



## \*Public Agenda Item #11

\*Review, Discussion and Consideration of the ERS Pension Experience Study, including Actuarial Assumptions and Methods, the Return Assumption and Asset Allocation (**Action – BOT**)

May 20, 2020

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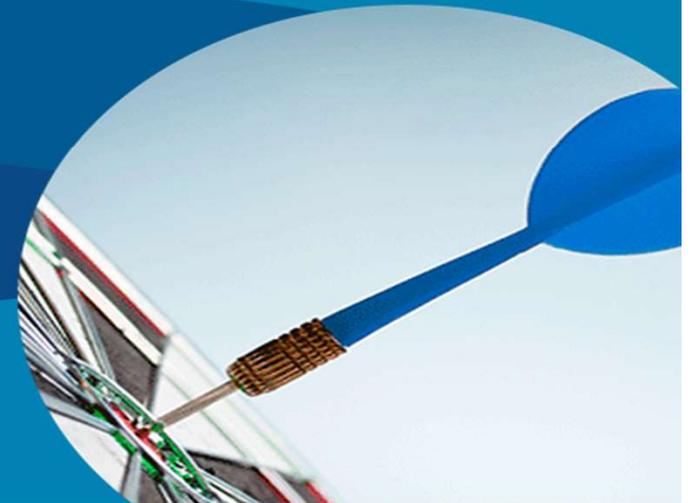
# ERS of Texas Experience Study Final Recommendations

May 20, 2020

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# Agenda

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- Review of Purpose
- Summary of Recommendations
- Analyze Financial Impact
- Discussion

## Reminder

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- The *primary* purpose of the annual actuarial valuation is to either (1) set or (2) assess the adequacy of the contribution policy
  - “Funding” or “contribution allocation procedure”
- For ERS, the historical funding policy has been a level “fixed rate” from the employer, and so the valuation is assessing the appropriateness of the current fixed rate

## How assumptions factor in...

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- Over time, the true cost of benefits will be borne out in actual experience
  - Ultimate benefits paid are NOT affected by actuarial assumptions or methods
  - Determined by actual participant behavior (termination, retirement), plan provisions, and actual investment returns
- Assumptions help us develop a reasonable starting point for decision making today

*“Projections are difficult, especially ones about the future”*

# Purpose of Experience Study

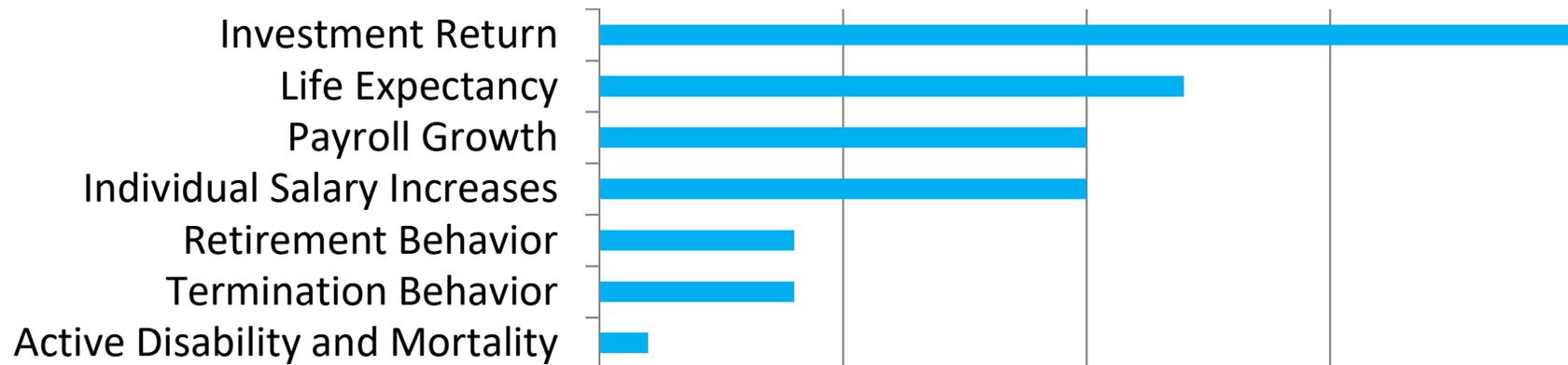
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- Assumptions should occasionally change to reflect
  - New information and changing knowledge
  - Changing patterns of retirements, terminations, mortality, etc.
- Experience study is a regularly scheduled review of the assumptions and methods
  - GFOA recommends at least once every five years
  - ERS will conduct studies at least every four years based on current statute
- General process for setting assumptions and methods
  - Actuary makes recommendations
  - Board considers actuary's recommendation and makes the final decision for the system

