



# MONTANA PUBLIC EMPLOYEE RETIREMENT SYSTEM SOLVENCY ANALYSIS

---

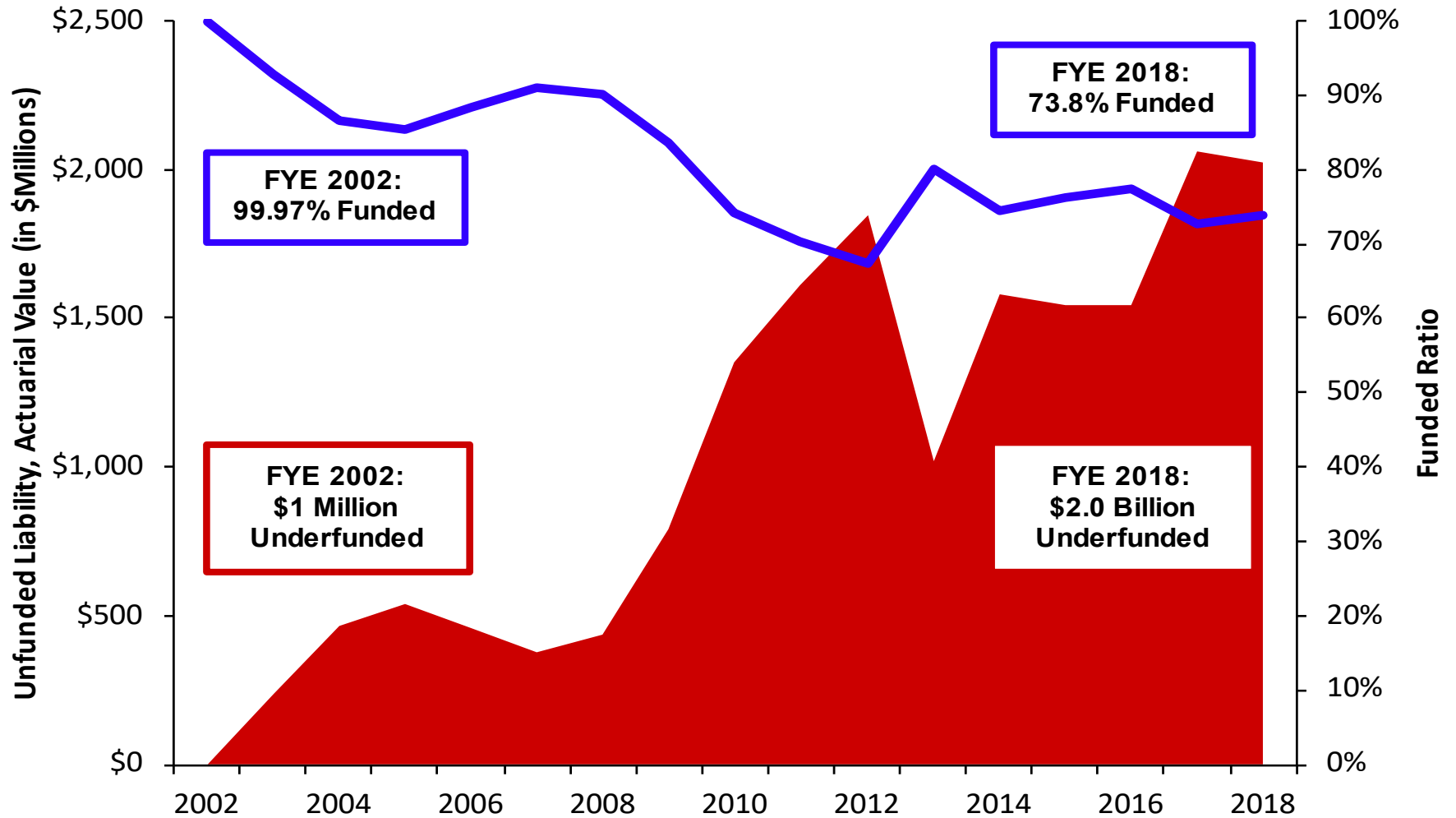
Prepared by:

**Pension Integrity Project at Reason Foundation**

**August 19, 2019**



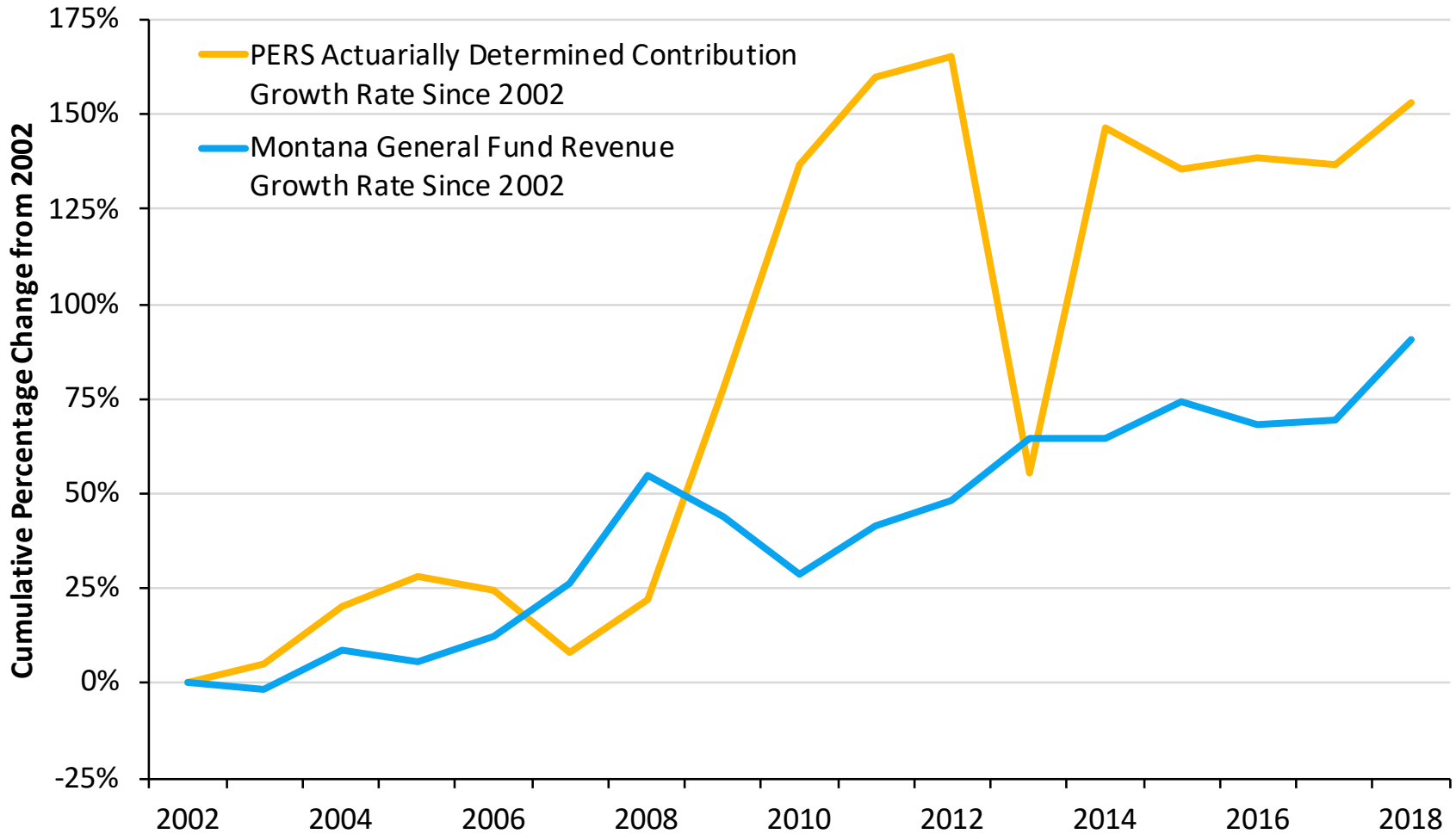
# PERS: A History of Weakening Solvency (2002-2018)



Source: Pension Integrity Project analysis of actuarial value of assets and actuarial accrued liability found in Montana PERS valuation reports and CAFRs



# Actuarially Determined Contribution Rates Growing Faster than Montana Revenue



Source: Pension Integrity Project analysis of PERS actuarial valuation reports and data from NASBO Fiscal Survey of States. GASB recently changed the definition of Actuarially Required Contribution (ARC) to Actuarially Determined Employer Contribution (ADEC).

