North Carolina Local Governmental Employees' Retirement System

Employer Contribution Rate Stabilization Policy

January 21, 2016

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Agenda

- Actuarial 101 review
- Current Funding Policy Landscape
- Proposed Employer Contribution Rate Stabilization Policy

Purpose of the Annual Actuarial Valuation

- Each year, the actuary determines the amount of contributions to be made to the Retirement System during each member's career, which, when combined with investment return, will be sufficient to pay for retiree benefits
- This contribution is determined through the annual actuarial valuation, which is summarized in the annual actuarial valuation report
- In addition, the annual actuarial valuation is performed to
  - Determine progress on funding the Retirement Systems
  - Explore why the results of the current valuation differ from the result of the valuation of the previous year
  - Satisfy regulatory and accounting requirements

Actuarial Valuation Process

INPUT

- Member Data
- Asset Data
- Benefit Provisions
- Actuarial Assumptions
- Actuarial Methods

Actuarial Valuation Process

RESULTS

- Normal Cost
- Actuarial Accrued Liability (AAL)
- Actuarial Value of Assets (AVA)
- Unfunded Actuarial Accrued Liability (UAAL)
- Employer Contributions
- Funded Ratio
- Experience Gain Loss
- Projections
- Observations

Also Known As Funding Policy

Actuarial Methods

Actuarial Methods describe the funding policy for the Retirement System. Actuarial Methods generally are comprised of the three components below:

- Actuarial Cost Methods: allocate costs to the past, current and future to allow for systematic payment of the costs over a member's career
- Amortization Payment for UAAL Methods: determine the payment schedule for unfunded actuarial accrued liability
- Asset Valuation Methods: smooth or average the market value returns over time to alleviate contribution volatility that results from market returns that differ from the investment return assumption used in the actuarial valuation

Actuarial methods allow for a considerable amount of flexibility in paying the costs of a Retirement System. The funding policy selected by the Retirement Board should strike a balance between contributions that are stable from year to year but satisfy the actuarial needs of the Retirement System.

Funding Policy

There are three broad considerations when establishing a funding policy for a pension plan

- Sufficiency - The funding target should be the value of benefits accrued to date
- Intergenerational equity – taxpayers should pay for workers' pensions while those workers are providing their services – fund for benefits over the worker's career.
- Stability of contributions – while stable contributions are easy to budget for, stability should not be achieved at the expense of the first two

Funding Policy

- There is no mandated funding policy within the public sector
- For years, the accounting standards under GASB 25 and 27 served as the de facto funding policy of public plans
  - Pay for the cost of benefits accruing
  - Pay off the pension debt over a perpetual period of 30 years of less
- After the passing of the GASB 25 and 27 standards, useful papers on this topic were issued
  - These working papers are not binding
  - See the appendix for links to some of these working papers

Funding Policy

The current Actuarial Methods used to develop contributions for the North Carolina Retirement Systems are well within the recommendations contained in these working papers

- Actuarial Cost Method: most systems apply entry age normal, which has been and continues to be the public sector retirement system gold standard
- Method of Amortizing Payment of Unfunded Actuarial Accrued Liability (UAAL): most systems pay down the UAAL in 12 years – a shorter period than the 15 to 20 year period indicated in these working papers
- Asset Valuation Methods:
  - 20% of market value plus 80% of the expected actuarial value
  - Assets not greater than 120% of market value and not less than 80% of market value
  - Adheres to recommended practice and helps alleviate contribution volatility

More importantly, North Carolina policymakers have consistently approved the contributions recommended by the actuaries since inception, resulting in one of the best funded public systems in the country