# Magnitude of Individual Assumptions

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## Impact on Determination of Funding Period



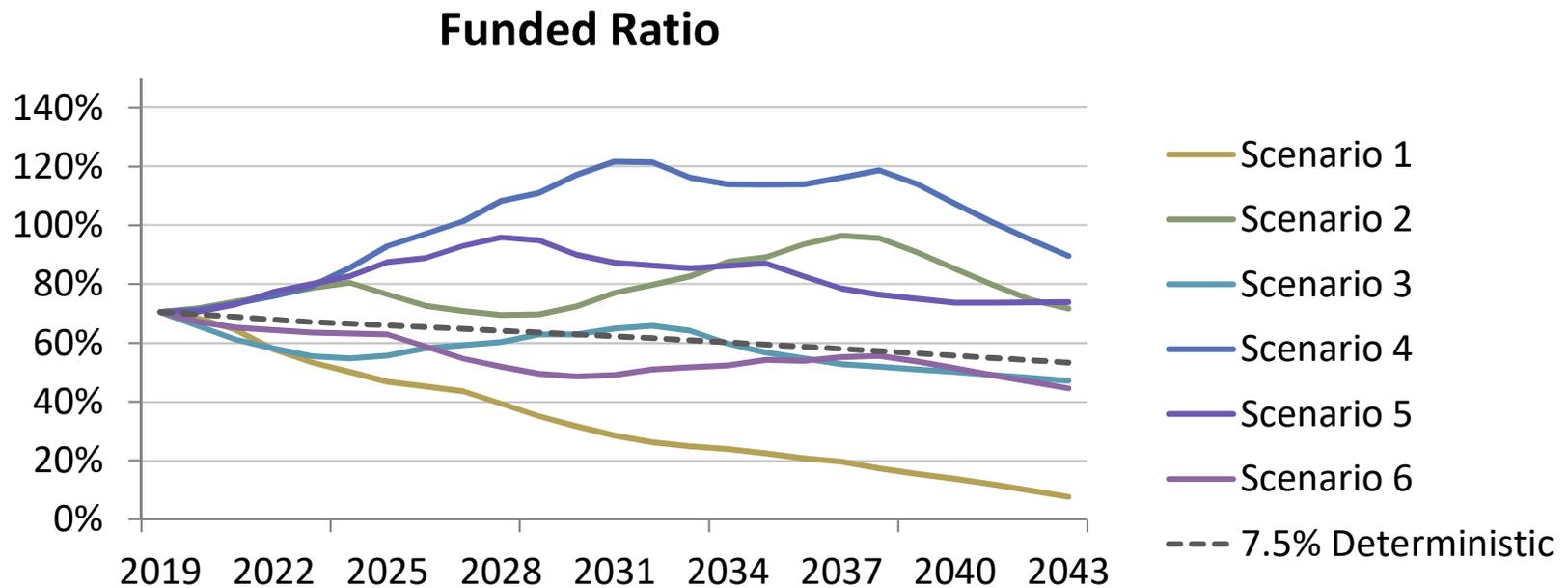
- *Each individual assumption must satisfy the Actuarial Standards*
- *Assumption set should be internally consistent*

# Range of Expected Returns

	2019	2020 (Q1)	2020 (Q2)	Comment
NEPC – Short Term	6.68%	6.06%	6.82%	<i>5-7 years in 2019, 10 years in 2020</i>
NEPC – Intermediate Term	N/A	6.41%	6.80%	<i>20 years</i>
NEPC – Longer Term	7.75%	7.14%	7.40%	<i>30 years</i>
GRS Survey Results – Short Term	6.57%	<i>Not yet available</i>	<i>Not yet available</i>	<i>Generally, 7 to 10 year horizon</i>
GRS Survey Results – Longer Term	7.37%	<i>Not yet available</i>	<i>Not yet available</i>	<i>Generally, 20 to 30 year horizon</i>

# Projection Scenarios Based on Historical Volatility Patterns

All scenarios generate 7.5% compound return over 20 years



*The above scenarios all achieve an 7.5% compound return over a 20 year period. All scenarios have the same annual returns, just in a different order.*