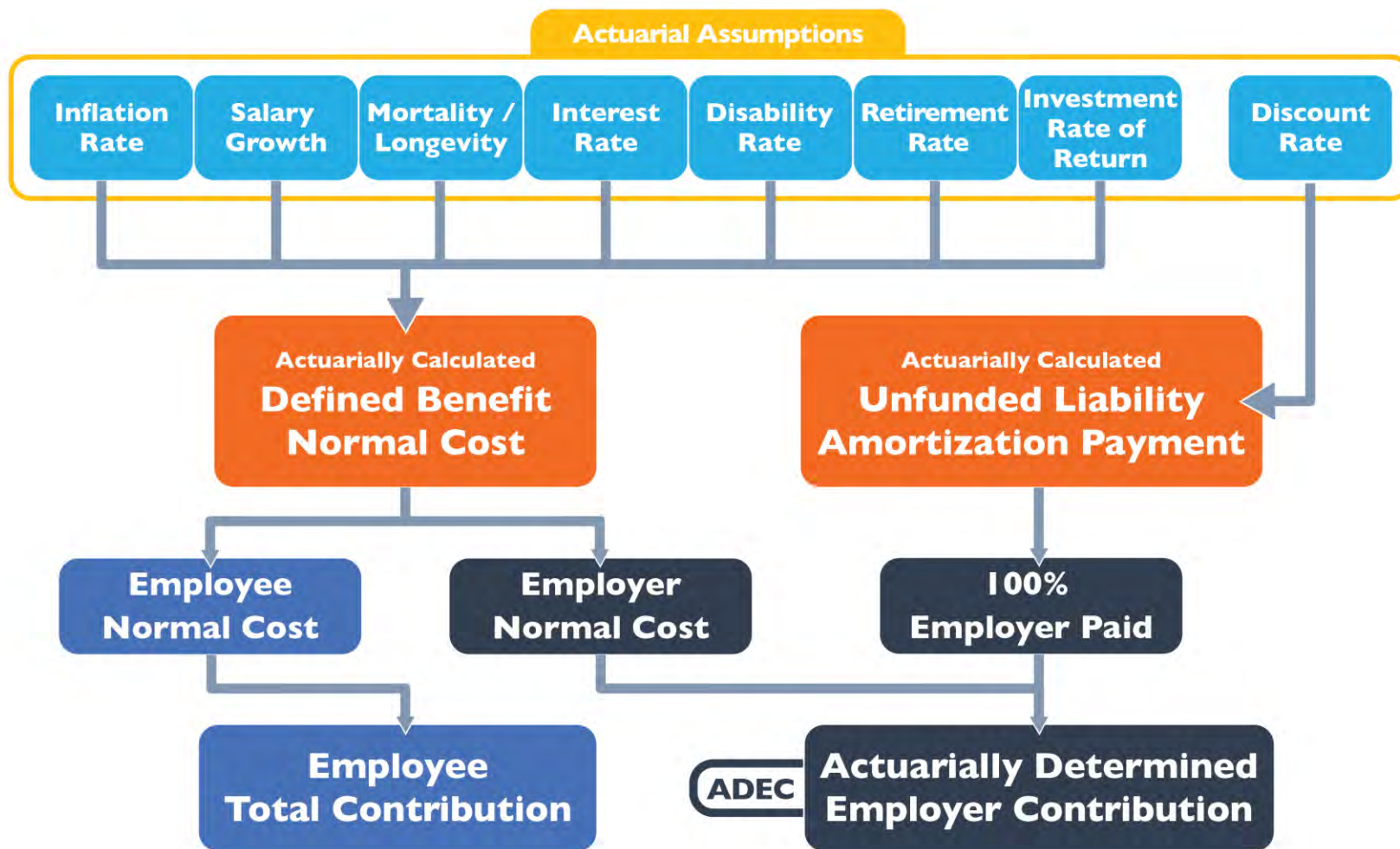


# CHALLENGES CURRENTLY FACING MONTANA PERS

---

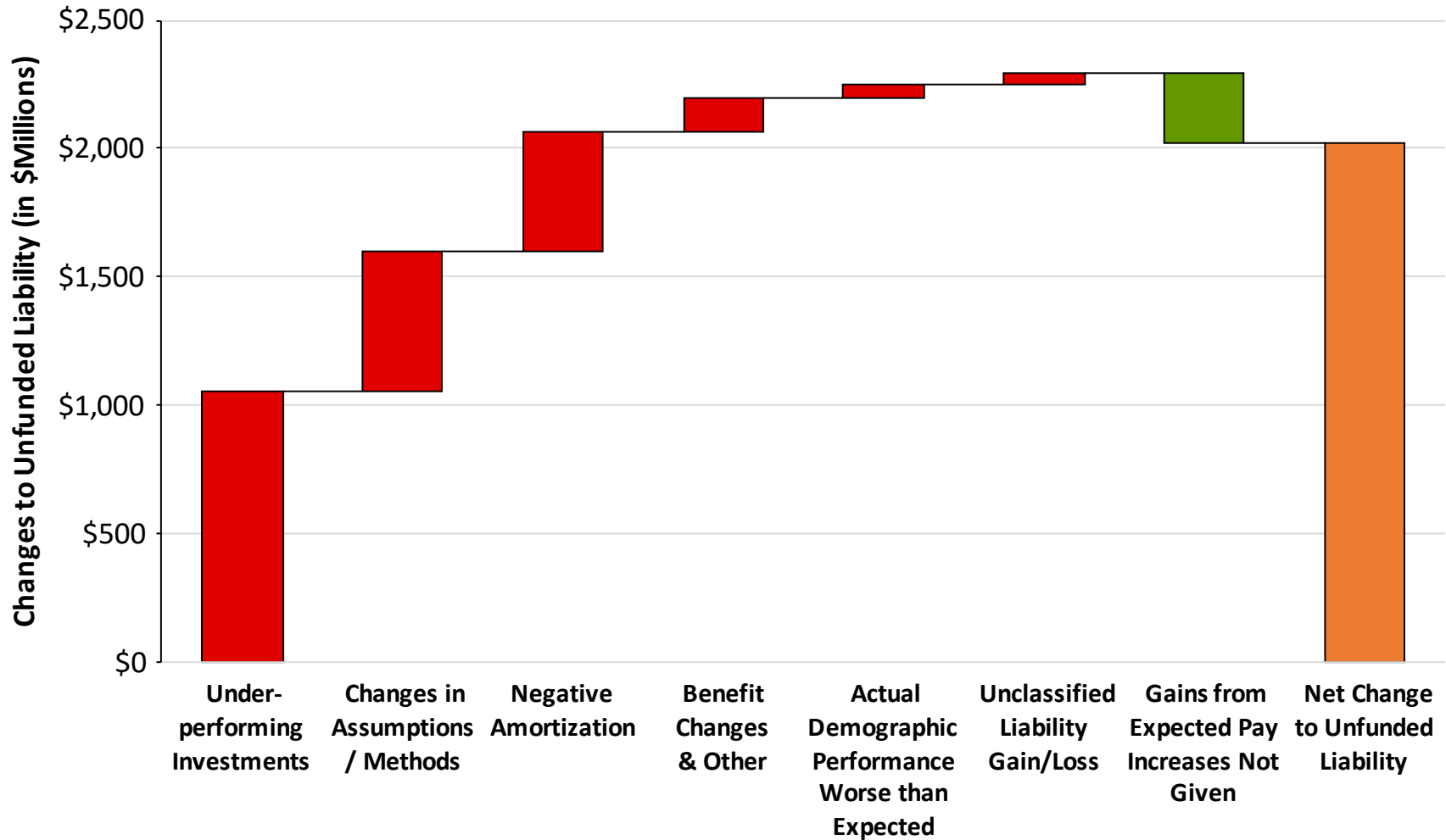


# How a Pension Plan is Funded



# The Origins of MPERS Pension Debt

## Actuarial Experience of Montana PERS, 2002-2018



Source: Pension Integrity Project analysis of Montana PERS CAFRs. Data represents cumulative unfunded actuarial liability by gain/loss category.