Funding Policy Recommended in the October Experience Study

- Actuarial Cost Methods allocate costs to the actuarial accrued liability (i.e. the amount of money that should be in the fund) for past service and normal cost (i.e. the cost of benefits accruing during the year) for current service.
  - The experience study recommended a change from a frozen entry age cost method to an Entry Age Normal cost method
  - The Entry Age Normal method develops a normal cost that stays level as a percent of payroll
- Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns.
  - The asset method proposed in the experience study is based upon a smoothed market value method.
  - Asset returns in excess of or less than the expected return on market value of assets will be reflected in the actuarial value of assets over a five-year period.
- Amortization Methods determine the payment schedule for unfunded actuarial accrued liability (i.e. the difference between the actuarial accrued liability and actuarial value of assets)
  - Payment level proposed in the experience study: the payment is determined as a level dollar amount, similar to a mortgage payment
  - Payment period proposed in the experience study: a 12-year closed amortization period. A new amortization base is created each year based on the prior years' experience.

Funding Policy

- This is all good news – right? Well…
- All else being equal, year to year contribution volatility is higher for North Carolina Retirements System
  - Missing the assumed rate of return of 7.25% by just 1.00% increases the contribution by 2.1% in year 1, accumulating to 11.5% over five years as the difference is reflected in the contribution rates

Employer Contribution Rate Stabilization Policy

- Throughout much of the last decade, the contribution rate was fixed at 4.80% of pay
- Based on the valuation, the contribution rate was less than 4.80%, even zero
- With the market downturn in 2008, the contribution rate based on the valuation began to increase, and contribution stability was set aside in favor of contribution sufficiency
- Effectively this policy was the greater of 4.80% and the contribution rates developed by the actuarial valuation
- Contributions could unexpectedly increase under the previous policy if the markets dropped, which of course happened
- Proposed policy:
  - New Employer Contribution Rate Stabilization Policy is built upon the funding policy recommended at the October 2015 Board meeting
  - "Fixed" contribution rate schedule for next several years
  - Actuarial valuation may trigger a change of 0.50% in the rate schedule

Employer Contribution Rate Stabilization Policy

- The target general employee contribution rate is 7.25% at 7/1/2016 and will increase by 0.25% each year.
- The target general employee contribution rate in any given fiscal year will be increased an additional 0.50% if the required contribution rate calculated at the actuarial valuation is 50% greater than the target contribution rate.
- The target general employee contribution rate in any given fiscal year will be decreased by 0.50% if the required contribution rate calculated at the actuarial valuation is 50% less than the target contribution rate.
- The LEO contribution rate is always 0.75% greater than the general employee contribution rate.
- If the legislature grants any additional COLA beyond the amount of COLA allowed and granted by the Board or an increased multiplier for active employees, the schedule of contributions for the current and future fiscal years will be increased by the cost of the additional COLA or increased multiplier. The cost of any allowable COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.

