# A Discussion On Actuarial Funding

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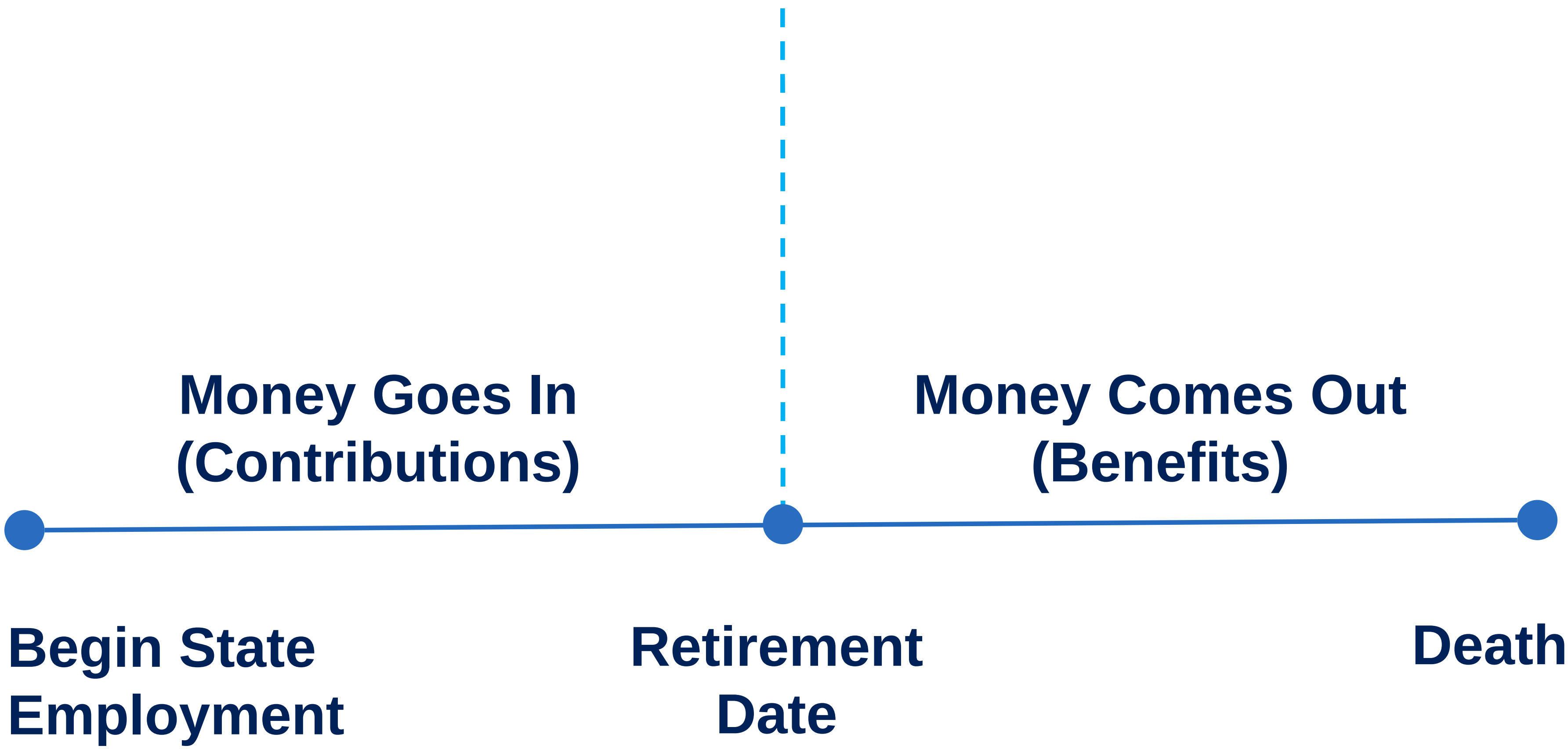
*Discussion with:*
*Steve Nelsen and the LEOFF Plan 2 Retirement Board*