# Driving Factors Behind MPERS Challenges

1. **Underperforming Investment Returns** have been the largest contributor to the unfunded liability, adding \$1.1 billion to the unfunded liability since 2002.
2. **Prudent Changes in Actuarial Assumptions and Methods** since 2004 to better reflect current market and demographic trends required the recognition of previously unrecognized pension cost and the acknowledgment of \$540 million to the unfunded liability.
3. **Contribution and Amortization Methods** have resulted in accrued interest payments, resulting in \$756 million in additional unfunded liability since 2002.
4. **Undervaluing Debt** through discounting methods that have remained unchanged, leading to an undercalculation of required contributions.



# CHALLENGE I: ASSUMED RATE OF RETURN

---

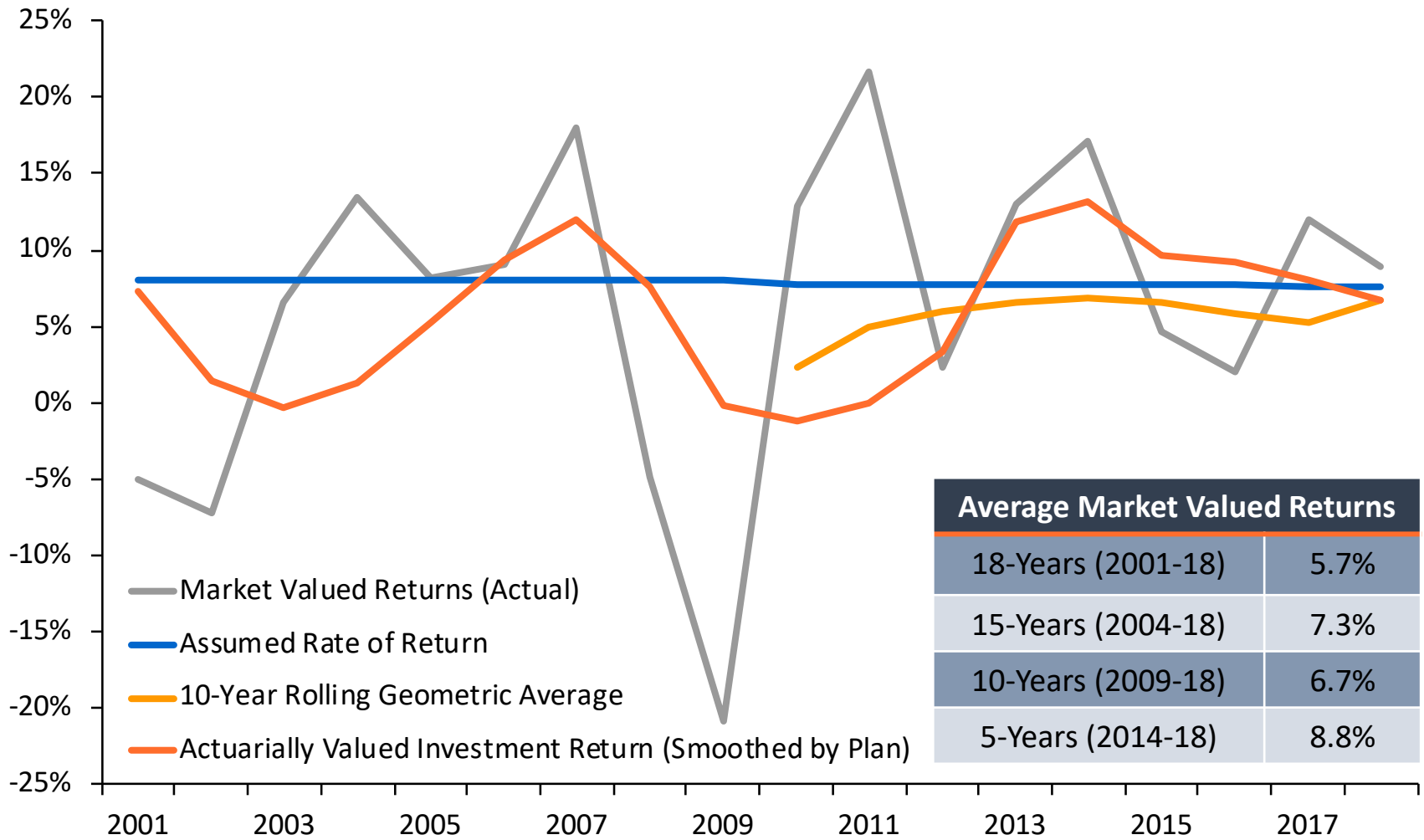
- **Unrealistic Expectations:** The Montana PERS *Assumed Return* exposes taxpayers to significant investment underperformance risk.
- **Underpricing Contributions:** Using an unrealistic *Assumed Return* has likely resulted in underpriced *Normal Cost* and an undercalculated *Actuarially Determined Contribution*.





# Montana PERS Problem: Underperforming Assets

## Investment Return History, 2001-2018



Source: Pension Integrity Project analysis of Montana PERS actuarial valuation reports and CAFRs. The current assumed rate of return for MPERS is 7.65%

# New Normal: The So-Called Recovery Has Already Happened, the Market Has Changed



- Over the past two decades there has been a steady change in the nature of institutional investment returns.
  - 30-year Treasury yields have fallen from around 8% in the 1990s to consistently less than 3% today.
  - Globally, interest rates are at ultralow historic levels, while market liquidity continues to be restrained by financial regulations.
- McKinsey & Co. forecast the returns to equities will be 20% to 50% lower over the next two decades compared to the previous three decades.