# Summary of Final Recommendations

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- **Notable Recommendations**
  - Reduce inflation assumption from 2.50% to 2.30%
  - Reduce nominal investment return assumption from 7.50% to 7.00%
    - Board may want to consider something lower in response to the impact of volatility and to increase the likelihood the assumption is met
- **Minor Findings**
  - In addition to recommended change to inflation assumption, lower expectations for future salary growth to better align with ERS experience
  - Lower assumed rates of turnover (pre-retirement) for LECOs
  - Make small modifications to assumed retirement patterns for LECOs in Groups 2 and 3
- **Confirmation of Current Assumptions**
  - Mortality and retirement experience remains in line with assumptions adopted in 2017

# Impact

- Proposed assumptions will increase actuarially determined contribution levels by a little more than 2% of pay
  - Based on current 19.50% contribution rate, additional 6% of pay needed to meet 31-year ASC

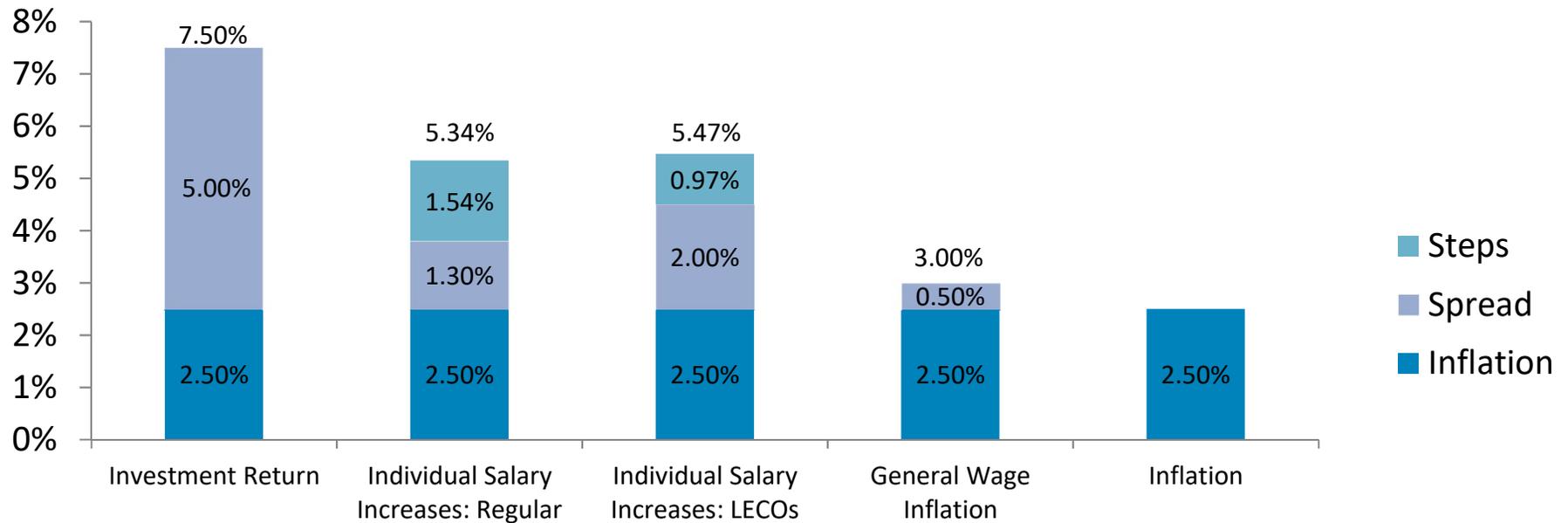
As of August 31, 2019 For FY 2020	Current Assumptions	Proposed Assumptions
Normal Cost Rate*	13.76%	14.24%
31 Year ASC - % of payroll	23.26%	25.33%
25 Year ASC - % of payroll	24.51%	26.79%
Unfunded UAAL (billions)	\$11.7	\$13.6
Funded Ratio	70.5%	67.3%

\* Average normal cost rate for all groups, includes administrative expenses

*Impact does not reflect the recent and still developing impact of COVID-19.*



# Inflation is the first building block for other economic assumptions



Current Assumption Set for ERS



“Steps” refer to pay increases associated with merit, promotion and longevity.

