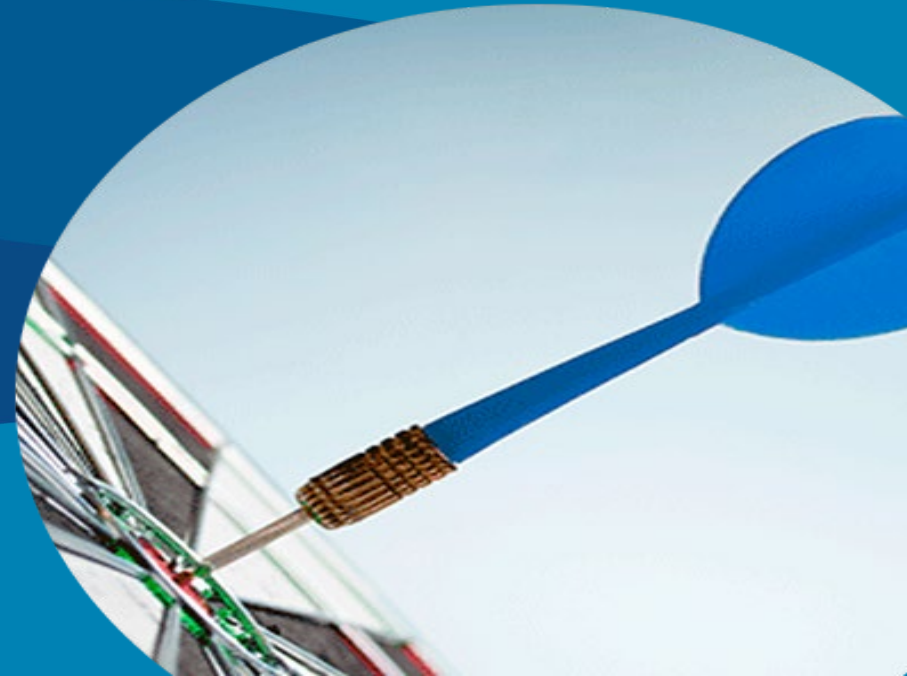




Employer Contribution Rates: Summary of 2024 Actuarial Valuation Results

Missouri LAGERS Annual Meeting
October 25, 2024

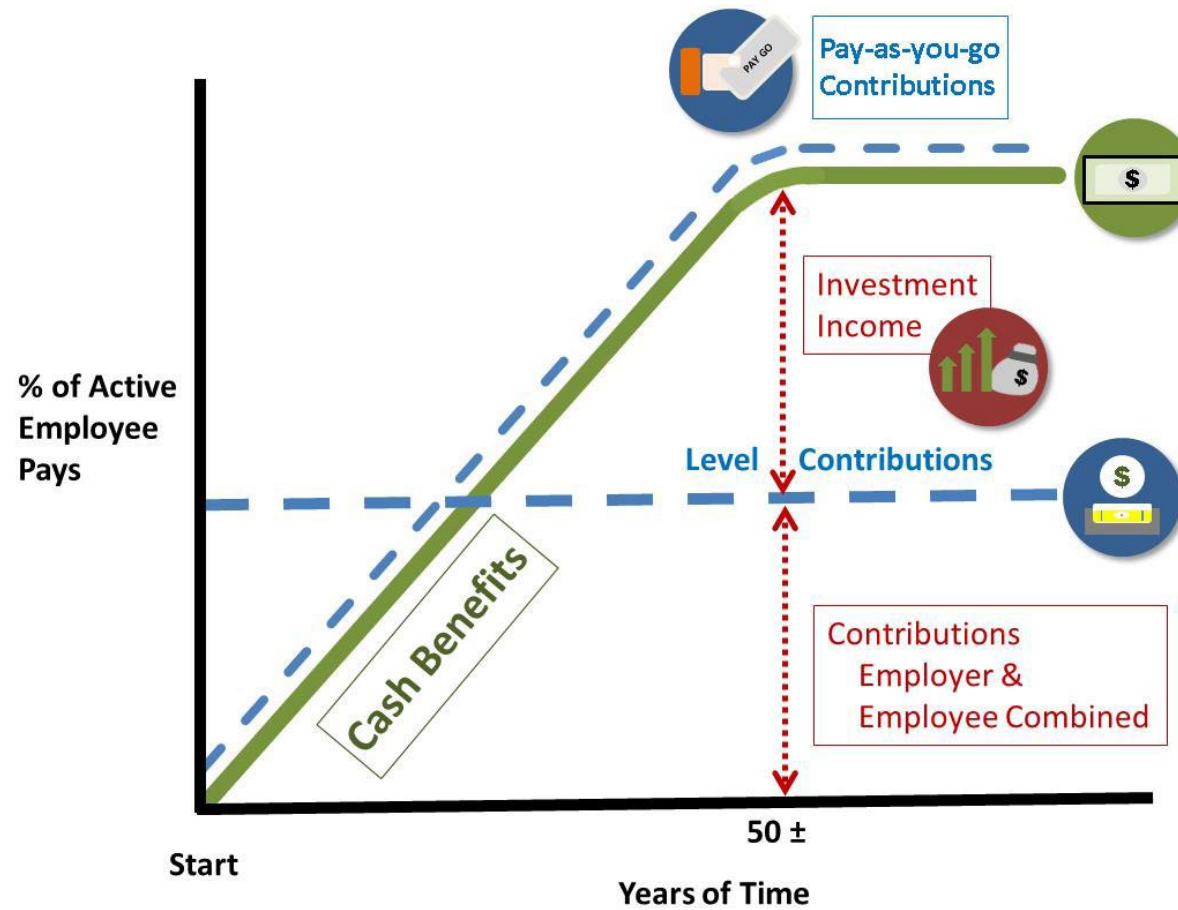
Presented by: Mita D. Drazilov, ASA, FCA, MAAA
Judith A. Kermans, EA, FCA, MAAA



56th Annual Actuarial Valuations

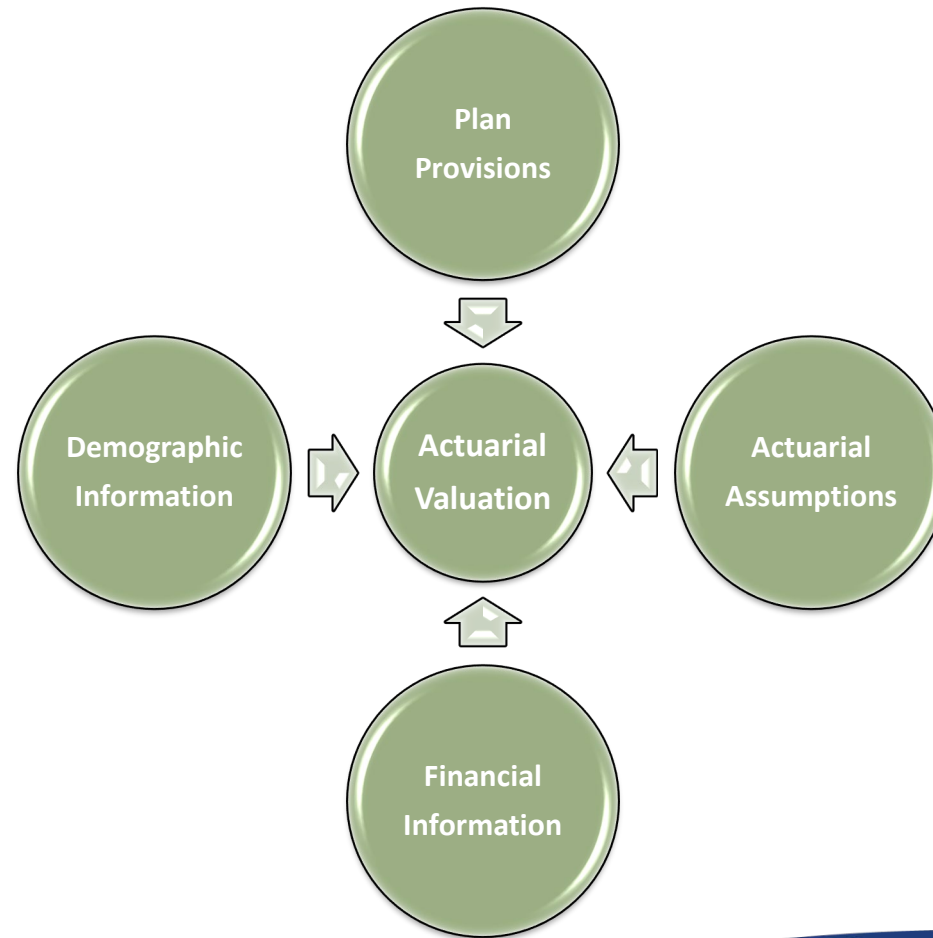
- Actuarial valuations of individual participating employers are made for the purposes of:
 - Revising employer contribution rates for fiscal years beginning in 2025
 - Examining the reserve strength of each separately experience-rated group
- Actuarial valuations are also made of retired life benefits being paid from the Benefit Reserve Fund to determine the financial condition of this pooled fund