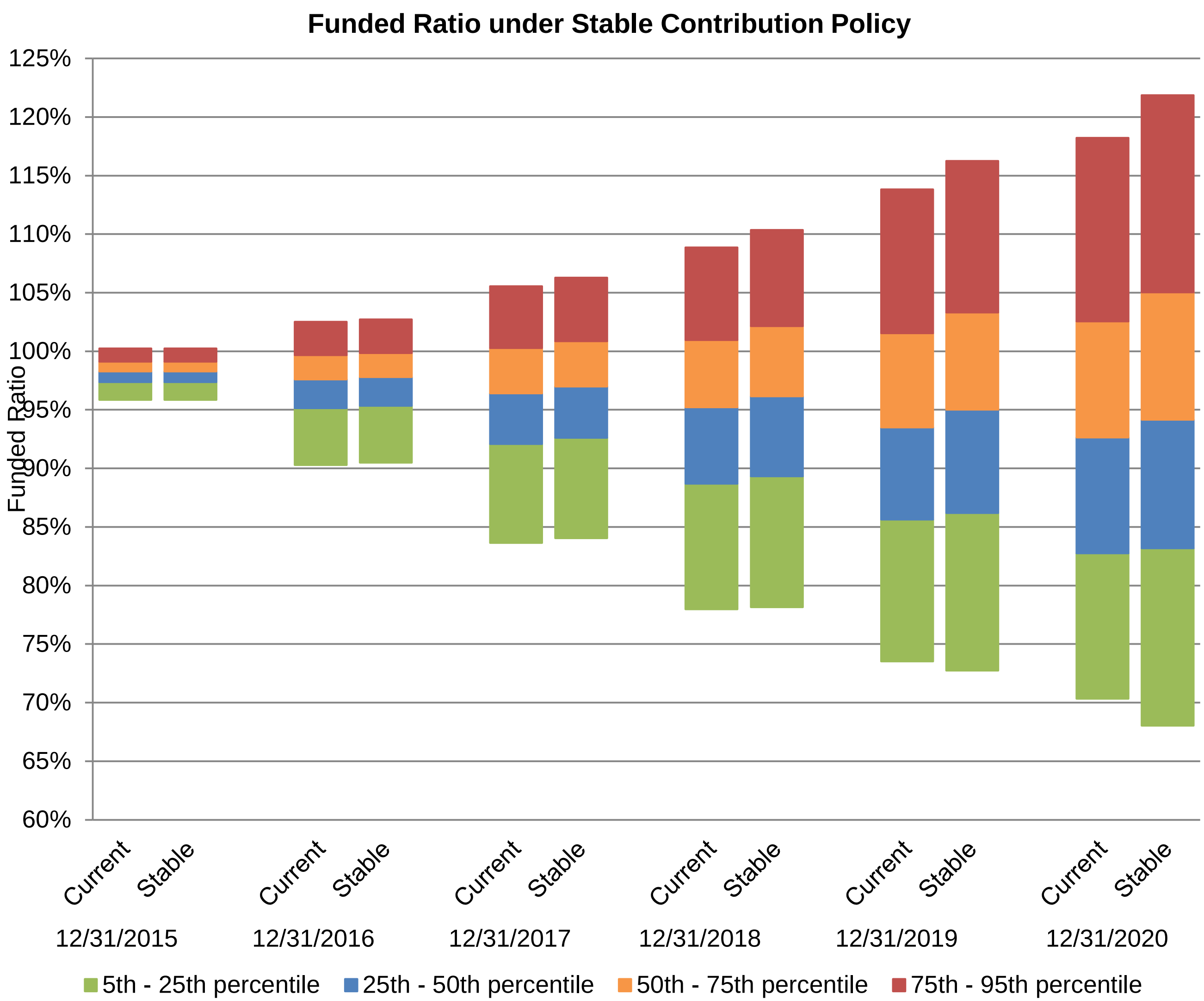
For example, the target contribution rate at 7/1/2017 is 7.50%. If the annual required contribution calculated in the December 31, 2015 actuarial valuation is greater than 11.25%, the contribution rate will be set at 8.00% and the target contribution rate at 7/1/2018 will be 8.25%.

For example, the target contribution rate at 7/1/2017 is 7.50%. If the annual required contribution calculated in the December 31, 2015 actuarial valuation is less than 3.75%, the contribution rate will be set at 7.00% and the target contribution rate at 7/1/2018 will be 7.25%.

Projections: Employer Contribution Rates and Funded Status

- The following projection is based on:
  - December 31, 2014 valuation results of LGERS, except that proposed economic and demographic assumptions have been reflected based on the experience study presented in October 2015 with a modification to reflect mortality projection scale (MP-2015)
  - Valuation interest rate of 7.25% for all years
  - The asset returns have been modeled using an Asset Liability Model (ALM)
    - Actuarial valuations are projected into the future under 999 different asset return scenarios.
    - When the scenarios are compared, the results show the likelihood of certain events such as funding levels or contribution amounts as well as a range of all outcomes.
  - Assumes no cost-of-living adjustments granted
  - Assumes future pay increases based on long-term valuation
  - Assumes active headcount will remain level in future years