*The “new normal” for institutional investing suggests achieving even a 6% average rate of return is optimistic.*



# New Normal: Forecasts for Future Returns are Significantly Lower than Past Returns

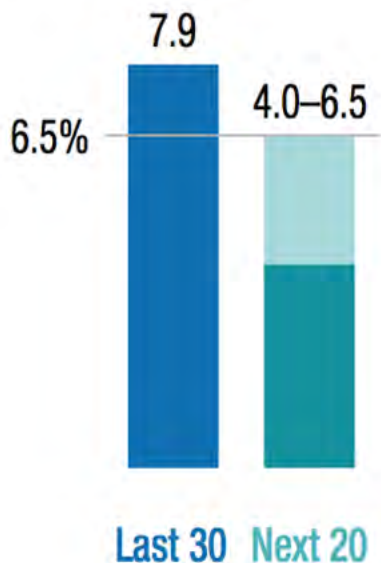
The past 30 years saw returns that exceeded the long-run average

The next 20 years could be more challenging

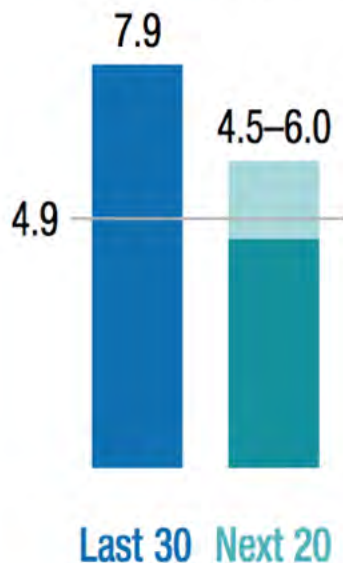
- Historical real returns
- Last 100 years average return