Funding Philosophies



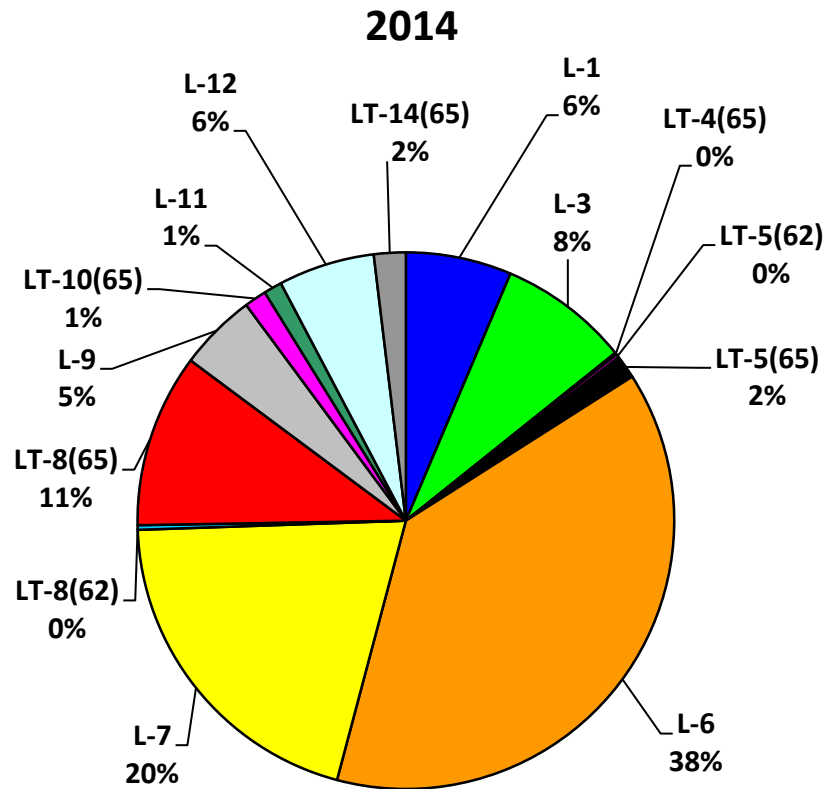
Actuarial Valuation Process

- The actuarial valuation is a mathematical process used to project future payments based on specified benefit provisions
- These projected payouts are converted to equivalent present value amounts and a corresponding level percent-of-payroll contribution rate is determined

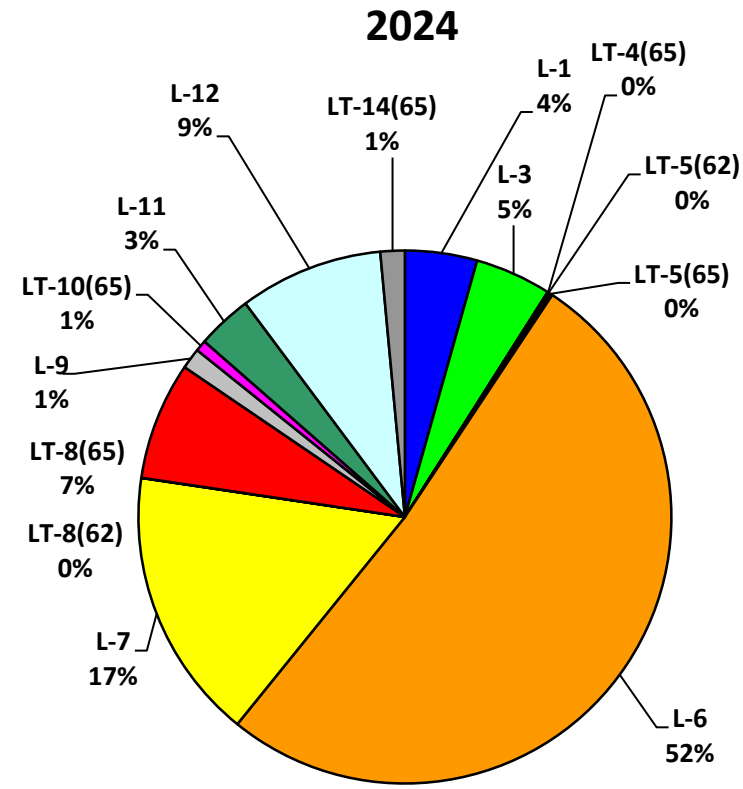


Benefit Programs – 2014 vs. 2024

By Active Membership



Avg. Benefit Multipliers: Life: 1.67%, Temporary: 0.08%



Avg. Benefit Multipliers: Life: 1.78%, Temporary: 0.04%

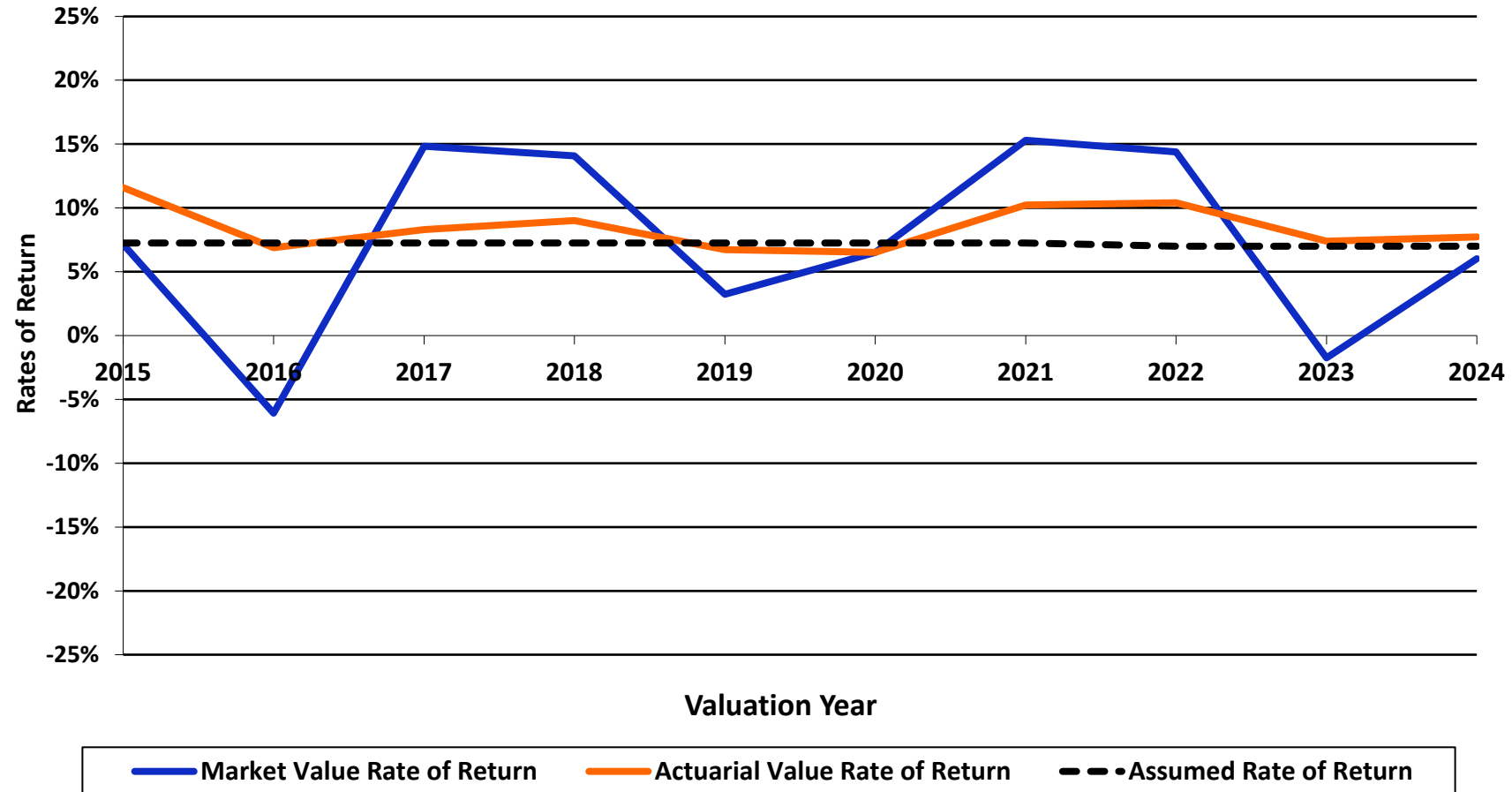
Introduction – Risk Areas

- Decrement Risk Areas
 - Rates of withdrawal
 - Rates of disability
 - Rates of retirement
 - Rates of mortality
- Economic Risk Areas
 - Investment return
 - Inflation
 - Patterns of salary increases