Employer Contribution Rate Stabilization Policy

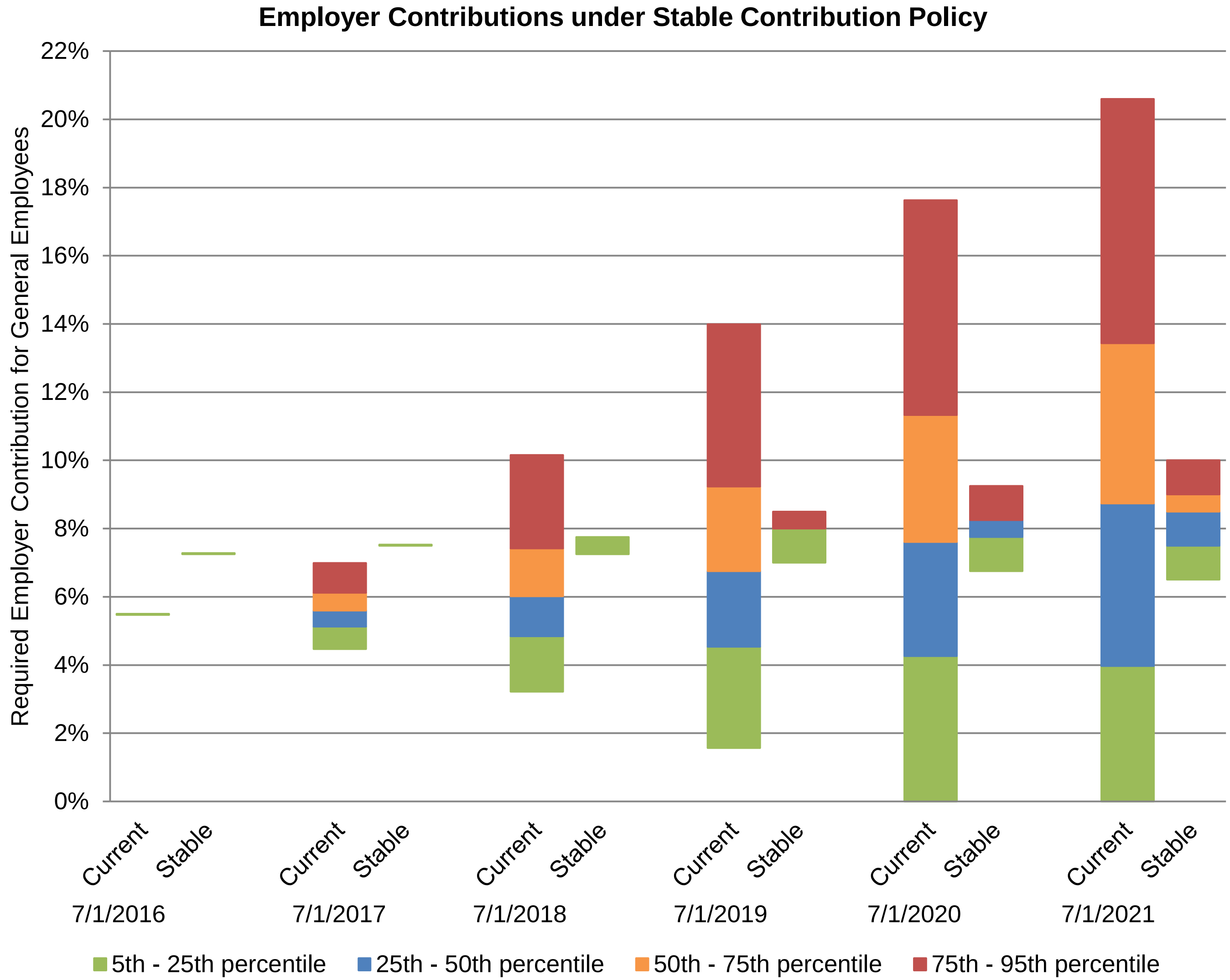


Stable contribution Funding Policy has higher funded ratio in stronger markets…

but lower funded ratio in weak markets.

When compared to the current policy of resetting the contribution rate annually, the Stable Contribution Rate has been set such that the funded ratio at December 31, 2020, is projected to be higher in 768 out of the 999 scenarios.