Office of the State Actuary
*"Supporting financial security for generations."*

**October 18, 2017**

## Background: Pension Funding 101



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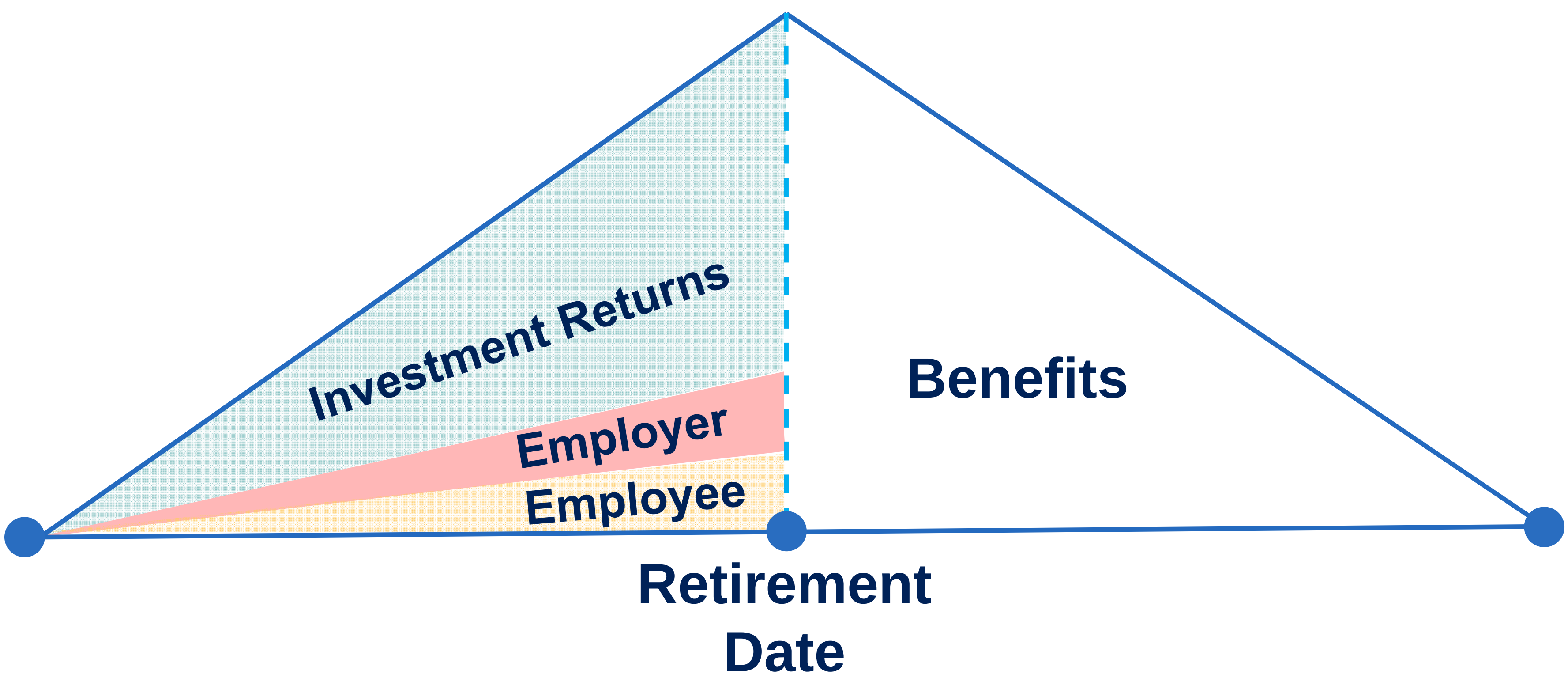