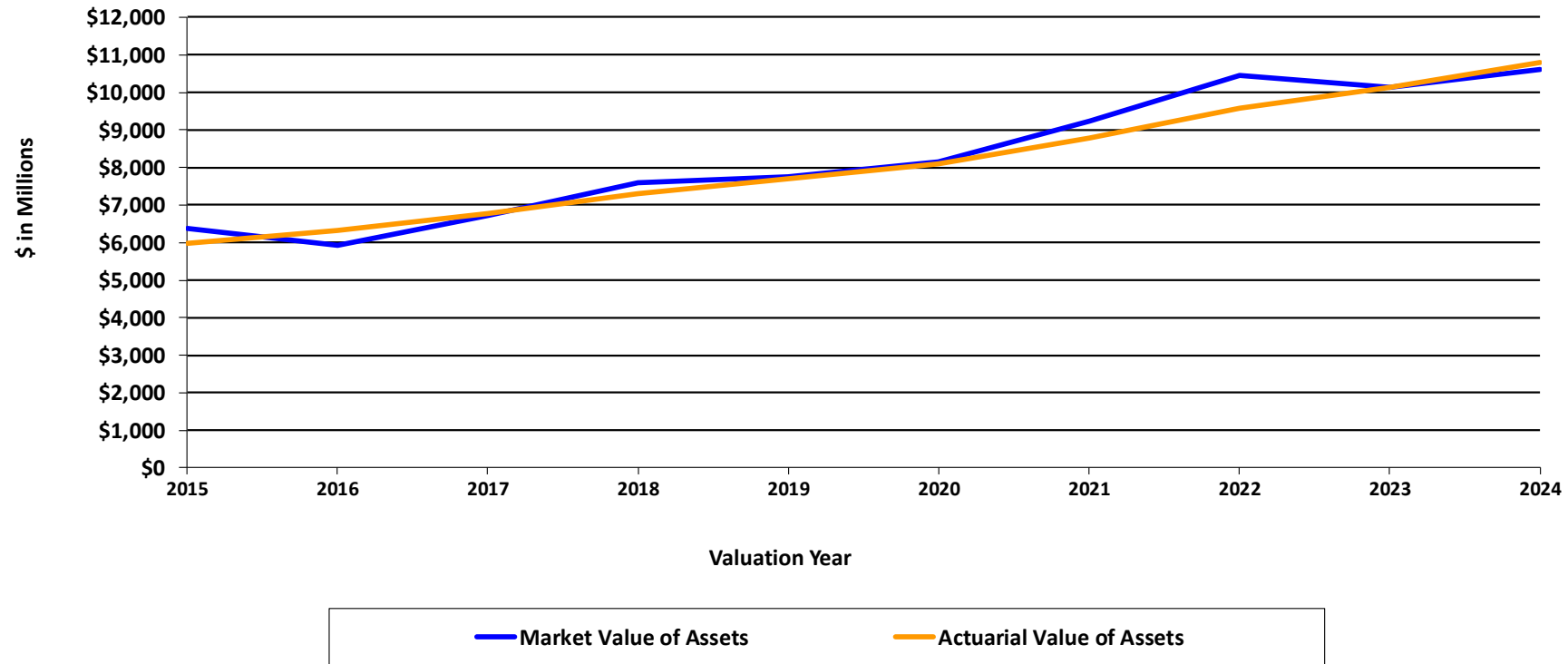
Actuarial Value of Assets

- Reported market values are converted to an actuarial value of assets for valuation purposes.
- Actuarial value of assets recognizes assumed investment return fully each year. Differences between market return and assumed return are phased-in over a closed 5-year period.
- Actuarial value of assets is not permitted to deviate from market value by more than 20% (introduced in the 2003 valuations).

Asset Rates of Returns



Market Value vs. Actuarial Value



Components of Employer Contribution Rates

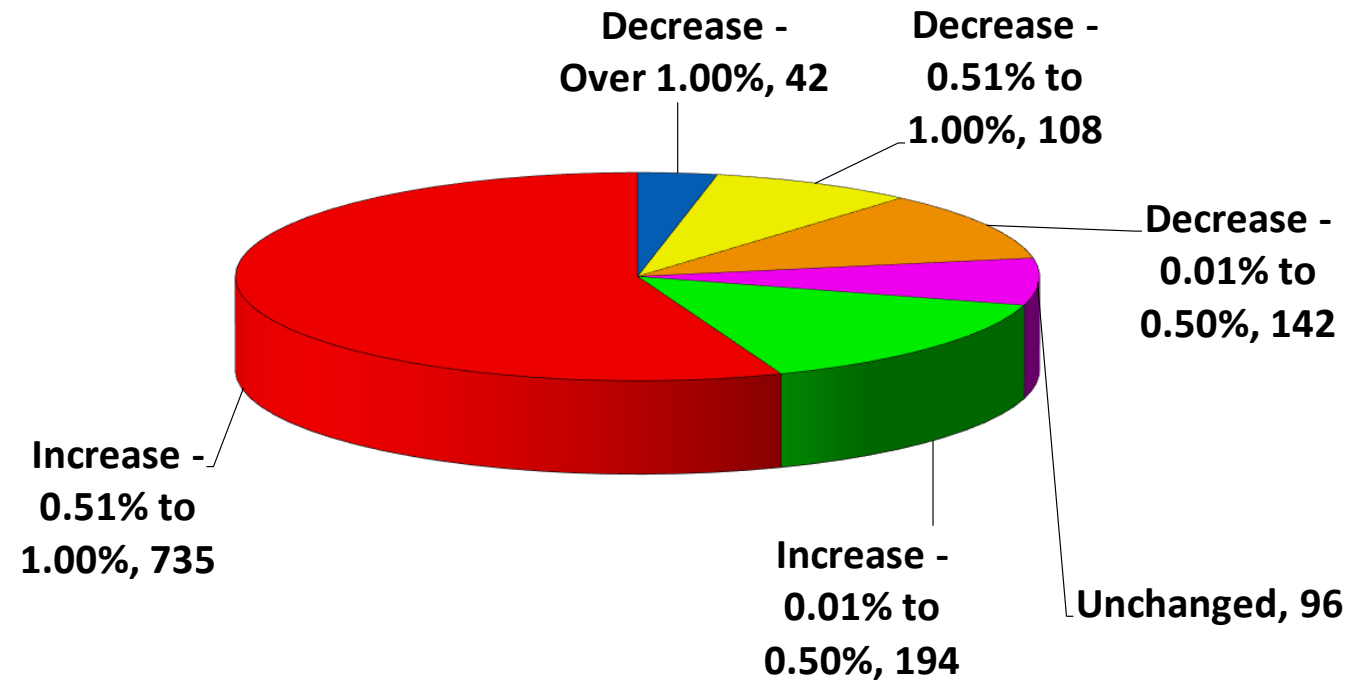
- Normal Cost Rate
 - Cost associated with an active member accruing an additional year of service credit
- Casualty Rate
 - “Pooled” cost associated with disability and duty death-in-service benefits
- Prior Service Cost Rate
 - Cost associated with the amortization of the difference between actuarial accrued liabilities and the actuarial value of assets

Change in Employer Contributions

Valuation Date	Decreases	Unchanged	Increases	Total
2-28-2015	738	80	244	1,062
2-29-2016*	255	53	759	1,067
2-28-2017	397	105	576	1,078
2-28-2018	494	135	487	1,116
2-28-2019	385	105	651	1,141
2-29-2020	342	94	771	1,207
2-28-2021*	659	97	469	1,225
2-28-2022	585	116	544	1,245
2-28-2023	343	107	822	1,272
2-29-2024	292	96	929	1,317

* Revised actuarial assumptions.

Change in Employer Contributions



Recent Valuation Results (\$ in Billions)

	2020	2021	2022	2023	2024	5 Year Average
Market Value Rate of Return	6.51%	15.30%	14.39%	(1.75)%	6.02%	7.91%
Funding Value Rate of Return	6.52%	10.22%	10.40%	7.39%	7.73%	8.44%
Market Value of Assets	\$ 8.137	\$ 9.246	\$ 10.457	\$ 10.141	\$ 10.620	
Funding Value of Assets	\$ 8.084	\$ 8.777	\$ 9.572	\$ 10.141	\$ 10.792	
Actuarial Accrued Liability	\$ 8.631	\$ 9.182	\$ 9.922	\$ 10.659	\$ 11.556	
Unfunded Actuarial Accrued Liability	\$ 0.547	\$ 0.405	\$ 0.350	\$ 0.518	\$ 0.764	
Funded Ratio	93.7%	95.6%	96.5%	95.1%	93.4%	
BRF Actuarial Accrued Liability	\$ 3.824	\$ 3.943	\$ 4.323	\$ 4.722	\$ 5.136	
BRF Funding Value of Assets	\$ 4.122	\$ 4.615	\$ 5.141	\$ 5.573	\$ 6.023	
BRF Reserve for Future Experience	\$ 0.298	\$ 0.672	\$ 0.818	\$ 0.851	\$ 0.887	
BRF Unfunded Actuarial Accrued Liability	\$ -	\$ -	\$ -	\$ -	\$ -	
BRF Funded Ratio	107.8%	117.1%	118.9%	118.0%	117.3%	
Average Total Contribution Rates (Capped)	14.38%	14.15%	14.25%	14.97%	15.82%	
Average Total Contribution Rates (Uncapped)	14.76%	14.39%	14.41%	15.39%	16.42%	
(as a % of payroll)						