- Growth-recovery scenario
- Slow-growth scenario

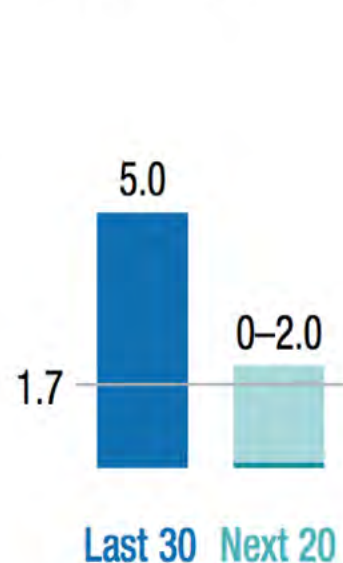
**US equities**



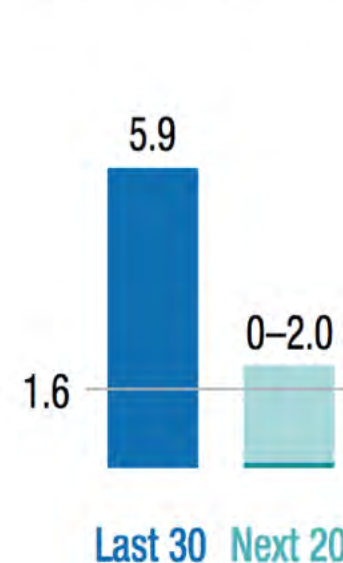
**European equities**



**US bonds**

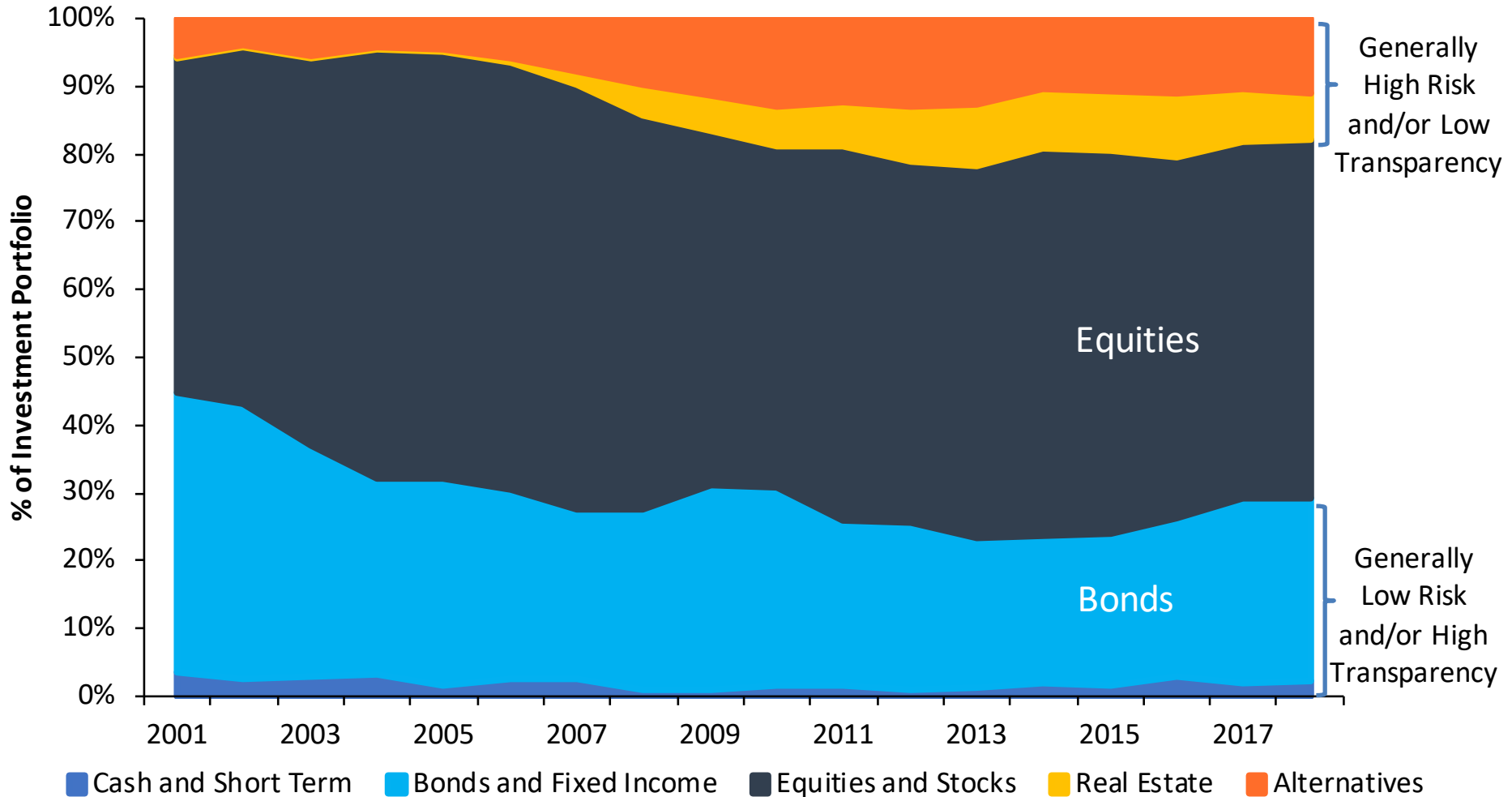


**European bonds**



# Montana PERS Asset Allocation (2001-2018)

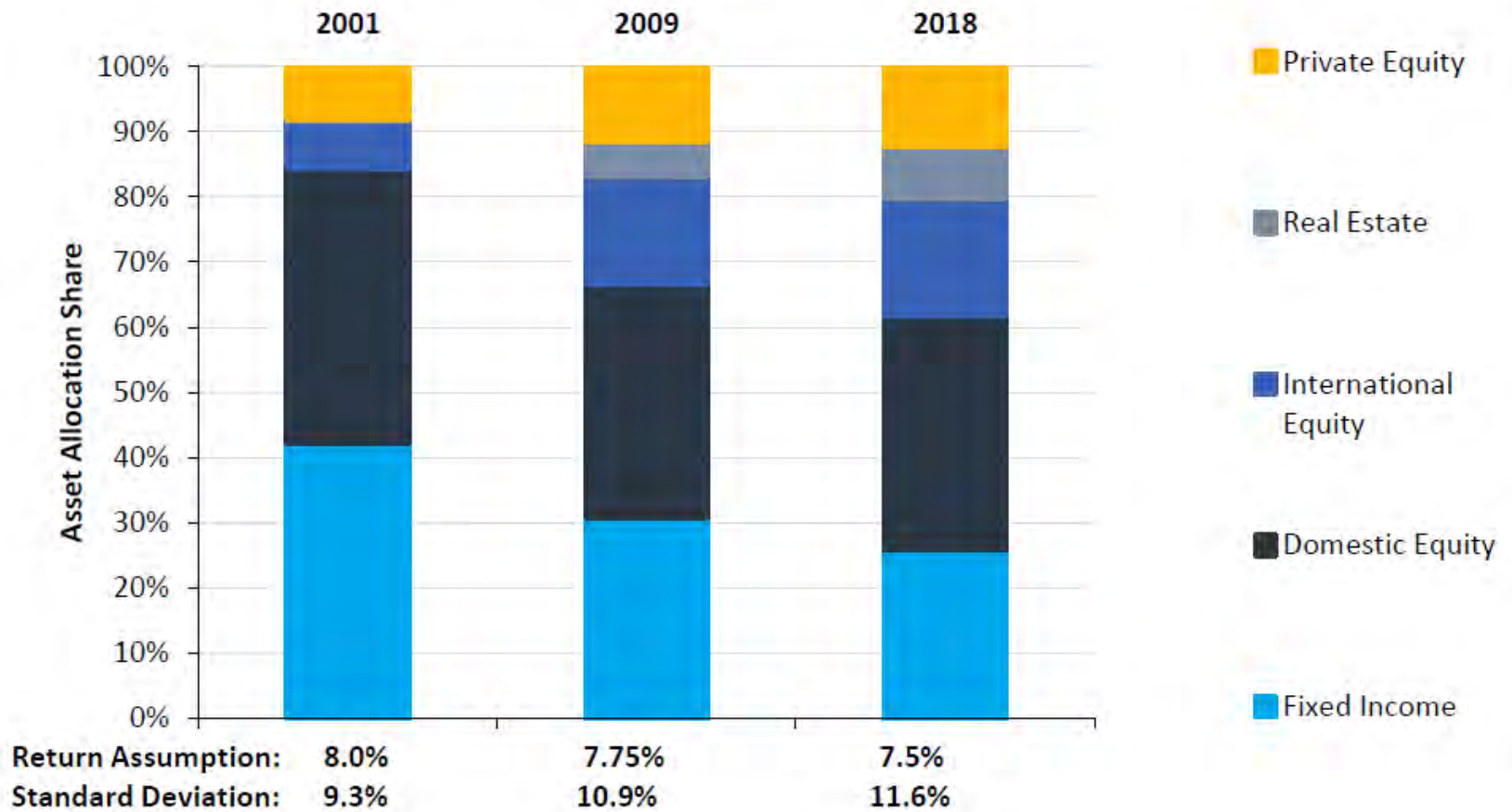
## Expanding Risk in Search for Yield



Source: Pension Integrity Project analysis of Montana PERS actuarial valuation reports and CAFRS.