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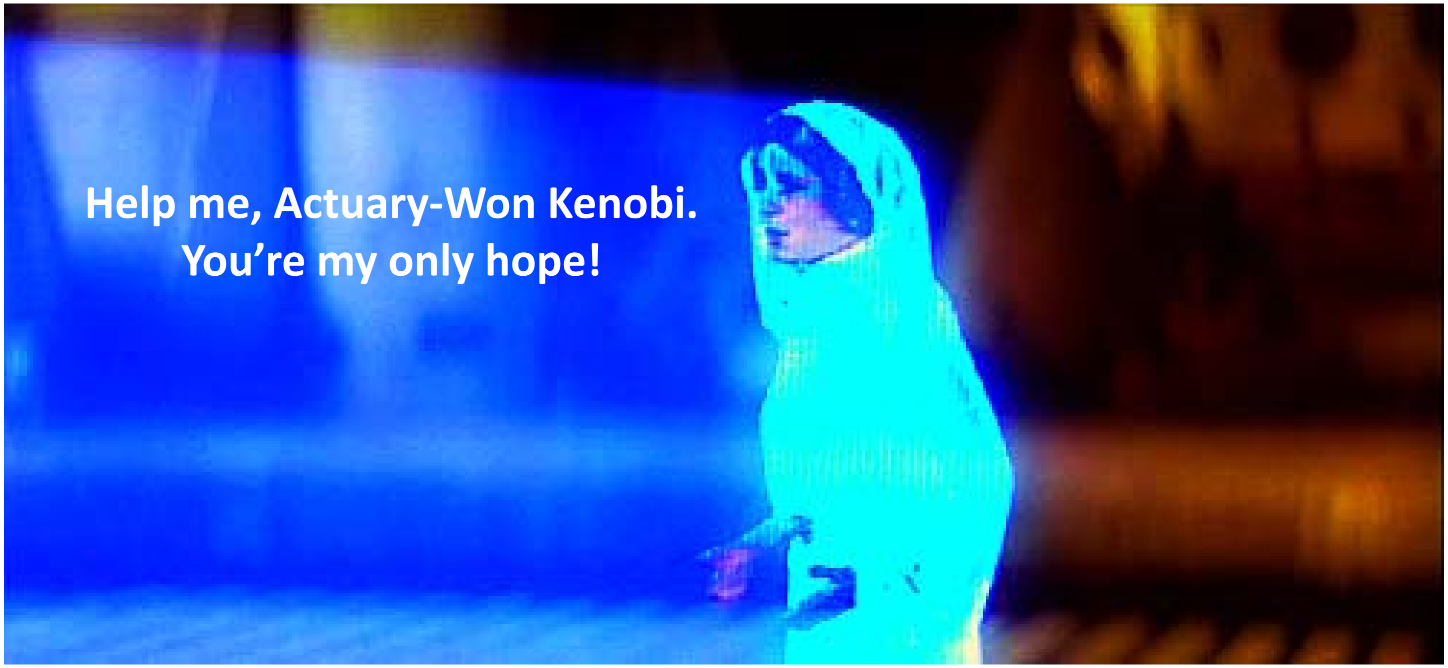
# Actuarial Cost Method Used To Determine Amount And Timing Of Contributions



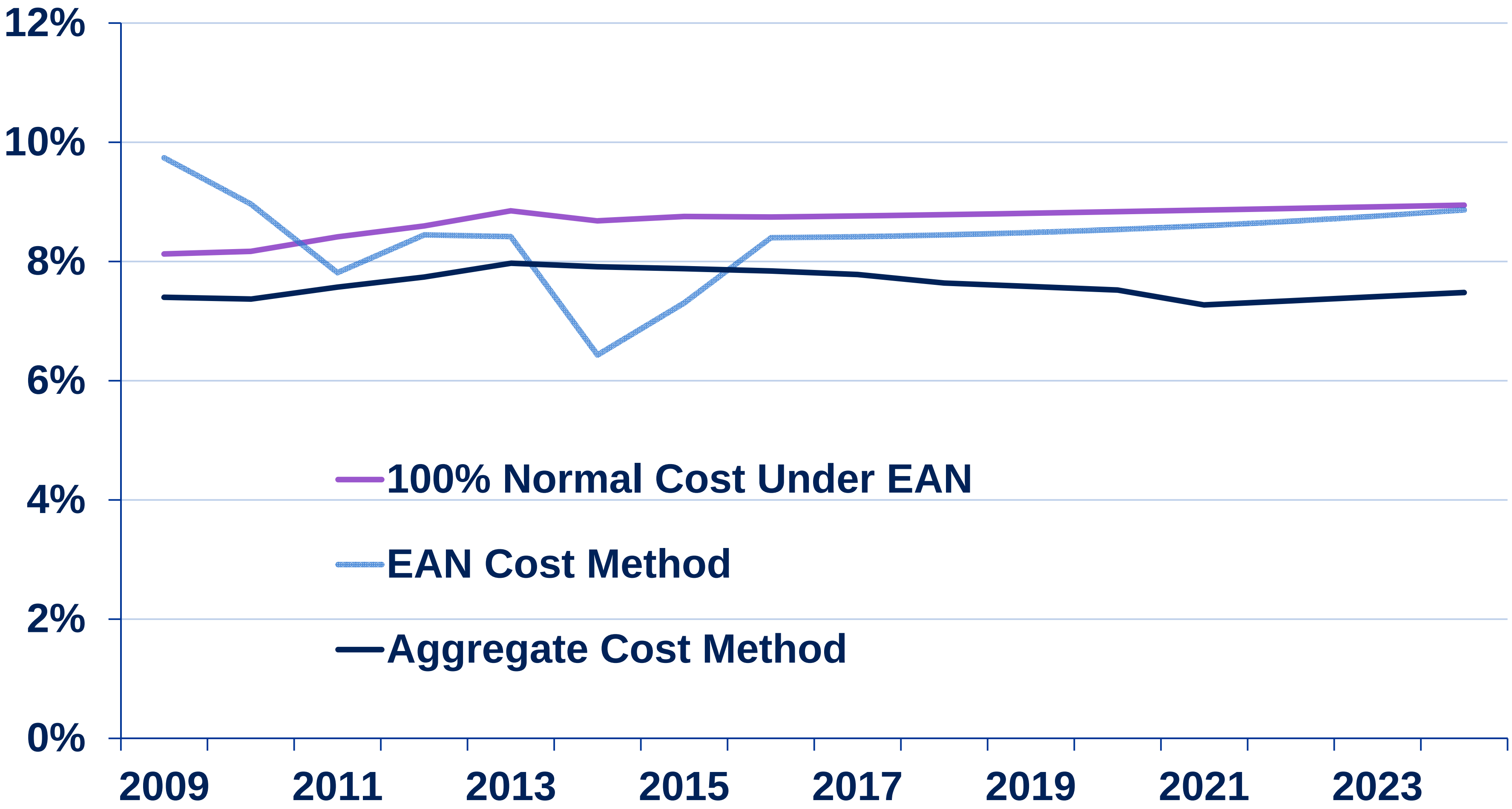
## Entry Age Normal (EAN) Cost Method Has Two Components