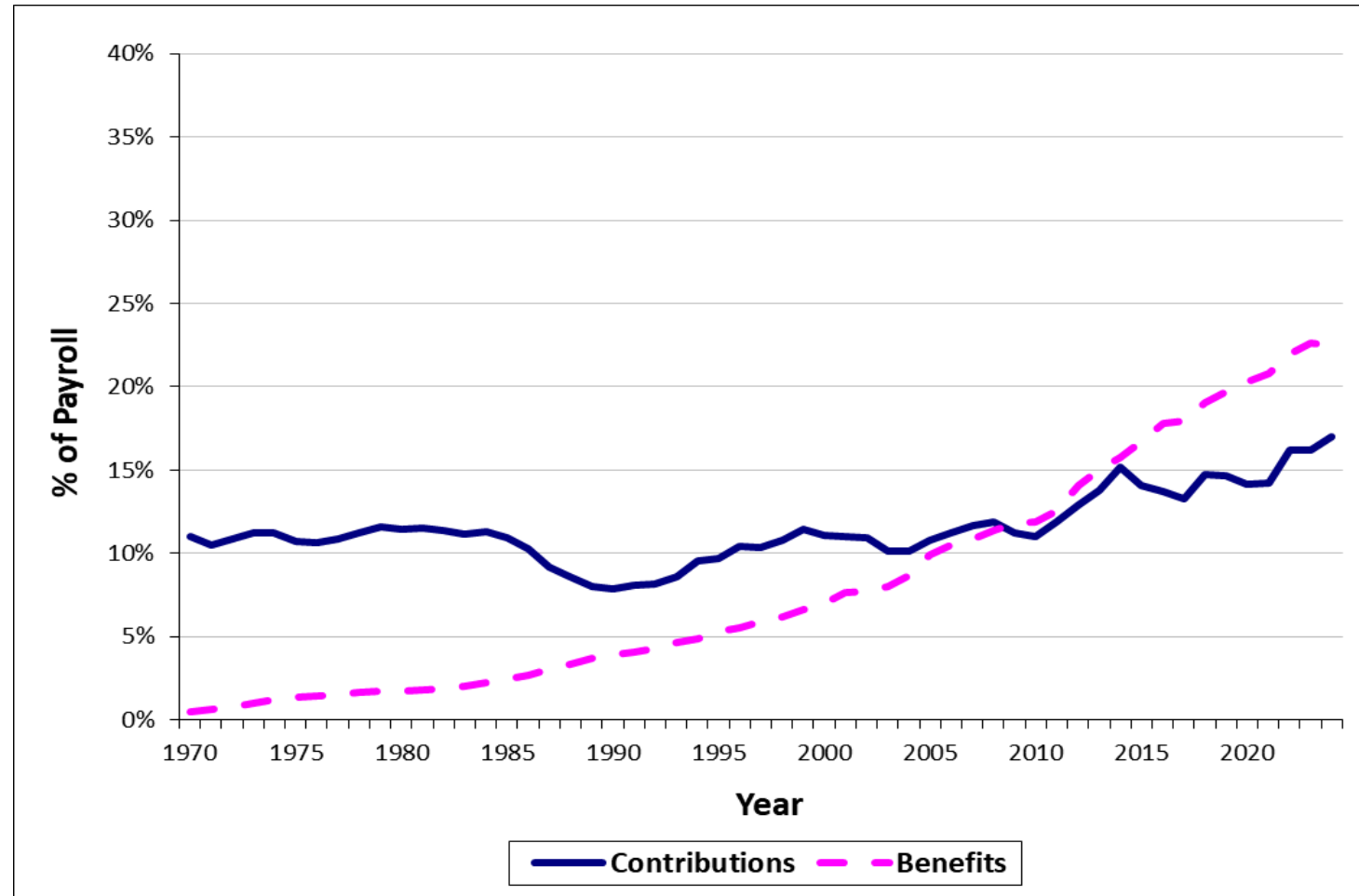
Uncapped Contribution Rate

- Uncapped employer contribution rate as a % of payroll
 - Determined annually for each employer
 - Reflects actuarial experience during the year
 - Such as investment gains/losses
 - Increases are not limited

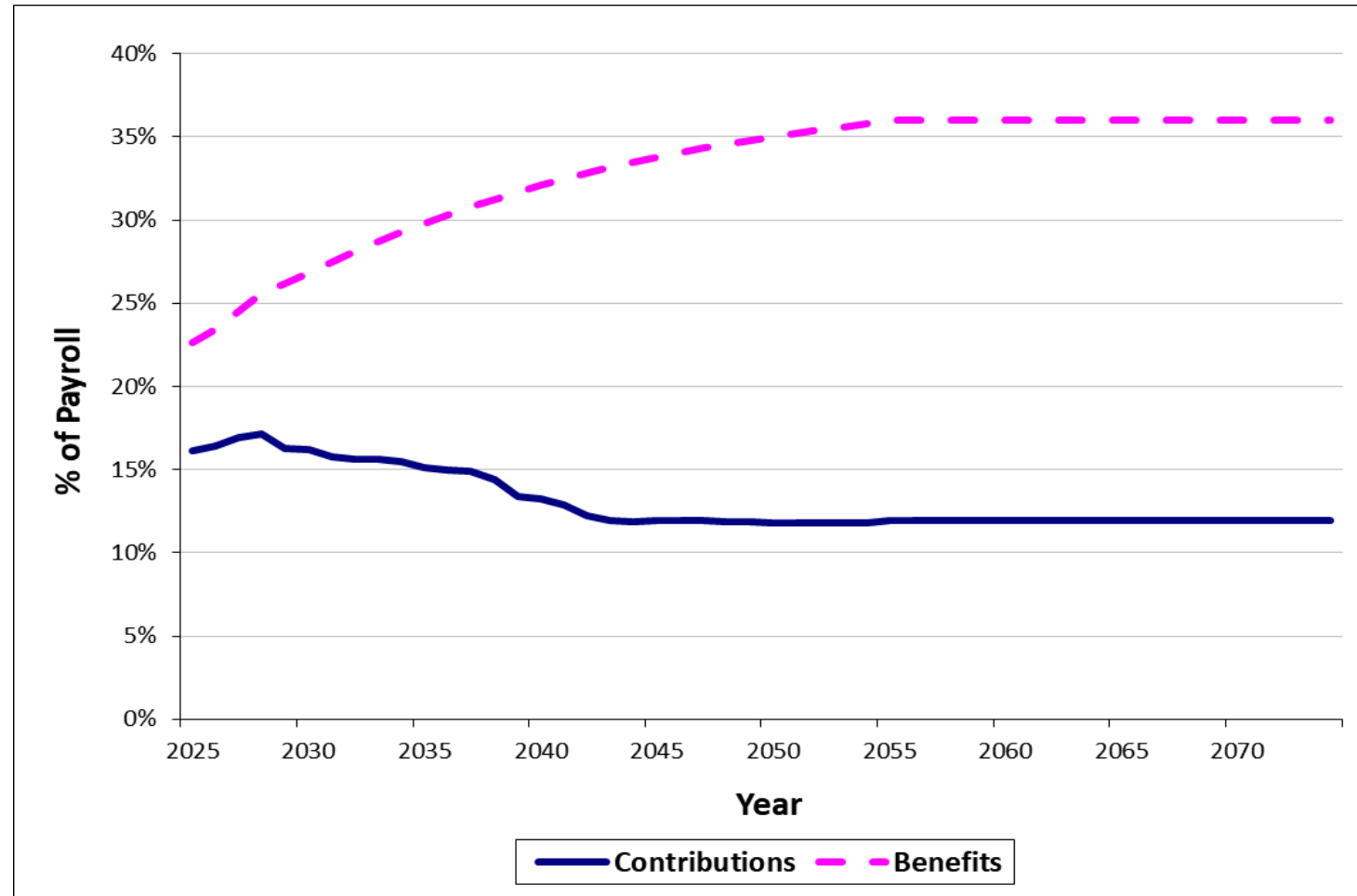
Capped Contribution Rate

- Capped employer contribution rate as a % of payroll
 - Often will equal the uncapped rate
 - However, Section 70.730 of the Revised Statutes of Missouri limits the increase to one percent of payroll each year
 - Not including the effects of any benefit changes
 - In the absence of future actuarial gains, the capped rate is expected to increase by 1% of payroll each year until it equals the uncapped rate

Historical Total Contribution Income (Employer plus Member) and Benefit Payout



Projected Total Contribution Income (Employer plus Member) and Benefit Payout



Summary

- Actuarial valuations were performed for 1,317 valuation groups
 - 488 groups are at the 1% “employer cap”
- Funded ratio of the System decreased to 93.4% as of February 29, 2024 from 95.1% as of February 28, 2023
- BRF funded ratio decreased to 117.3% as of February 29, 2024 from 118.0% as of February 28, 2023
 - BRF reserve for future experience is approximately \$887 million

Disclosures

- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Mita D. Drazilov and Judith A. Kermans 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.
- This is one of multiple documents comprising the actuarial report. Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the report titled “Compiled 56th Annual Actuarial Valuation as of February 29, 2024.”
- 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 using this presentation.



Up Next

Stakeholder Relations & Customer Experience

9:30 a.m. Windgate 62-64 (here)

-or-

Working After Retirement, COLAs, and Taxes

9:30 a.m. Paradise A (across the hall)





Stakeholder Relations & Customer Experience



MISSOURI LAGERS



Strengthen Stakeholder Relations

- Improve education & training for our employers
- Increase financial confidence of our members
- Enhance relationships with all stakeholders



LAGERS' Stakeholders

LAGERS' stakeholders have a vested interest in our organization and can affect or be affected by its operations and performance.



Engaging Our Stakeholders

Live Events



Awards, Certifications, & Recognition

Print & Digital Media



Measuring Stakeholder Relations

A decorative graphic consisting of a thick dark blue horizontal line. In the center of this line is a small dark blue downward-pointing triangle. Below the dark blue line are two thinner, parallel gold-colored horizontal lines that extend across the width of the slide, starting and ending at the same points as the dark blue line.