Employer Contribution Rate Stabilization Policy



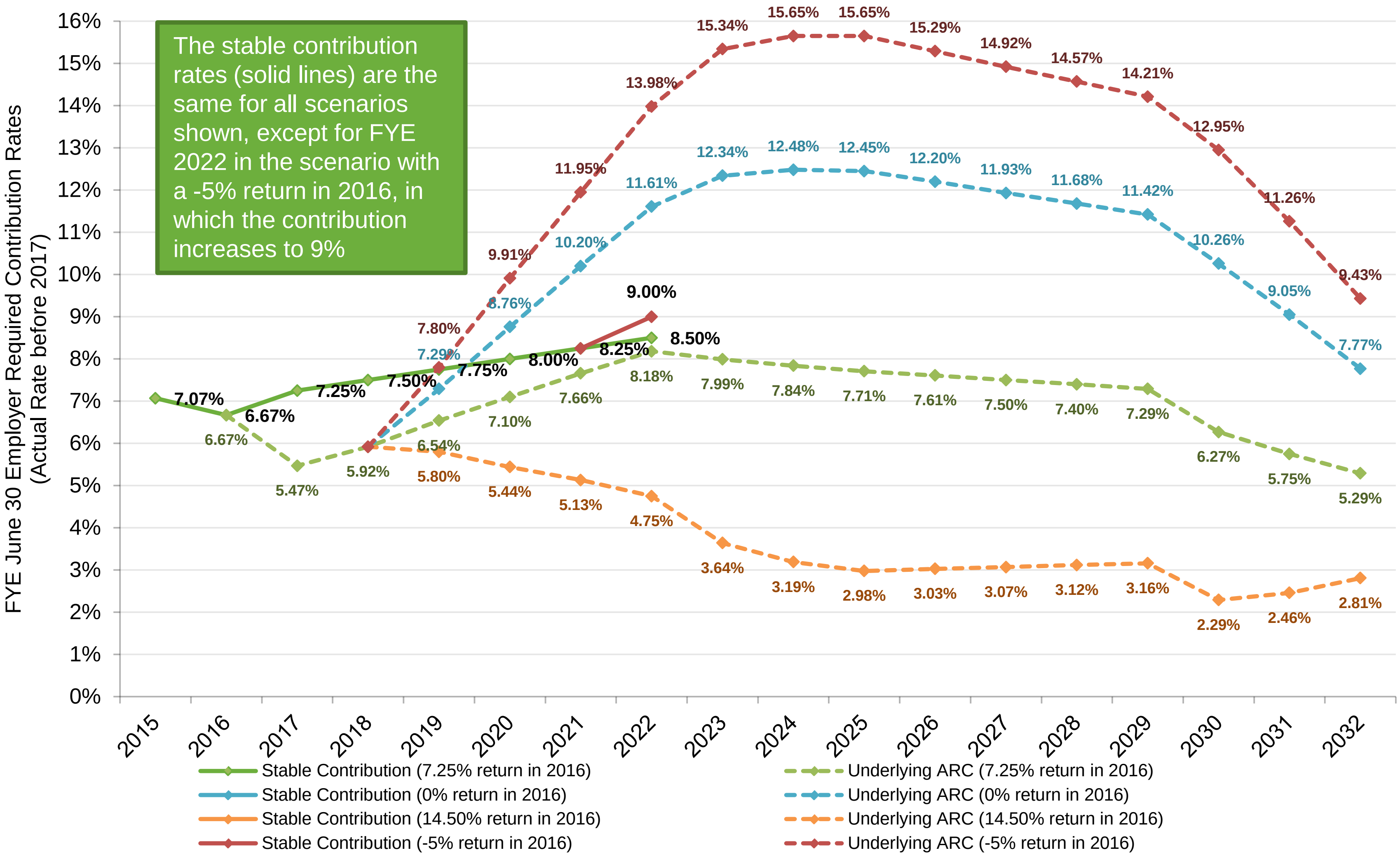
To achieve the higher funded ratios in down markets under the current policy, contributions would have to rise significantly.

