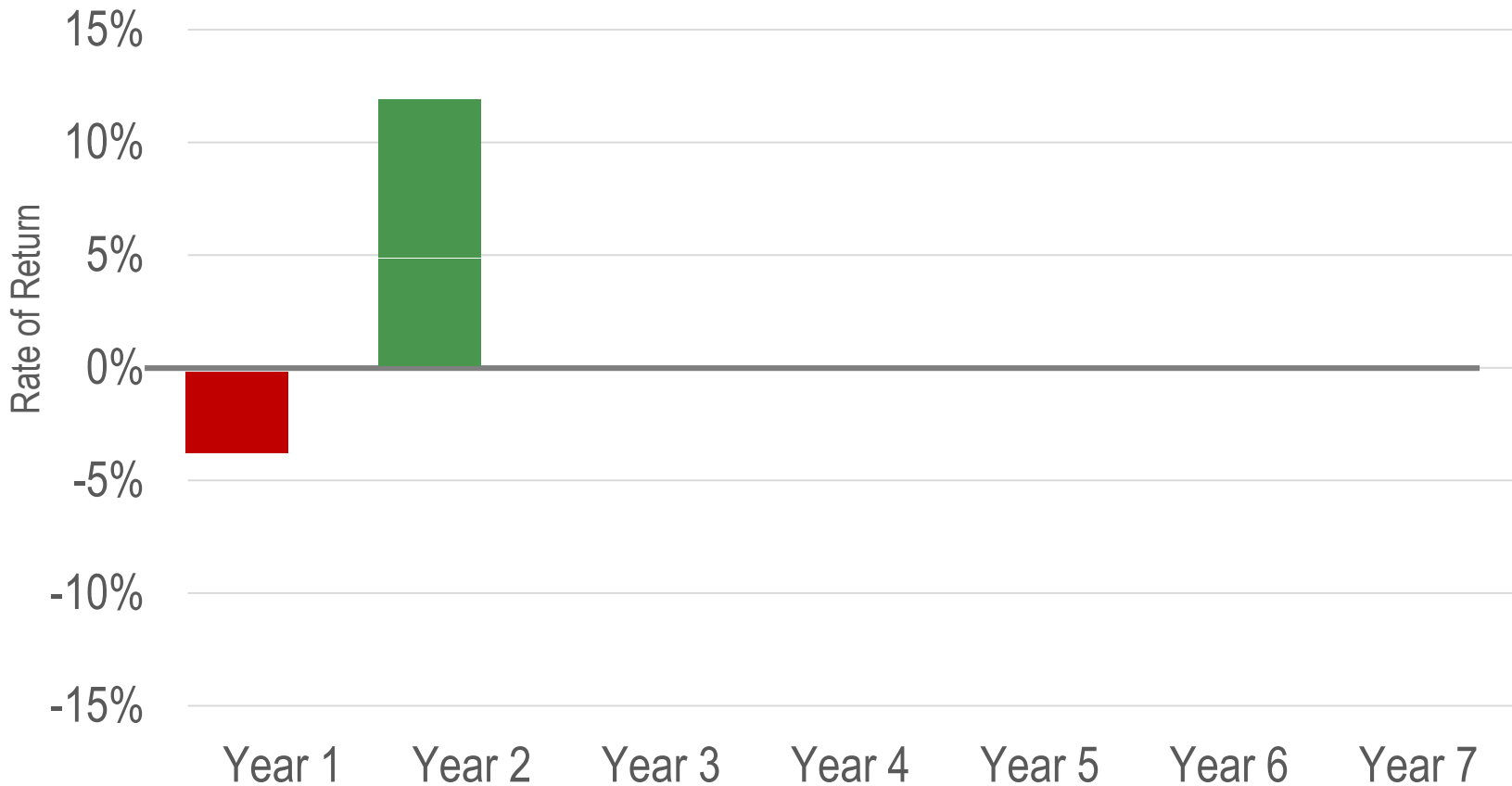
Smoothing is a buffer against extreme fluctuations in the market