Stakeholder Perception Survey

The Purpose of This Survey

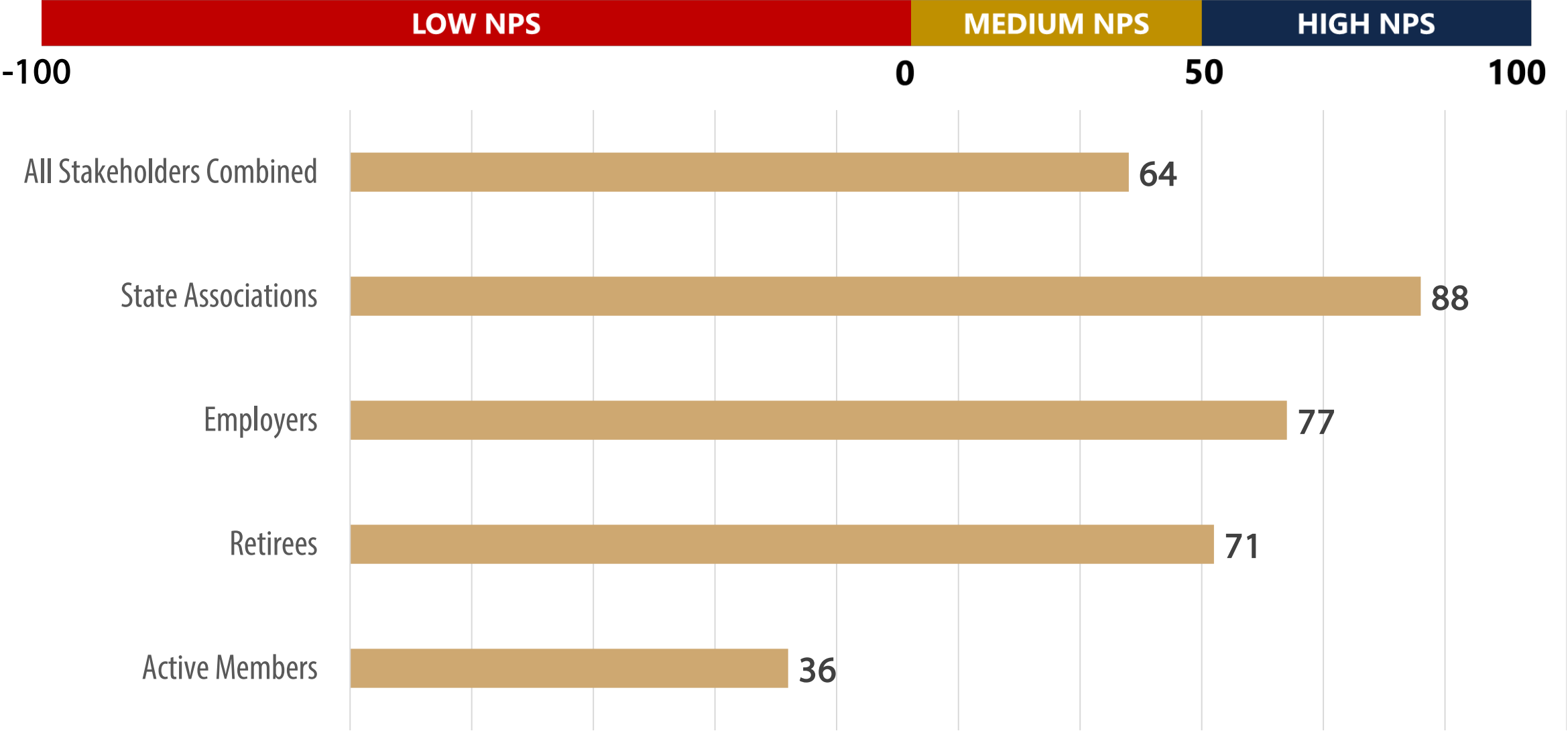
- Gain insights from our stakeholders about their perceptions of LAGERS
- Data collected from this survey helps fine-tune our behavior to protect and enhance LAGERS' reputation

Survey Structure

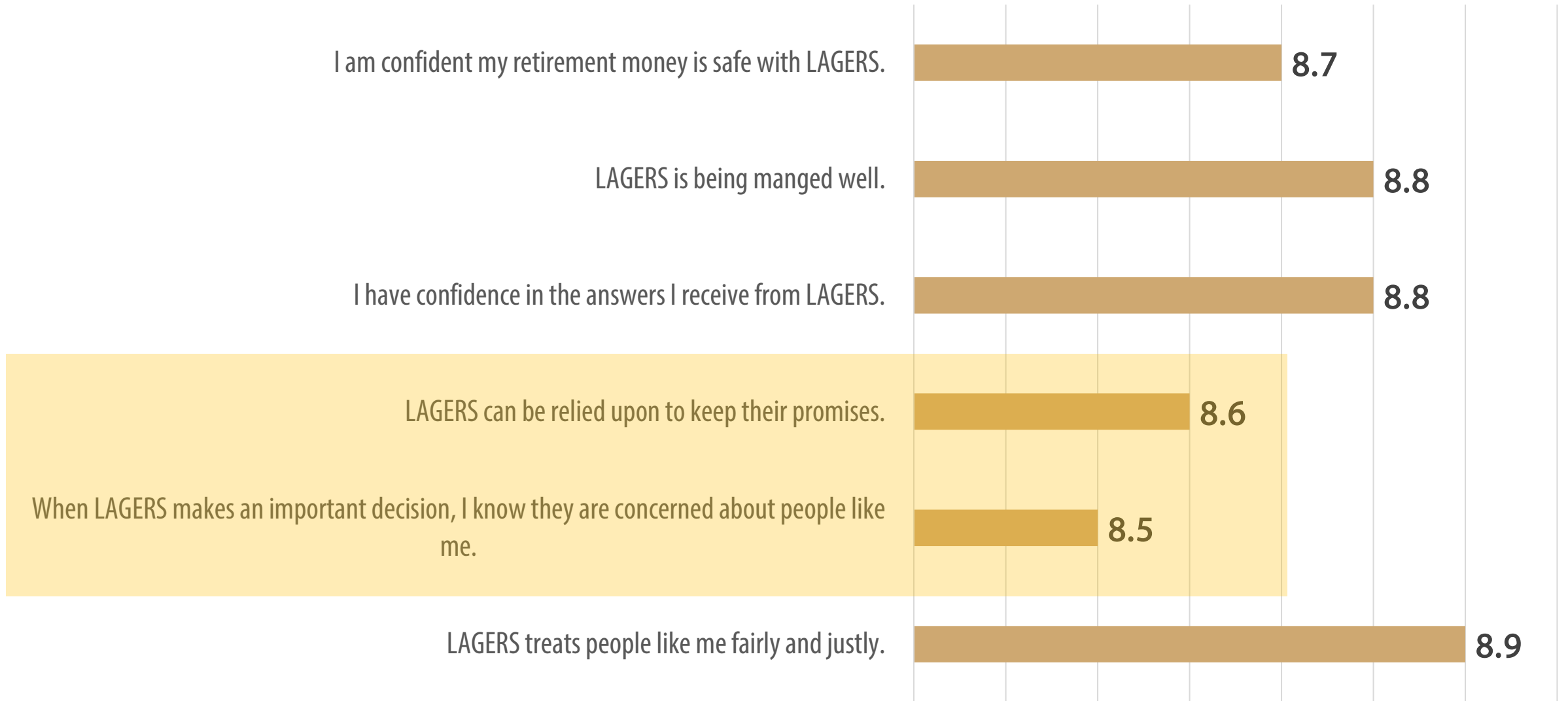
- 1 question to determine LAGERS' Net Promoter Score
- 2 questions to measure LAGERS' integrity
- 2 questions to measure LAGERS' dependability
- 2 questions to measure LAGERS' competence
- Opportunities for open comments