While a Stable Contribution Funding Policy would not eliminate the need for rising contributions in down markets, it would remove the need for significant <u>annual</u> contribution increases.

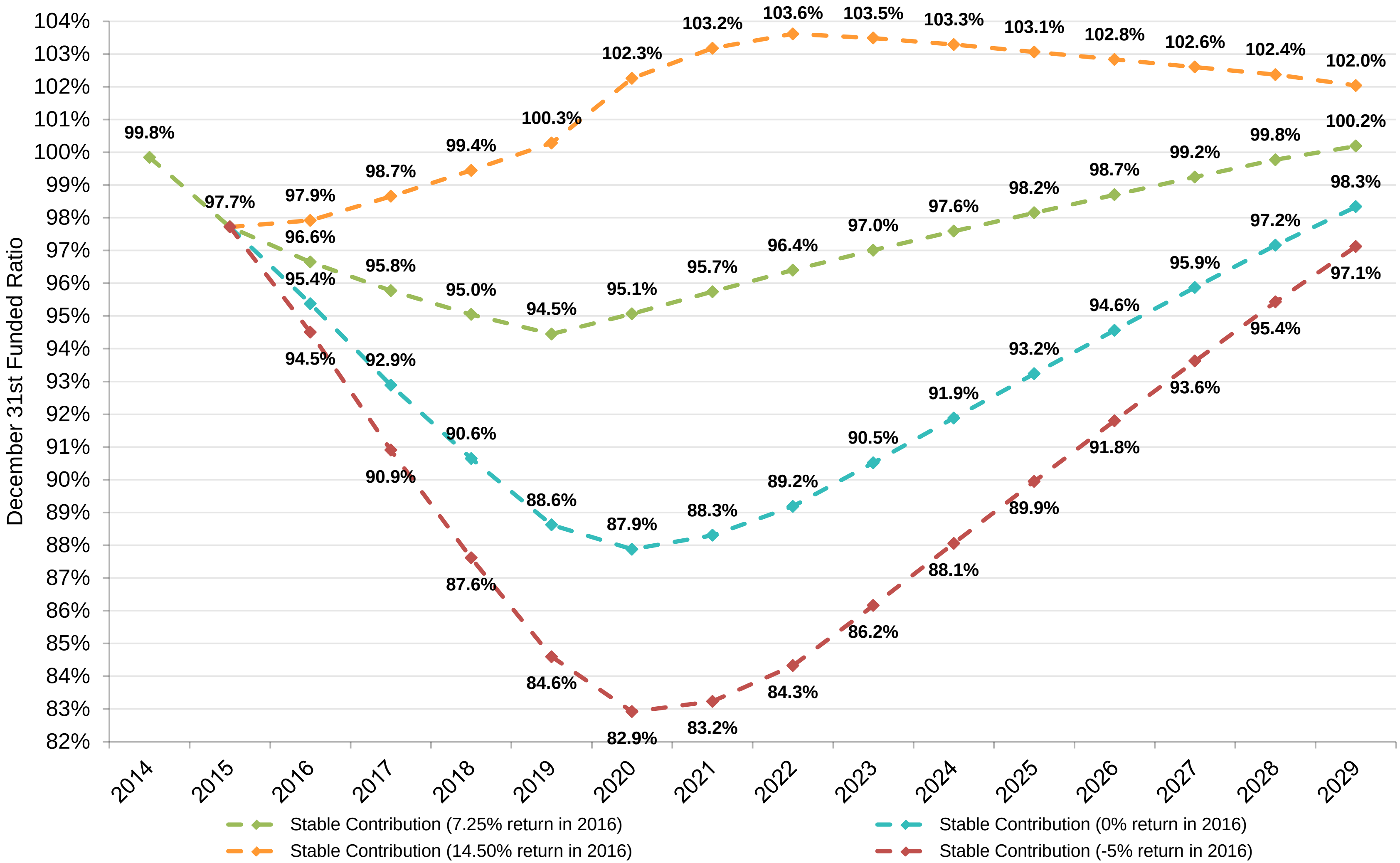
Additional Projections: Employer Contribution Rates and Funded Status