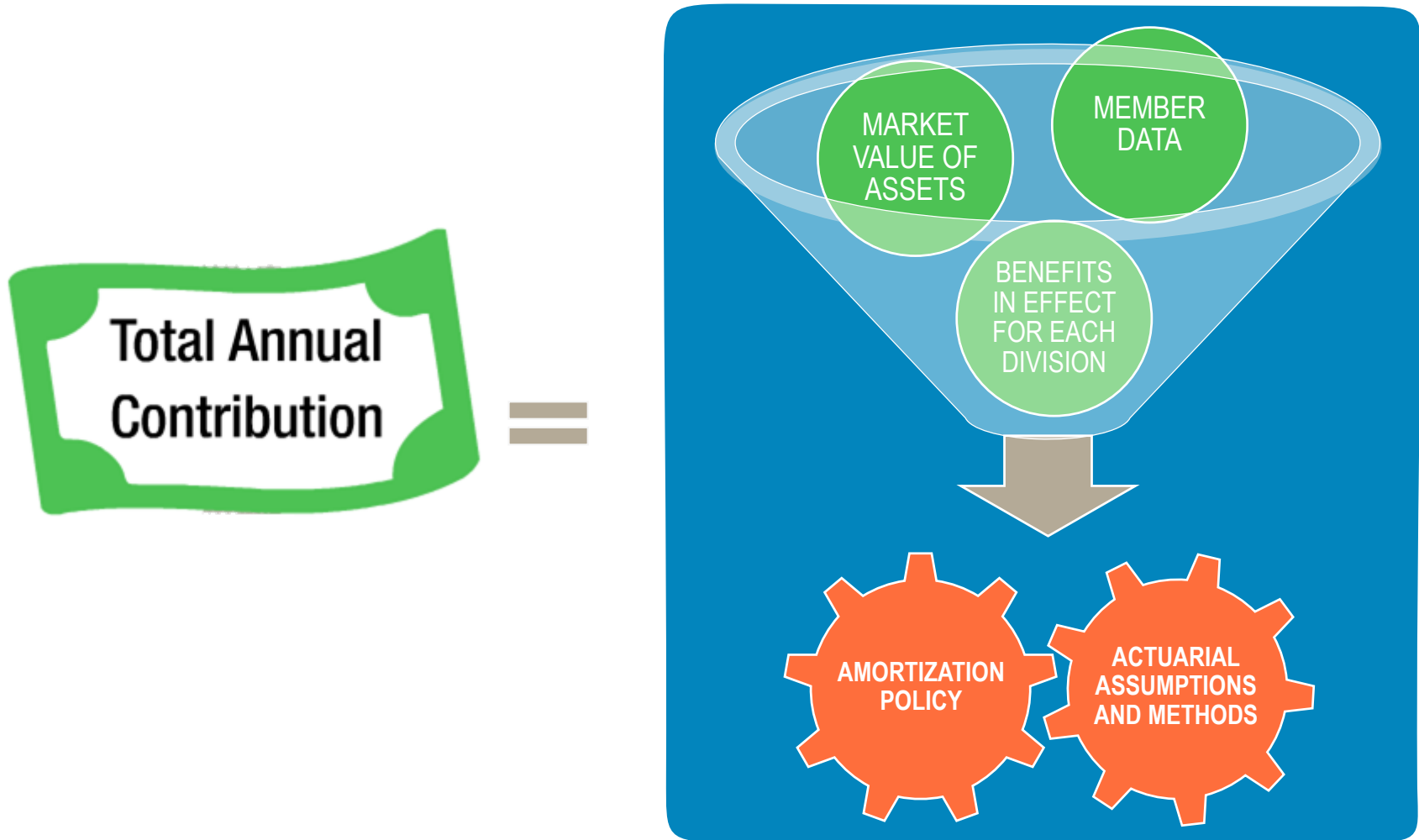
**Investment rate of return is gross of fees*