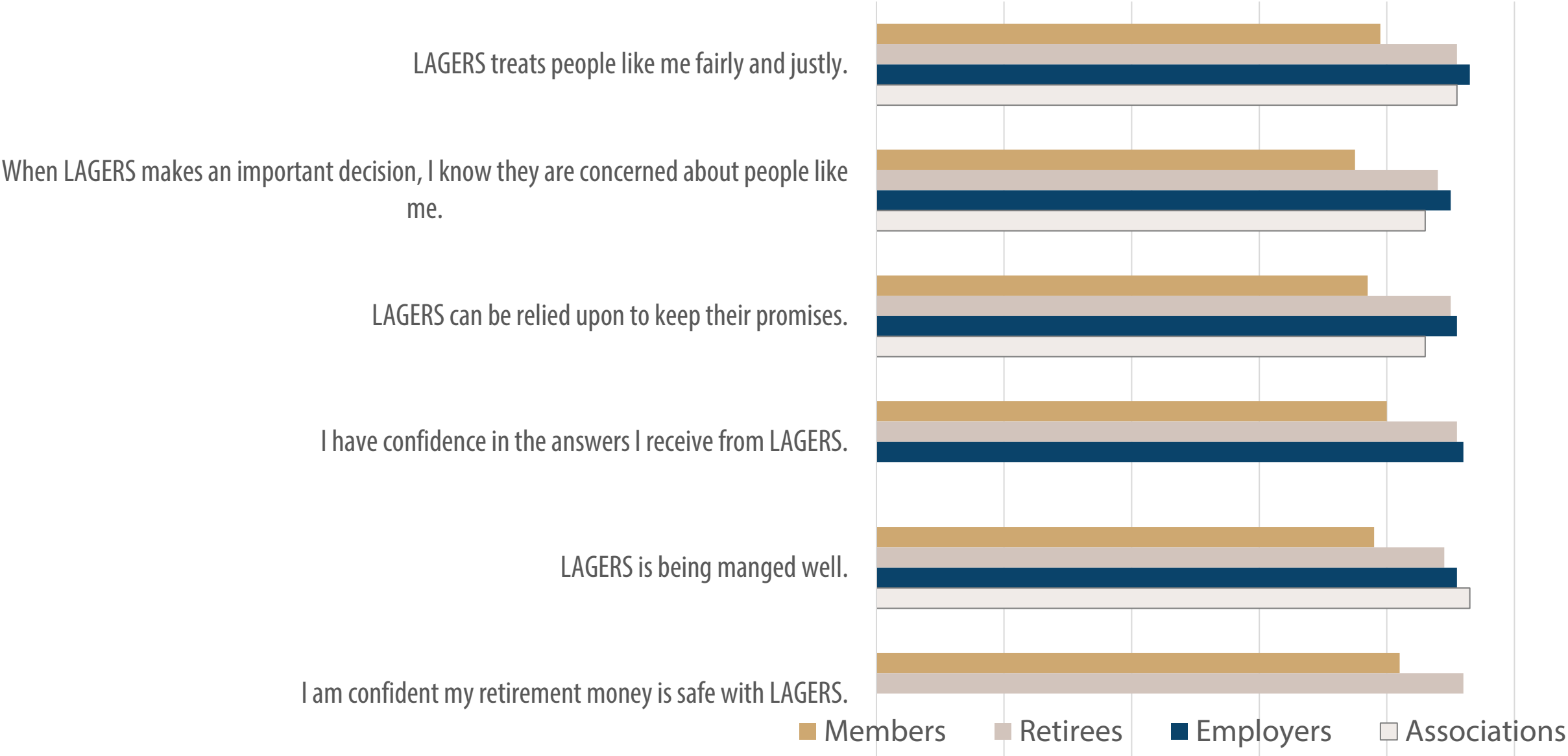


Net Promoter Score



Measuring Integrity, Dependability, and Competence





Key Takeaways

Customer satisfaction with LAGERS' staff interactions remains high.

Stakeholders who have interacted with LAGERS have a more positive perception of the organization.

Customers desire more information, education, and enhancements to online portals.



Planned Actions

- Increase interactions with active members
- Enhance online member tools
- Enhance online employer experience
- Increase information and education for employers
- Improve financial and actuarial reports



Measuring Customer Experience

A decorative graphic consisting of a thick dark blue horizontal line. In the center of this line is a small, solid dark blue downward-pointing triangle. Below the dark blue line are two thinner, parallel light orange horizontal lines that extend across the width of the slide, starting and ending at the same points as the dark blue line.

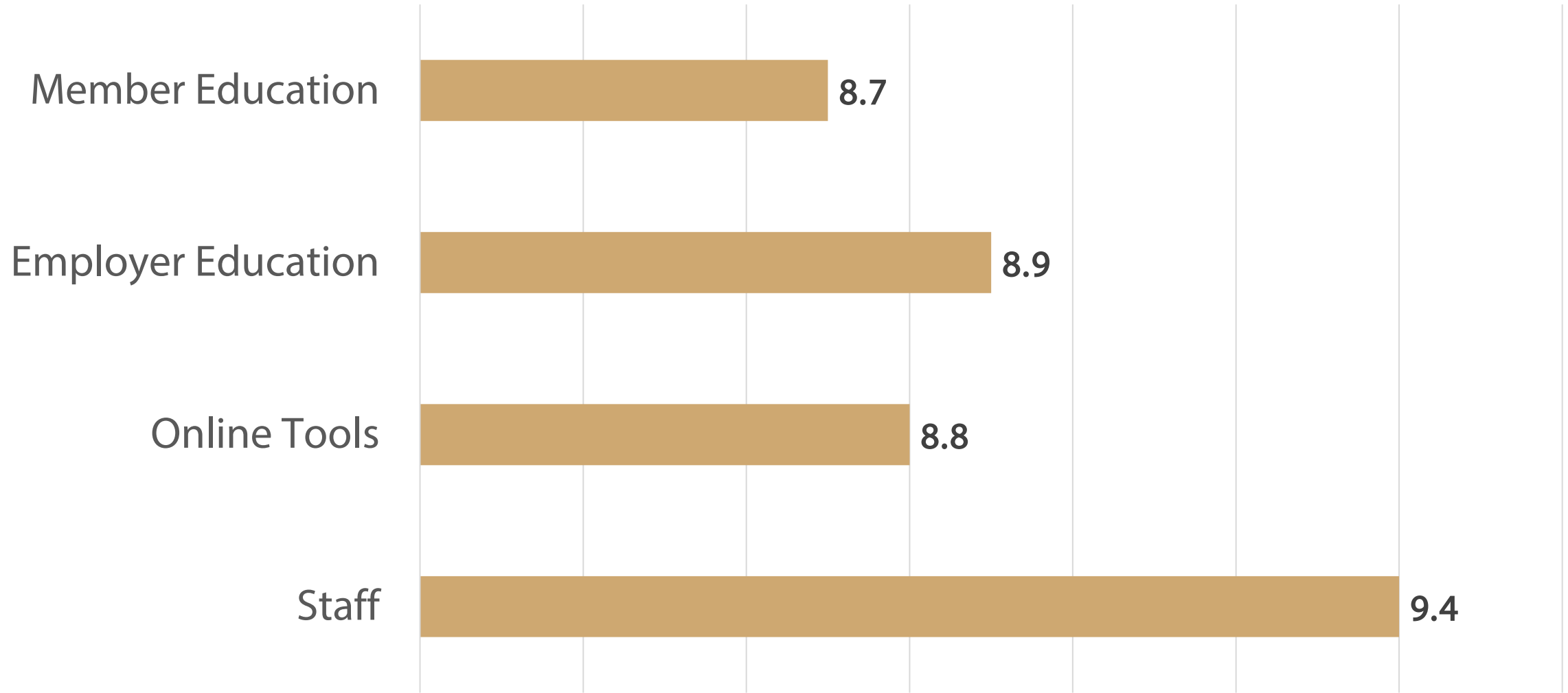
Employer Engagement Survey

The Purpose of This Survey

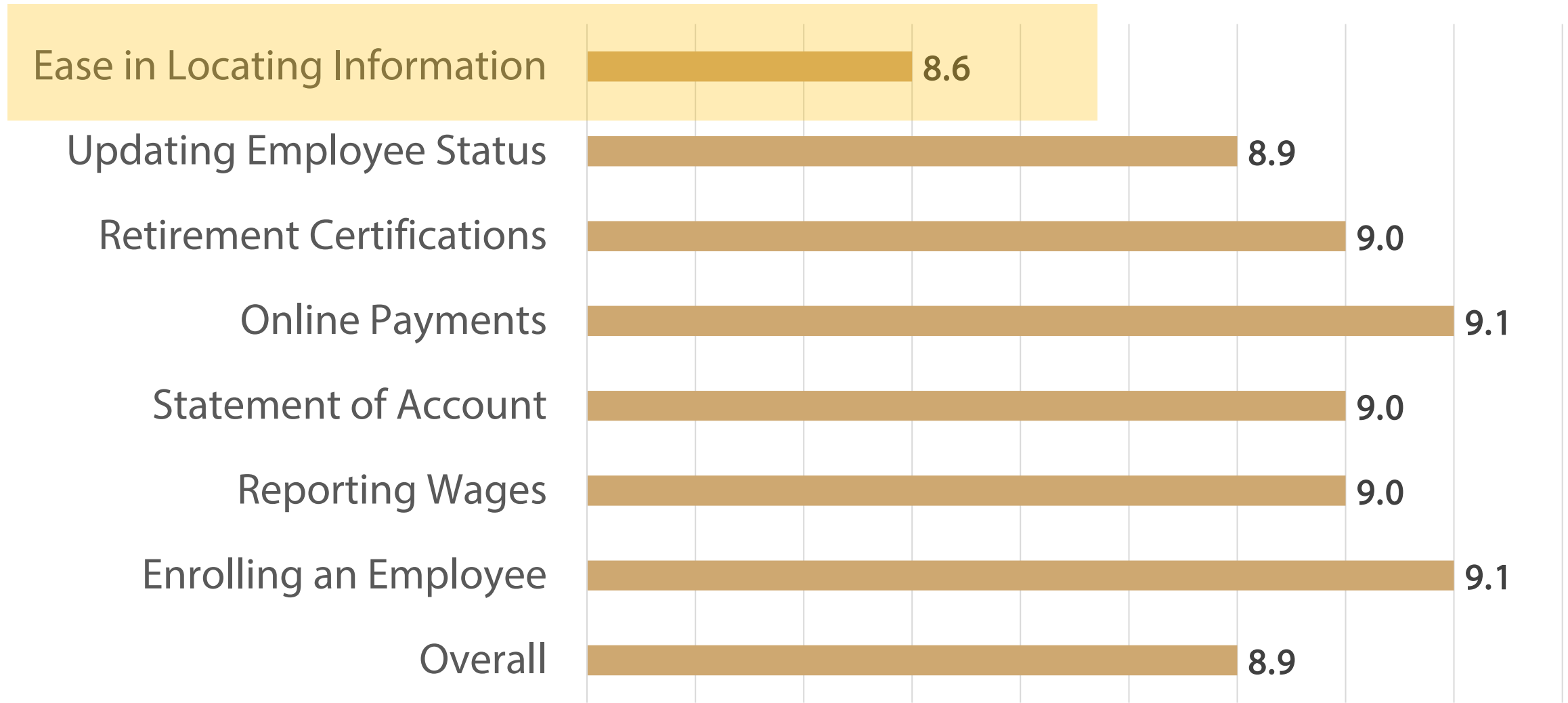
- Gain insights about our employers' engagement and satisfaction with communication methods, LAGERS staff, online tools, and education programs
- Informs LAGERS on employer-specific initiatives we should complete to improve employer satisfaction