- The Employer Contribution Rate Stabilization Policy projections described on the next two slides rely on the following data, methods and assumptions:
  - December 31, 2014 valuation results of LGERS, except that proposed economic and demographic assumptions have been reflected based on the experience study presented in October 2015 as modified to reflect the latest mortality projection scale (MP-2015)
    - No cost-of-living adjustments granted
    - Assumes future pay increases based on long-term valuation
    - Assumes active headcount will remain level in future years
    - Assumes rate of return for 2015 of 0.23%
    - Four different rate of return scenarios for 2016: -5%, 0%, 7.25% and 14.5%
    - Assumes rate of return for 2017 and beyond equal to 7.25%
    - Assumes Employer Contribution Rate Stabilization Policy is in place for FYE 2017 to FYE 2022 and then reverts to funding the ARC for FYE 2023 and beyond

Projected General Employer Required Contribution Rates (Employer Contribution Rate Stabilization Policy)



Projected Funded Ratio
(Employer Contribution Rate Stabilization Policy)



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Employer Contribution Rate Stabilization Policy

- Other considerations
  - Projected contribution rate decreases make this an opportune time to consider a Stable Contribution Funding Policy
  - Timing with experience review
  - Impact on January Board decisions concerning ARC, ad hoc COLA and multiplier
  - Perception when Stable Contribution Rate is lower or higher than the current funding policy
  - Impact on GASB
  - Next steps?

Employer Contribution Rate Stabilization Policy

Retirement Systems Division staff recommends the following policy:

- Contributions will be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year for five years, with the following additional adjustments, if applicable:
  - (1) if the underlying ARC for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%,
  - (2) if the underlying ARC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%,
  - (3) Law Enforcement rates will be 0.75% higher than General Employee rates, and
  - (4) if the legislature grants any additional COLA beyond the amount of COLA allowed to be granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the additional COLA, increased multiplier or other benefit enhancement.
    - The cost of any allowable COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.
- The Employer Contribution Rate Stabilization Policy results in an initial recommended contribution rate for General Employees of 7.25% of payroll for fiscal year ending 2017.

Conclusion

A Stable Funding Contribution Policy can be constructed that achieves stable and predictable contribution levels and maintains the actuarial integrity of the North Carolina Retirement Systems.

Certification

The results were prepared under the direction of Michael Ribble and Larry Langer who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about them.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

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Public Sector Retirement System Funding Policy Resources

- Conference of Consulting Actuaries Public Plans Community White Paper "Actuarial Funding Policies and Practices for Public Pension Plans” http://www.ccactuaries.org/publications/news/cca-ppc-white-paper.cfm
- American Academy of Actuaries Issue Brief “Objectives and Principles for Funding Public Sector Pension Plans” http://www.actuary.org/files/Public-Plans_IB-Funding-Policy_02-18-2014.pdf
- California Actuarial Advisory Panel White Paper “Model Actuarial Funding Policies and Practices for Public Pension and OPEB Plans” http://www.sco.ca.gov/Files-ARD/BudLeg/CAAP_Funding_Policies_w_letter.pdf
- Report from the Pension Funding Task Force 2013 (convened by the Center for State and Local Government Excellence) “Pension Funding: A Guide for Elected Officials” http://www.nctr.org/pdf/PensionFundingGuideBrief_Final.pdf
- GFOA Best Practice “Funding Defined Benefit Pensions” http://www.gfoa.org/funding-defined-benefit-pensions (no PDF)
- GFOA Best Practice “Core Elements of a Pension Funding Policy” http://www.gfoa.org/core-elements-funding-policy (no PDF)
- Society of Actuaries Blue Ribbon Panel on Public Pension Plan Funding “Report of the Blue Ribbon Panel on Public Pension Plan Funding” (report, summary, video and guide) https://www.soa.org/blueribbonpanel/

Questions?

THANK YOU