How Smoothing Works

Spreads investment gains and losses over five years



Calculating the Actuarially Defined Contribution



Timeline

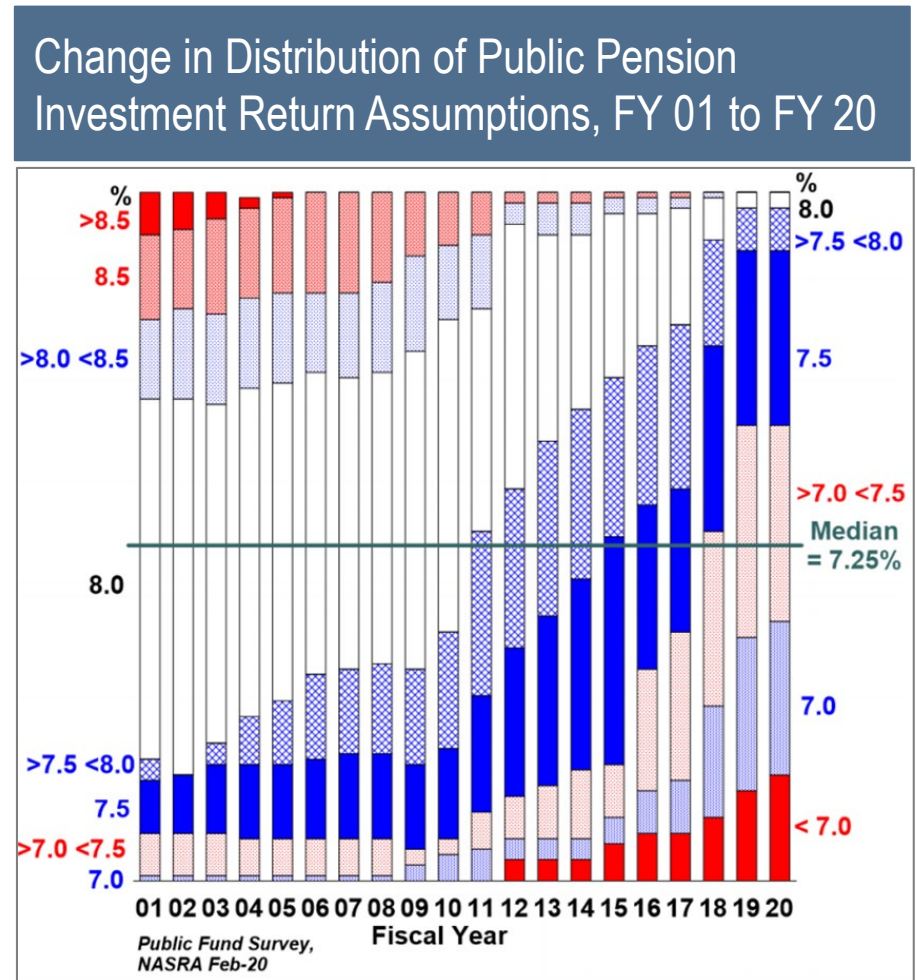
- We understand that giving you advance notice of changes is important
- The economic assumption review was performed first to provide more advance notice
- **Economic assumption** changes were adopted in 2019 and impact FY 2021 contributions
- **Demographic assumption** changes were adopted in 2020 and impact FY 2022 contributions



Actuarial Assumptions & Experience Study Updates

Economic Assumptions

- Plans are reviewing economic assumptions more frequently so plans can make incremental changes on an ongoing basis
- NASRA study of public pension plan investment return assumptions
 - Median rate: 7.25%
 - Lowest rate: 5.25%
 - Highest rate: 8.0%



Investment Rate Review Process

- In mid-2018, GRS conducted an independent analysis of the investment rate assumption
- Used an industry standard tool to review capital market assumptions from independent investment consultants
- Adapted assumptions to MERS' asset allocation policy
- Looking at 10, 20 and 30 year forecasts

MERS Economic Assumptions

- In 2019, the MERS Retirement Board adjusted key economic assumptions

Wage inflation assumption was lowered from 3.75% to 3.00%

Investment rate of return assumption was lowered from 7.75% to 7.35%

- These assumption changes were effective with the 2019 valuation and **will impact FY 2021** contributions



Demographic Assumptions

Key Demographic Assumptions

- Early 2020, the MERS Retirement Board approved changes to demographic assumptions
- Key changes were made to:







Mortality

- Estimate of how long each individual is expected to live and consequently how long each individual is expected to receive a pension
- Life expectancies have generally increased over time
- Society of Actuaries issued Pub-2010 mortality table in 2019
 - Separate assumptions for males and females
 - Table was then adapted to MERS' experience on a liability-weighted basis