# Sources (Inflation)

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- NEPC Expectation (2020): 2.30% (10 year) and 2.50% (30 year)
- GRS Survey of Investment Firms: 1.70% - 2.50%, 2.18% average
- Social Security Trustee's Report: 2.60% (intermediate)
- TIPs vs. Nominal US Treasuries: 1.85% (20 year)
- Professional Forecasters: 2.20% (10 year)
- Horizon Survey (Summer 2019): 2.21% (10 year) to 2.29% (20 year)

# Wage Assumptions

FY 2012-2019 (actual inflation has been 1.57% during this period)

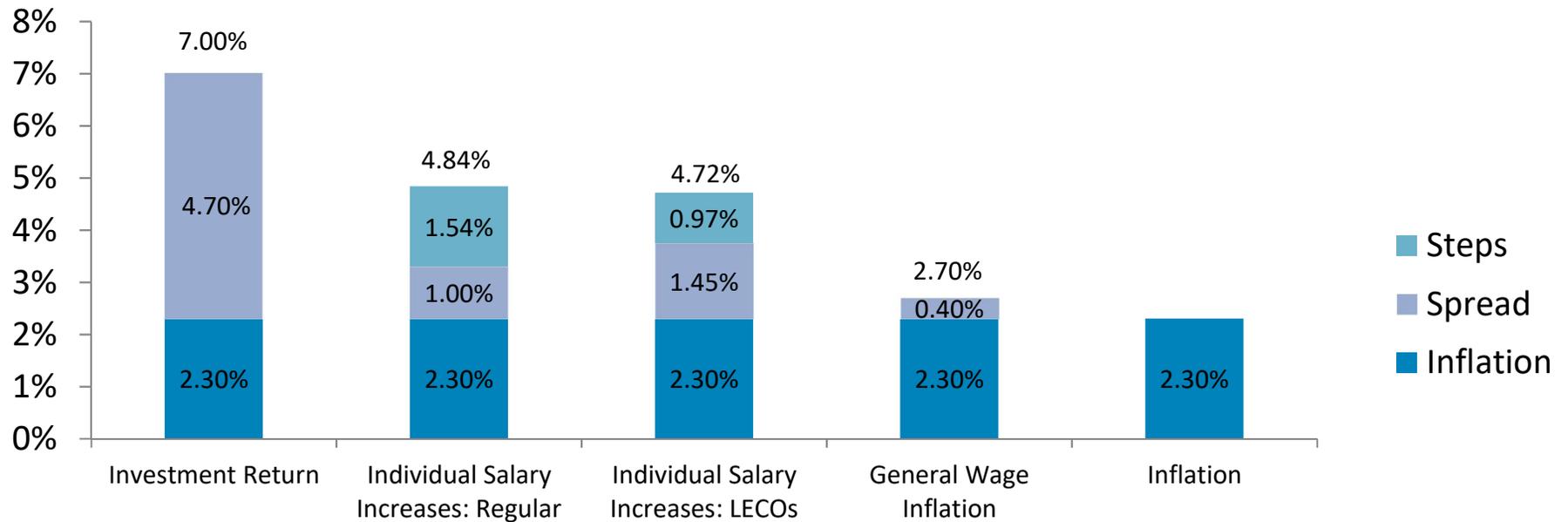
Annualized Assumption	Current Assumed	Actual	Preliminary Recommendation**
Overall Active Membership Growth	0.00%	-0.24%*	0.00%
Overall Payroll Growth (Based on Open Group Projection)	3.06%	2.36%	2.70%
Growth in Average Salary	3.00%	2.12%	2.70%
Year over Year Entrant Level Salary Growth	3.00%	2.90%	2.70%
Non-Step related Salary increases: Regular	3.80%	2.91%	3.30%
Non-Step related Salary increases: LECOs	4.50%	2.82%	3.75%

\* Net of removal of 90 day wait in 2015

\*\* Preliminary recommendation includes an inflation change from 2.50% to 2.30%. Additional change in the recommendation is based on actual experience of ERS.



# Illustrated Package of Economic Assumptions



Assumption Set for ERS reflecting preliminary recommendations



# Actuary's Qualifications

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- We believe the recommended set of actuarial assumptions should present a more accurate portrayal of ERS's financial condition and should reduce the magnitude of future experience gains and losses.
- The study was conducted in accordance with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board
- Ryan and Joe meet the Qualification Standards of the American Academy of Actuaries

Questions?  
**Action Item – BOT**