# New Normal: Market Trend Towards Risk

Montana PERS Has Changed its Asset Allocation Towards More Risky Investments Resulting in a Higher Annual Standard Deviation of Returns



Source: Pension Integrity Project Monte Carlo model based on Montana PERS asset allocation and reported expected of returns by asset class. Asset class returns are based on 2019 estimates

# Probability Analysis: Measuring the Likelihood of PERS Achieving Various Rates of Return



## Probability of PERS Achieving A Given Return Based On:

Possible Rates of Return	PERS Forecast			Short-Term Market Forecast				Long-Term Market Forecast	
	PERS Forecast	PERS Forecast (RVK)	PERS Historical Returns	BNY Mellon 10-Year Forecast	JP Morgan 10-15 Year Forecast	Research Affiliates 10-Year Forecast	Horizon 10-Year Market Forecast	BlackRock 20-Year Forecast	Horizon 20-Year Market Forecast
9.00%	35%	18%	9%	12%	12%	8%	16%	31%	31%
8.00%	50%	28%	20%	21%	21%	14%	27%	44%	44%
7.65%	55%	32%	24%	26%	25%	17%	31%	48%	49%
7.00%	64%	40%	35%	36%	34%	24%	41%	57%	58%
6.50%	71%	47%	43%	45%	42%	30%	48%	64%	65%
6.00%	77%	54%	52%	53%	50%	37%	55%	70%	72%
5.00%	86%	67%	69%	69%	66%	52%	68%	80%	83%

Source: Pension Integrity Project Monte Carlo model based on PERS asset allocation and reported expected returns by asset class. Forecasts of returns by asset class generally by BNYM, JPMC, BlackRock, Research Affiliates, and Horizon Actuarial Services were matched to the specific asset class of PERS. Probability estimates are approximate as they are based on the aggregated return by asset class. For complete methodology contact Reason Foundation. RVK is the internal PERS investment consultant. PERS Forecast based on 2017 Horizon 20-year forecast. Probabilities projected in Horizon 20-Year Market Forecast column reflect 2018 reported expected returns. Horizon is an external consulting firm that surveyed capital assumptions made by other firms.

# Probability Analysis: Measuring the Likelihood of PERS Achieving Various Rates of Return



## PERS Forecast

- A probability analysis of PERS historical returns over the past 20 years (1999-2018) indicates only a modest chance (24%) of hitting the plan's 7.65% assumed return.
- While the Horizon's capital assumptions adopted by PERS project a 55% chance of achieving their investment return target, the capital assumptions produced by the plan's own investment consultant RVK projected a significantly lower probability of 32%.

## Short-Term Market Forecast

- Returns over the short to medium term can have significant negative effects on funding outcomes for mature pension plans with large negative cash flows like PERS.
- Analysis of capital market assumptions publicly reported by the leading financial firms (BlackRock, BNY Mellon, JPMorgan, and Research Affiliates) suggests that over a 10-15 year period, PERS returns are likely to fall short of their assumption.