Mortality Improvement

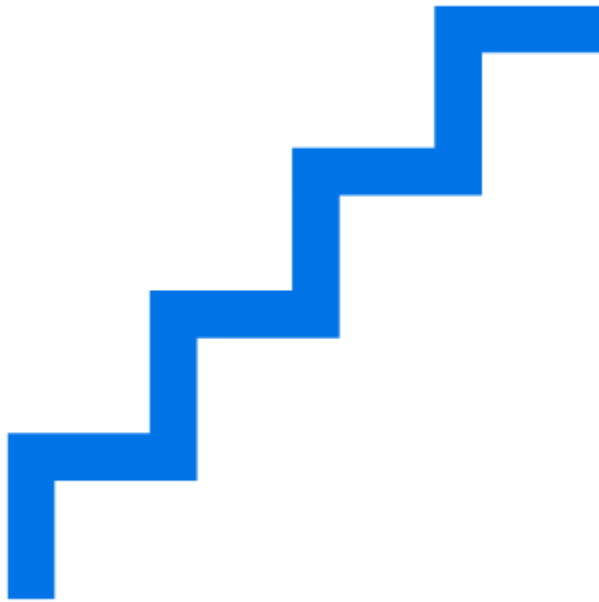
This assumption recognizes that mortality rates continue to improve over time

Life Expectancies of the U.S. Population

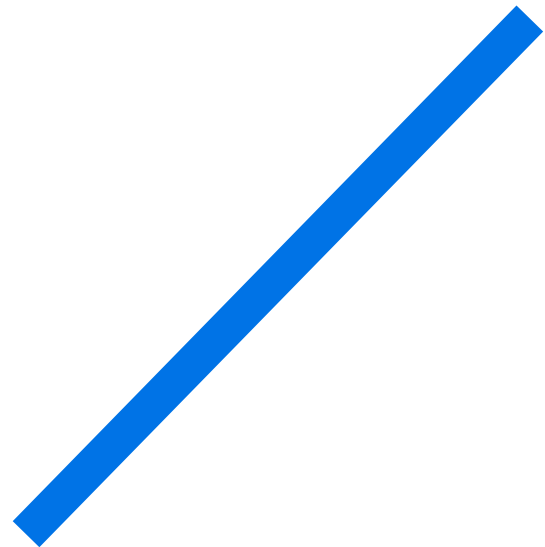
Year	 From Birth	 From Birth	 Age 65	 Age 65
1935	59.4	63.3	76.9	78.2
2010	75.4	80.0	81.6	84.2
2050 Projection	79.5	83.6	83.9	86.4

Source: Social Security Administration, Actuarial Study Number 120

Mortality Improvement Types



Static



Fully Generational

Retirement Rates

- Overall, actual retirement experience was similar to the assumed experience
- There is strong evidence that Public Safety Retirement rates differ from those of other employees

	Exposures	Actual	Expected	A/E
Public Safety	1,290.2	454.9	383.2	119%
All Others	5,450.3	1,340.9	1,411.3	95%

- A higher incidence of retirements versus the current assumption suggests Public Safety need to be separately rated

Withdrawal Rates

- Overall, actual withdrawal experience was similar to the assumed experience
- There is strong evidence that Public Safety Withdrawal rates differ from those of other employees

	Exposures	Actual	Expected	A/E
Public Safety	4,879.1	114.2	162.4	70%
All Others	7,633.7	343.4	290.9	118%

- A lower incidence of withdrawals versus the current assumption suggests Public Safety need to be separately rated

Summary of Demographic Impacts

Summary of changes:

Mortality

- Likely to increase cost for divisions with more females and possibly decrease cost for divisions with more males

Mortality Improvement

- Likely to increase cost for most divisions
- Younger active workforces may see the highest increases
- A few retiree-only divisions with older populations may see a decrease

Retirement and Withdrawal Experience

- Generally, an increase for public safety divisions and possibly a decrease for other employee divisions

- Changes will be effective with the 2020 valuation and will impact FY 2022 contributions
- The 2019 Annual Actuarial Valuation reports have a “what-if” scenario showing projected costs under the new demographic assumptions for reference



Tools & Short-Term Impact Relief

Forecasting Tools

- Contributions are calculated based upon assumptions about future events which may or may not materialize
- The Annual Actuarial Valuation provides alternative scenarios and projections to assist with planning:
 - More conservative investment outcome (5.35% vs 7.35%)
 - Estimated impact of demographic assumption changes
- MERS strongly encourages employers to contribute more than the minimum required contributions

Short-Term Impact Relief

Optional Phase-In

- By default, contributions will reflect the full impact of the demographic assumption changes
- For those that need more time, there is an option to phase in the demographic assumption changes over **four years**

Amortization Extension

- Employers may request an analysis to determine if an amortization extension is possible
- Extending the amortization period defers costs into the future, resulting in higher long-term costs