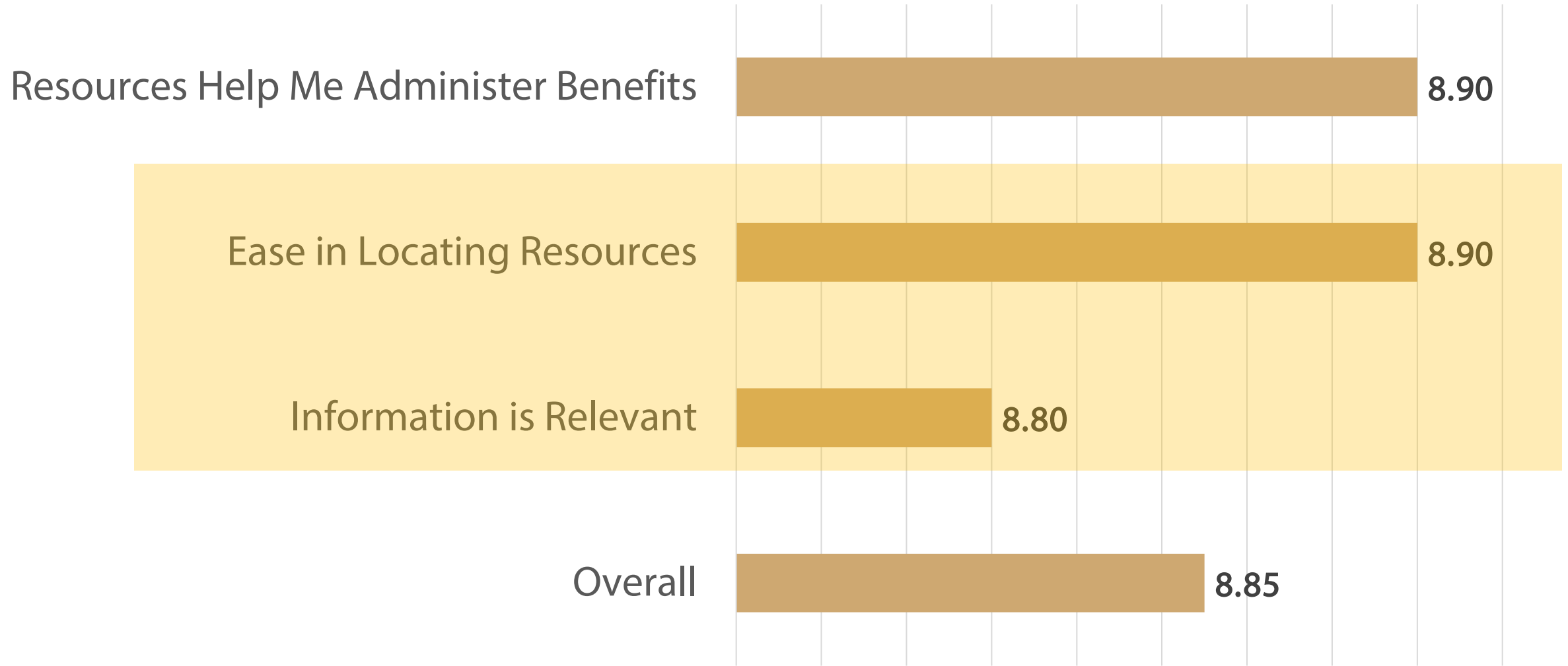
Employer Satisfaction Scores



Employer Portal (ECLIPSE) Impressions



Employer Education Impressions



Key Takeaways

- Top drivers of employer satisfaction are confidence in LAGERS and the employers' positive experiences
- Improving online tools is the area where there is the greatest opportunity to improve employer satisfaction
- Respondents expressed frustration regarding locating and updating information
- Respondents would like to see glitches fixed, more guidance on errors, and fewer steps in processes
- Employers like educational events



Planned Actions

- Improve communication regarding benefit choices and actuarial information
- Simplify ECLIPSE web portal
- Consolidate information and make it easier to find



Customer Journey Surveys

The Purpose of These Surveys

- Gain insights into LAGERS' processes from a customer point of view so we may find ways to improve efficiencies and customer satisfaction.

We currently measure:

- Retirement process
- New employer onboarding
- Employer benefit changes



Customer Journey Surveys

The Purpose of These Surveys

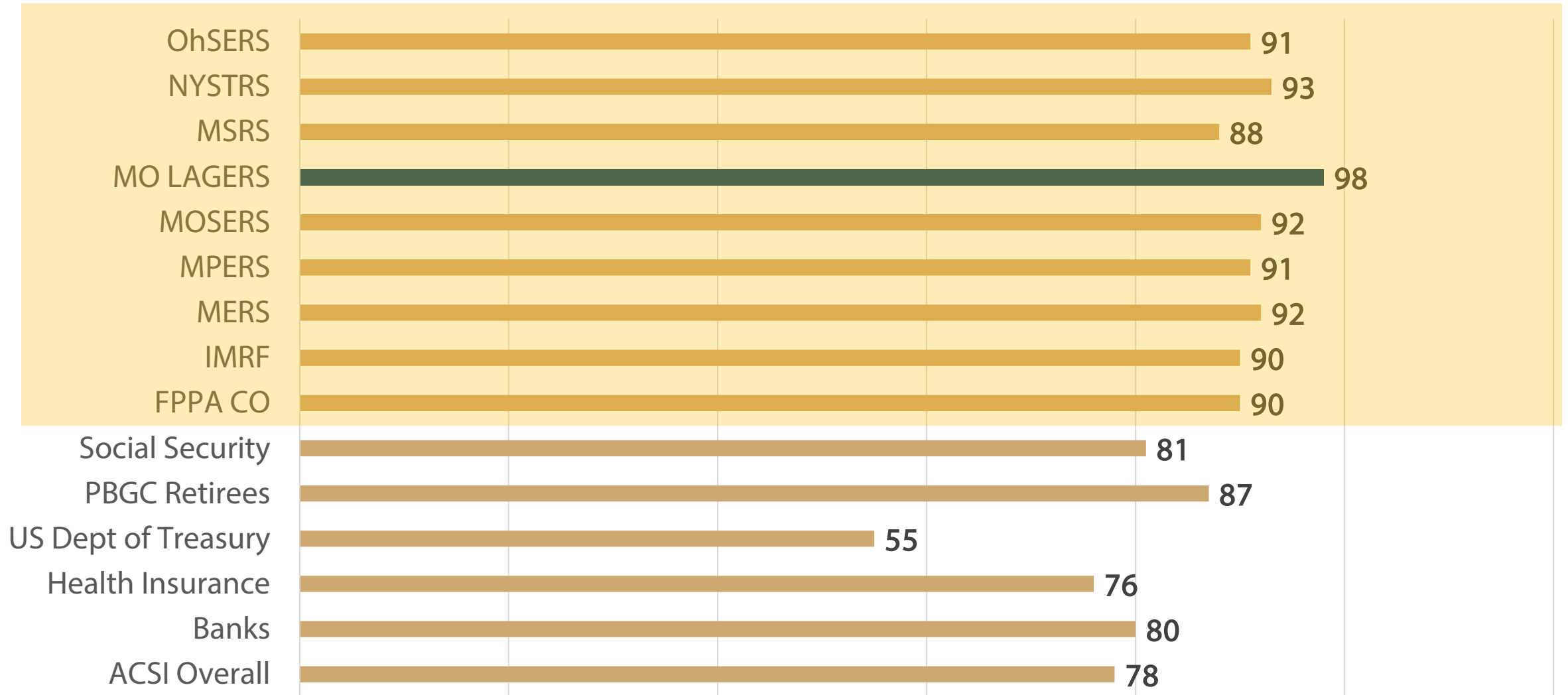
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We currently measure:

- Retirement process
- New employer onboarding
- Employer benefit changes



ACSI Benchmarking



Customer Journey Surveys

New Retiree ACSI Score



mission

customer satisfaction

continuous improvement

stakeholders

goals

KPIs

actions

benchmarking

processes



Up Next

Options for Changing LAGERS Benefits

10:30 a.m. Windgate 62-64 (here)

-or-

Purchasing Service Overview

10:30 a.m. Paradise A (across the hall)



The background is split into two main sections. The left section has a grey, textured background with several white arrows pointing right. One of these white arrows is replaced by a red arrow that starts with a 90-degree downward turn before pointing right. The right section is a solid dark blue. A thin orange diagonal line separates the two sections.

Changing LAGERS Benefit Levels



MISSOURI LAGERS
A Secure Retirement for All

The Flexibility of LAGERS

- Employers have 100+ different combinations of benefits from which to choose
- Elections may be changed to best meet a subdivision's workforce management and budgetary goals



Employers May Change Benefit Levels

Once every 2 years

- Benefit Program
 - Multiplier can range from 1.0% - 2.5%
- Final Average Salary
 - Can be the highest consecutive 60 or 36 month average from employees last 120 months of LAGERS credited service.