- Normal Cost (NC)
  - Funded over period from entry age to retirement age
  - Recalculated when projected benefits change
    - Changes in assumptions, benefit provisions, or demographics of plan
- Unfunded Actuarial Accrued Liability (UAAL)
  - Compares benefits members have "earned" for past service to assets already set aside to pay for those benefits
  - Difference between the two must be amortized over select time period
  - Volatility from investment returns and plan experience
- Pros: Stable NC rates and cost method required for financial reporting
- Cons: Includes UAAL and can weaken intergenerational equity

## Aggregate Cost Method Only Has A Normal Cost

- NC includes volatility from investment returns and plan experience
  - All unfunded benefits are amortized over future active payroll
- Most Washington State plans use this method
- Pro: No UAAL
- Con: NC can be volatile

# Estimated LEOFF 2 Employee Contribution Rate Path

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## Current Board Funding Policy

- Board has two policies in place
  - Long term: Aggregate, with rate floor of 90% EAN Cost
  - Short term: Aggregate, with rate floor of 100% EAN Cost
- Aggregate plus one component of the EAN funding method
  - Aggregate as the underlying method, no UAAL
  - Adding stability in the NC by applying the EAN Cost as a rate floor
- Asset smoothing method also in place to help limit annual volatility in the Aggregate NC