Contacting Your Regional Manager



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Terra Langham



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Matt Taylor



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Tony Radjenovich



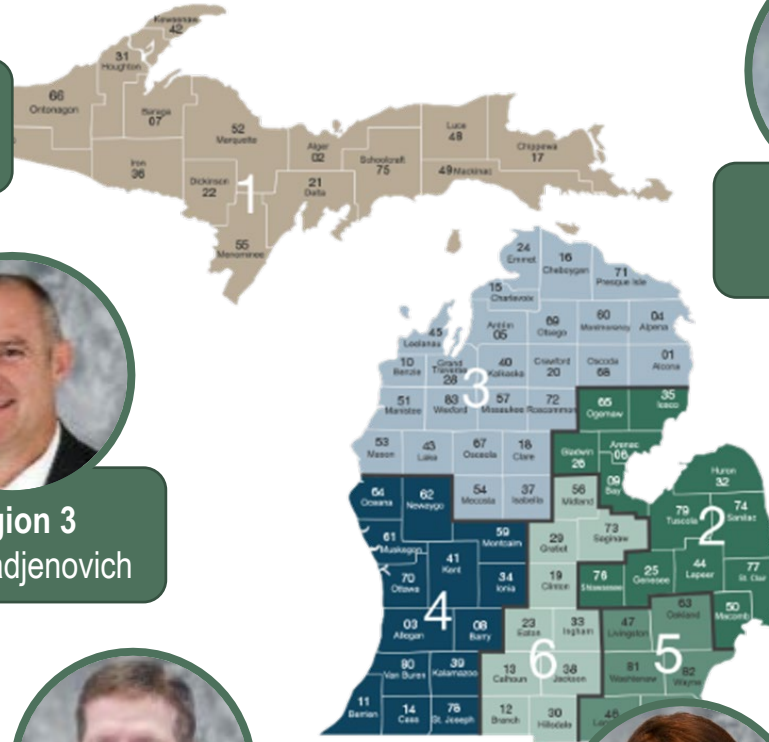
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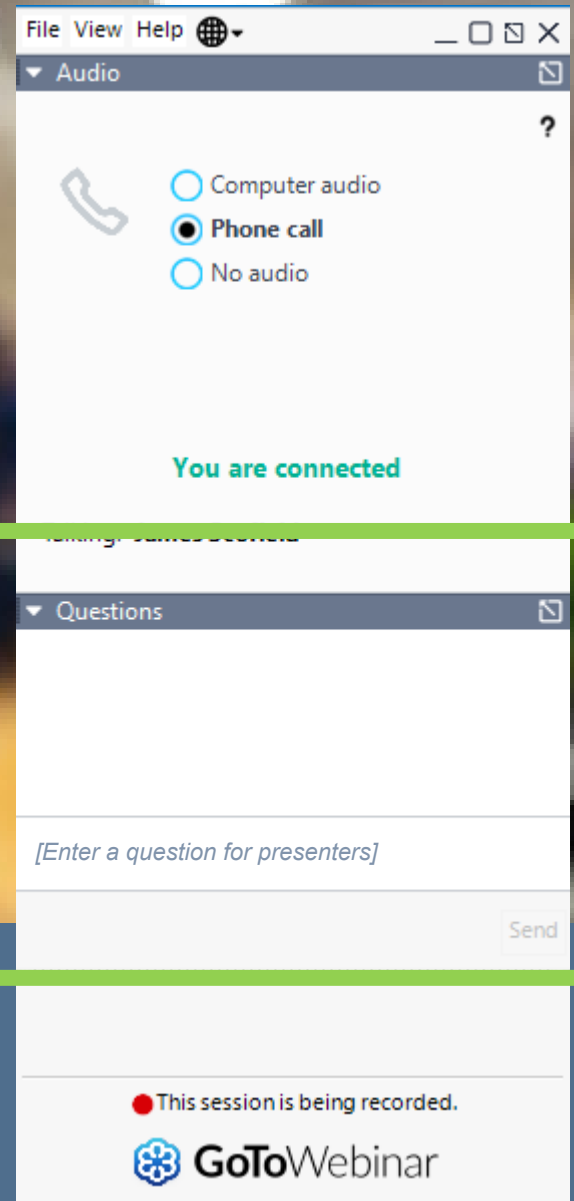
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