Employers May Change Benefit Levels

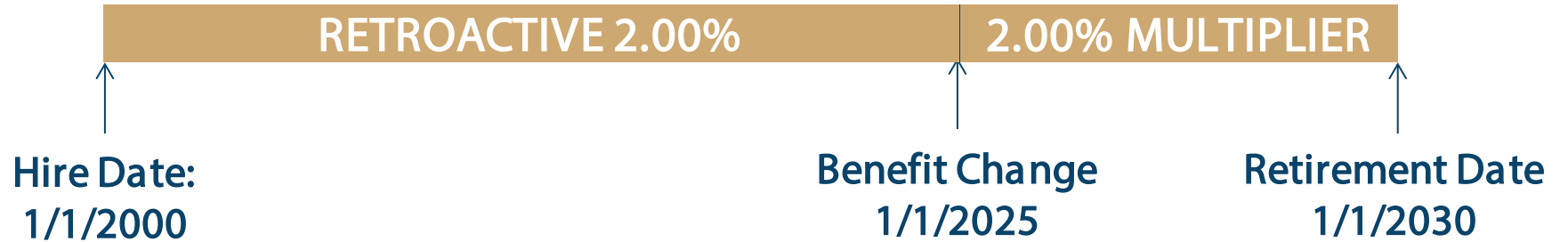
Once every 2 years

- Employee Contribution Amount
 - May require 0%, 2%, 4% or 6% mandatory employee contributions
- Retirement Eligibility
 - Normal Retirement
 - General: 60
 - Police, Fire, & Public Safety (if elected) at age 55
 - Rule of 80



Upgrading the Benefit Multiplier

Upgrades
Are
Retroactive



**Future Benefit Without
Upgrade**

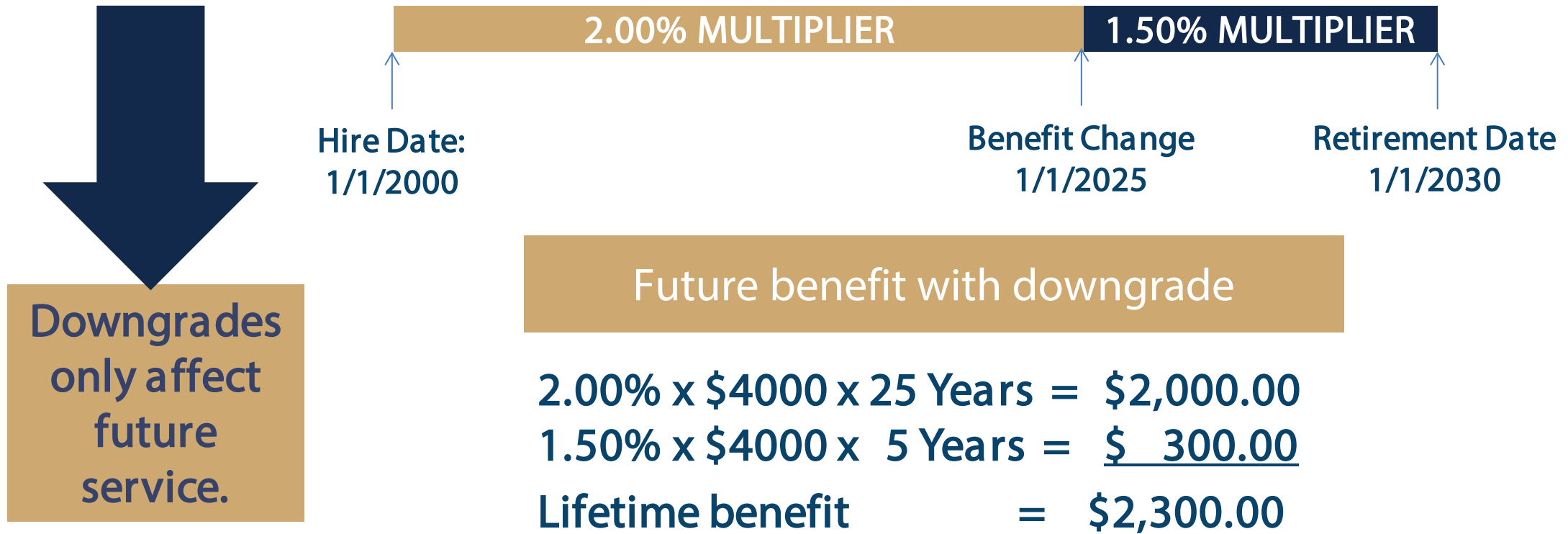
$1.50\% \times \$4000 \times 30 \text{ Years} =$
 $\$1,800/\text{month}$

Future Benefit With Upgrade

$2.00\% \times \$4000 \times 30 \text{ Years} =$
 $\$2,400/\text{month}$



Downgrading the Benefit Multiplier



Advantages of Increasing the Multiplier

- Impacts all active employees equally
- Improves employees' ability to retire at an appropriate time
- Helps to recruit workers by improving employer's workforce competitiveness
- Helps to retain workers



Disadvantages of Increasing the Multiplier

- Employers will take on an additional unfunded liability
- Future decreases to the benefit multiplier will not erase the liability associated with this upgrade
- Higher than normal retirement rates in the years immediately following a benefit multiplier upgrade may cause additional increases to LAGERS contribution rates beyond the initial rate increase



Changing Benefit Elections:

Final Average Salary

Employers may choose the highest consecutive 36 months or 60 months from last 120 months of LAGERS credited service

Upgrades are retroactive
Downgrades affect future service only

2024	\$38,800	<u>\$110,080</u>
2023	36,000	36 Months
2022	35,280	<u>\$3,058</u>
2021	34,602	<u>\$177,805</u>
2020	33,923	60 Months
2019	33,260	\$2,963
2018	32,606	
2017	31,700	
2016	31,100	
2015	30,600	



Advantages of Enhancing the Final Average Salary

- Impacts all active employees equally
- Moderately improves employees' ability to retire at an appropriate time
- Helps to recruit & retain workers by improving employer's workforce competitiveness
- Is less expensive than a benefit multiplier enhancement



Disadvantages of Enhancing the Final Average Salary

- Employers will take on an additional unfunded liability
- Not as impactful as a benefit multiplier enhancement
- May incentivize employees to work overtime as they near retirement because of the smaller time frame for calculating the average
 - This potentially causes increases in ongoing cost due to actuarial loss created by unexpected higher average salaries.



Changing Benefit Elections:

Rule of 80

Age at Hire	Service Credit	+	Rule of 80 Age	=	80
20	30	+	50	=	80
25	27.5	+	52.5	=	80
30	25	+	55	=	80
40	20	+	60	=	80

Upgrades are retroactive

Downgrades only affect newly hired employees



Advantages of Adding the Rule of 80

- Helps retain employees due to requirement to work up to or beyond Rule of 80 age for eligibility
- Helps recruit employees by making benefits competitive and having an early retirement provision
- May generate turnover in top heavy organizations



Disadvantages of Adding the Rule of 80

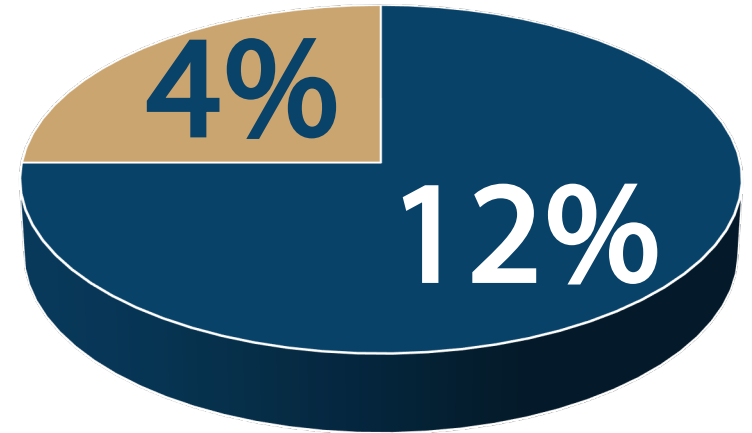
- Employers will take on an additional unfunded liability
- Does not affect all employees
- Higher than normal retirement rates in the years immediately following the upgrade may cause additional increases to LAGERS contribution rates beyond the initial rate increase



Changing Benefit Elections:

Employee Contribution Amount

- Employers may require 0%, 2%, 4% or 6% mandatory contributions



Advantages of Removing or Reducing Employee Contributions

- Impacts all active employees equally
- Increases employees' take home pay
- Increases employee morale



Disadvantages of Removing or Reducing Employee Contributions

- Employers will be responsible for all or a larger portion of their total cost
- Employees stop or reduce amount being contributed to their guaranteed after-tax member account balance
- May create less awareness of LAGERS benefit if no contributions are being withheld from payroll



The Benefit Change Process

Process for Changing LAGERS Benefit Elections

1. Employer requests an internal cost estimate from LAGERS' staff
 - This cannot be used for governing body action
2. Employer requests an official supplemental valuation from LAGERS' actuary
 - Public safety will require a data form completed by the employer
3. Employer makes supplemental valuation public information for 45 Days
4. Subdivision passes resolution of ordinance adopting benefit change
5. Subdivision sends resolution of ordinance to LAGERS office within 10 days of passing.

Options for Changing LAGERS

Benefits

9:30 a.m.

Windgate 62-

64 (across the



Thank You for Attending LAGERS Annual Meeting!

Tell us how we did!