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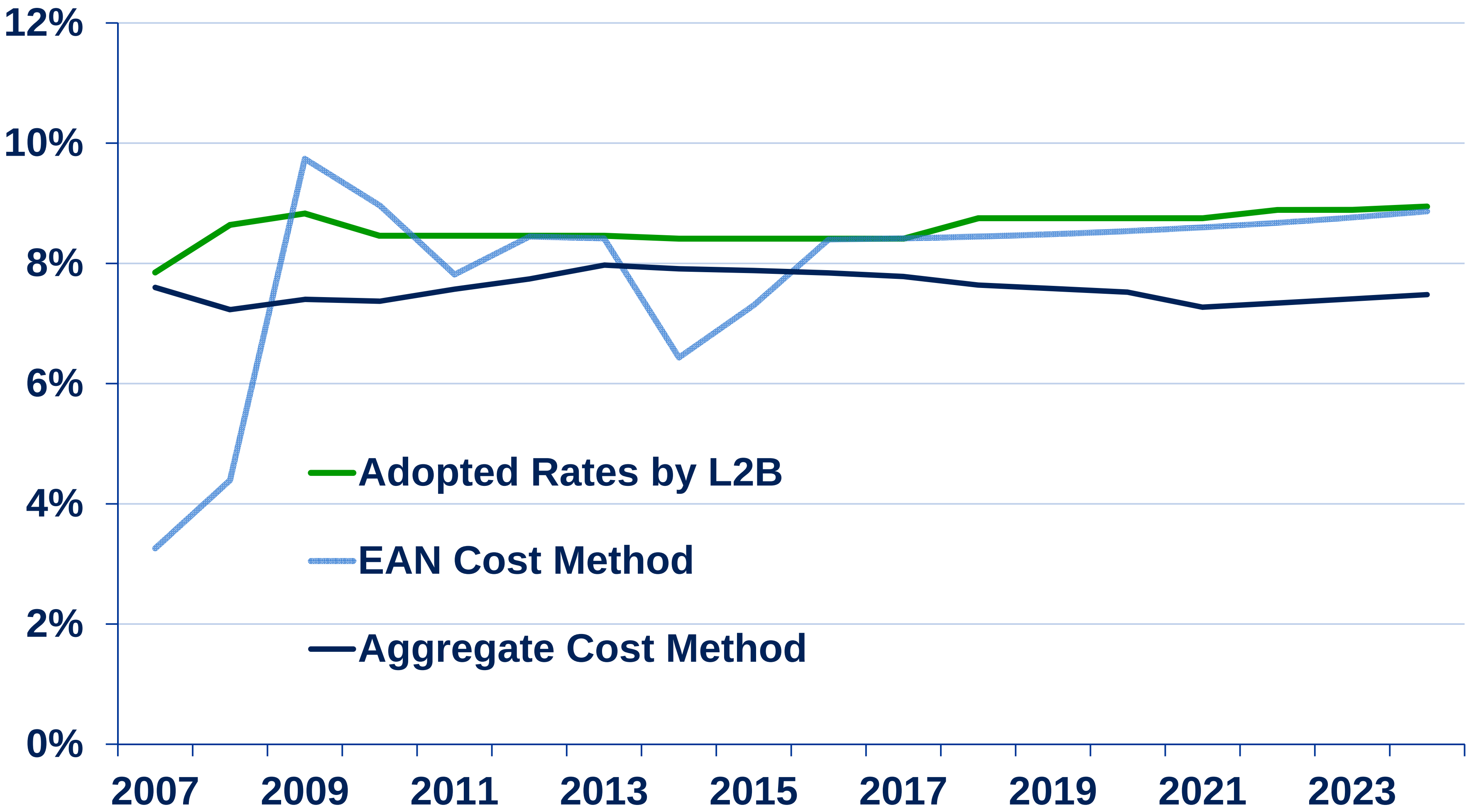
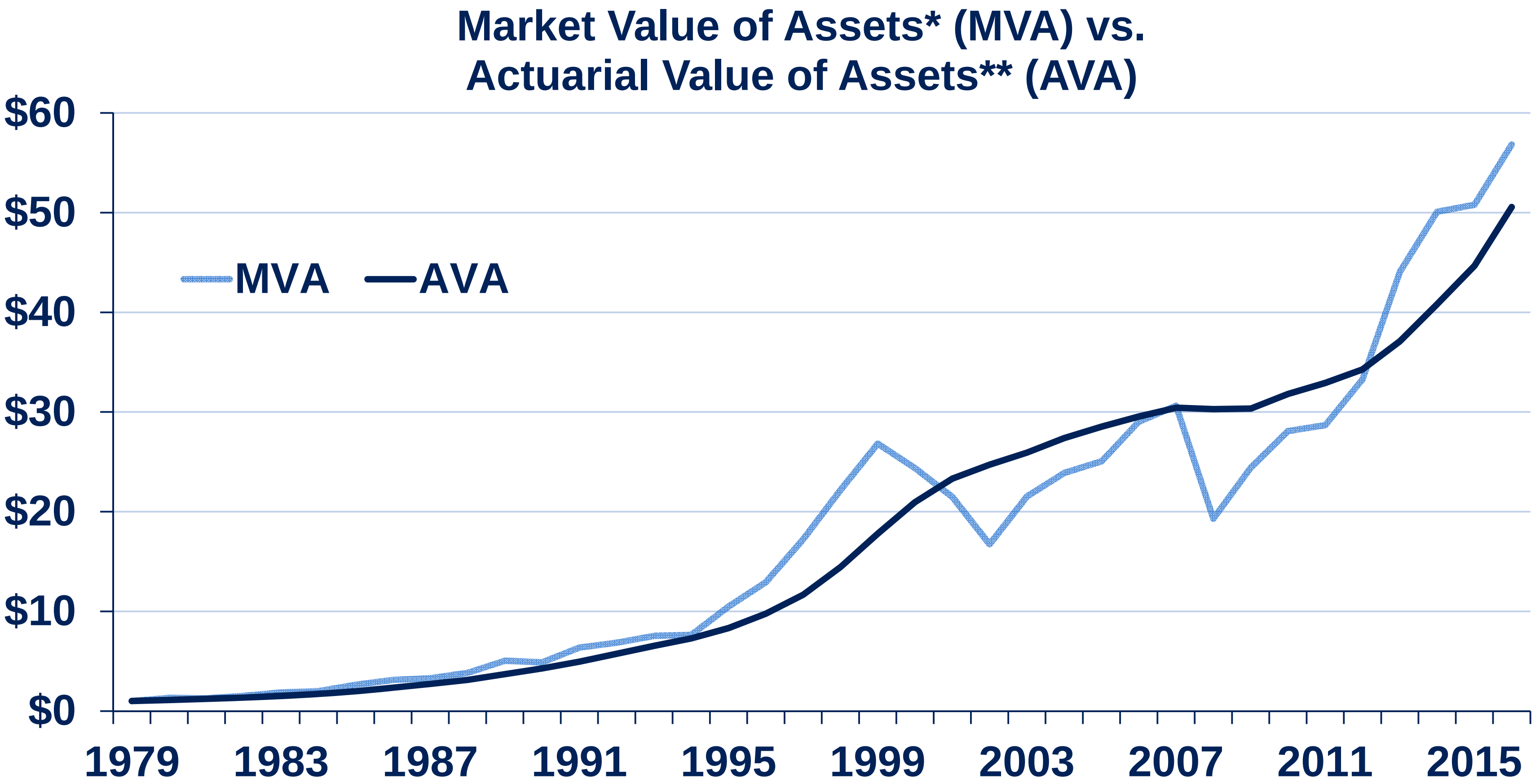


# Sample Eight-Year Fixed Asset Smoothing




**We assumed MVA increased by the S&P 500 returns.*

***We smoothed the AVA over a fixed 8 year period beginning in 1980. We assumed an investment rate of return of 7.50% during this time period.*

# Funding Policy Considerations

- Funding policy determines contribution rates
  - Adequacy, stability, affordability
- Complexity of the policy can impact understandability and administration
- Continue with current policy
  - Aggregate cost method with 90% or 100% EAN Cost rate floor for stability
  - Regularly monitor funded status progress including future expectations
- Adopt new funding policy
  - Change underlying actuarial cost method
  - Adopt new rate stability measure(s)
  - Consider options and pros/cons

## Summary

- Many funding method options
  - Ways of determining how much to set aside each year to pay future benefits
  - Can choose method that best represents the Board's values
- EAN
  - Pro: Stable NC
  - Con: Allows creation of UAAL
- Aggregate
  - Pro: No UAAL
  - Con: Volatility in the NC
- Current Board funding policy - Aggregate with NC from EAN
  - Pro: Stable NC and no UAAL
  - Con: Possible overfunding, weakening intergenerational equity

## Appendix: Assumptions and Methods

- Contribution rates through 2015 are from Actuarial Valuation Reports (AVRs). Rates from 2016 to 2024 are projected rates. Projected contribution rates were developed using assets, data, assumptions, and methods consistent with the *2015 AVR* and assumptions found on our website. We also assumed a 2.65% return for Fiscal Year 2016.

*Entry Age Normal Cost Method*

- Estimated the projected Market Value of Assets based upon calculated contributions under this funding method.
- Assumed no smoothing of assets.
- Amortized UAAL over 15 years with a discount rate consistent with the valuation year discount assumption.
- Employees and employers share equally in the contribution rate increase or reduction from amortizing any UAAL.