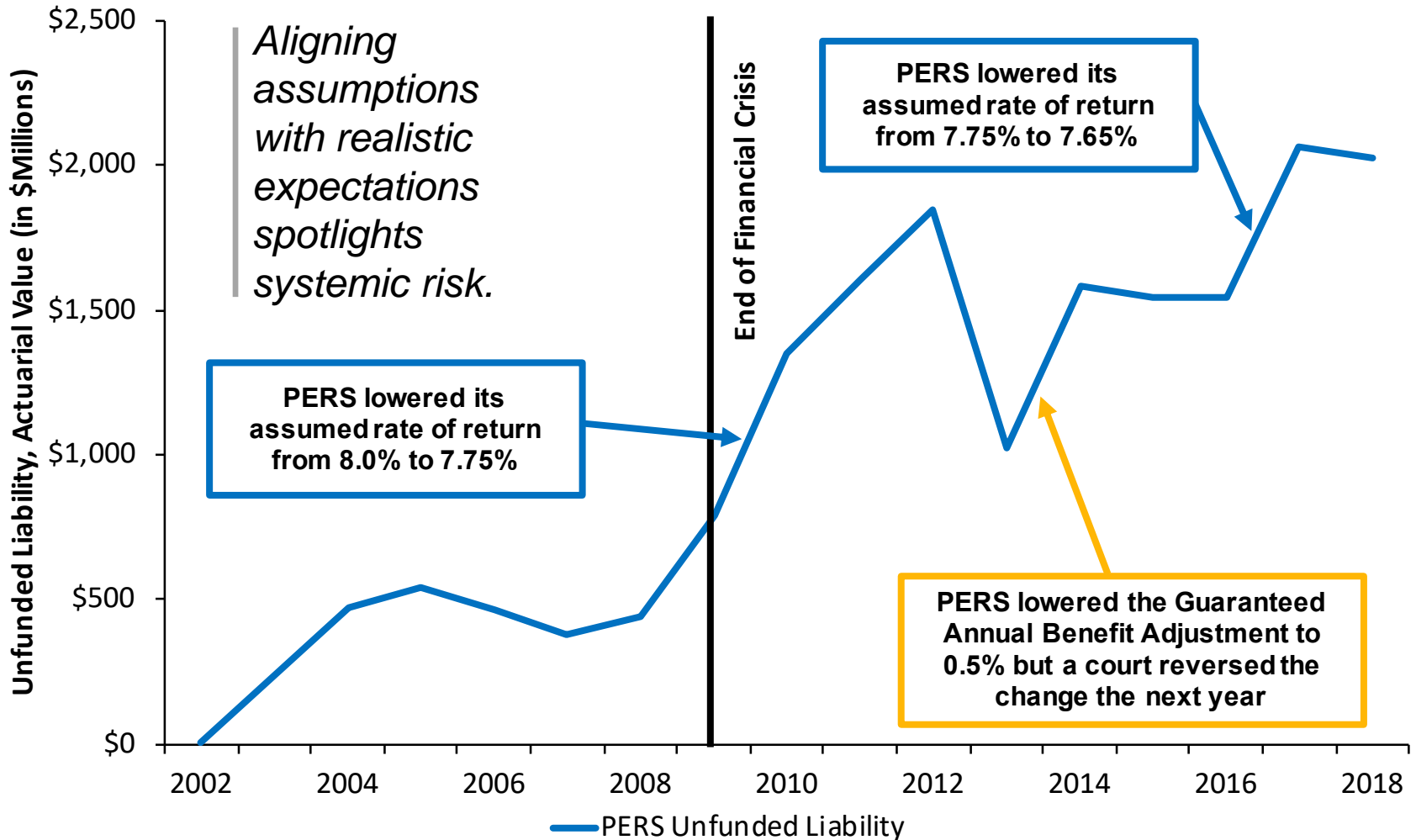
## Long-Term Market Forecast

- Longer-term projections typically assume PERS investment returns will revert back to historical averages.
  - ✓ The "reversion to mean" assumption should be viewed with caution given historical changes in interest rates and a variety of other market conditions that increase uncertainty over longer projection periods, relative to shorter ones.
- Forecasts showing long-term returns near 7.65% being likely also show a significant chance that the actual long-term average return will fall far shorter than expected.
  - ✓ For example, according to BlackRock's 20-year forecast, while the probability of achieving an average return of 7.65% or higher is about 48%, the probability of earning a rate of return below 5% is about 20%.



# Benefits of Making Prudent Assumption Changes

## Recognition of More Accurate Debt Levels



Source: Pension Integrity Project analysis of PERS actuarial valuation reports.





# RISK ASSESSMENT

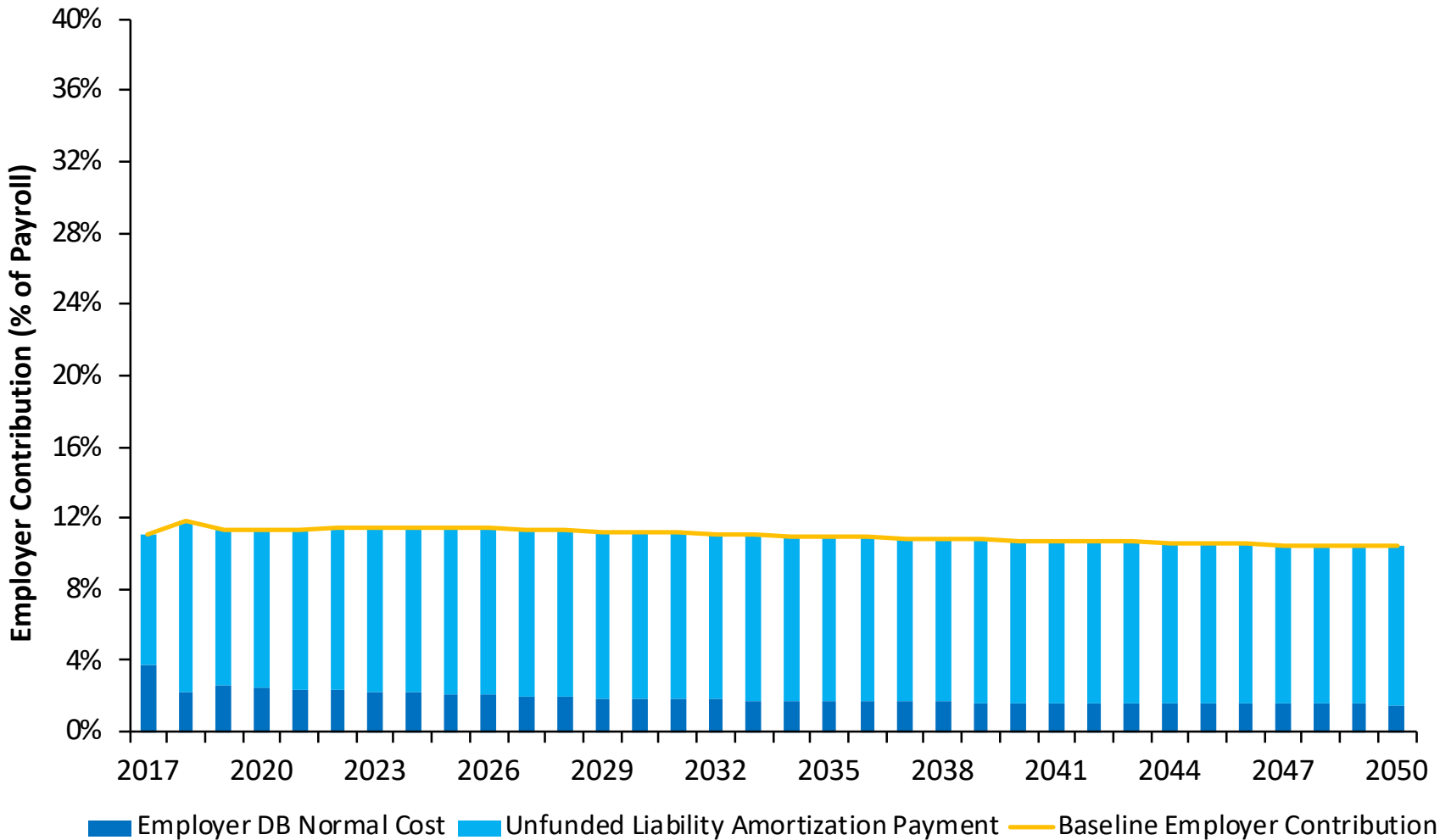
---

- **How resilient is Montana PERS to volatile market factors?**

Current PERS Baseline: Normal Cost + Amortization (current state)

# What Happens if PERS Hits its Investment Target?

Discount Rate: 7.65%, Assumed Return: 7.65%, Actual Return: 7.65%



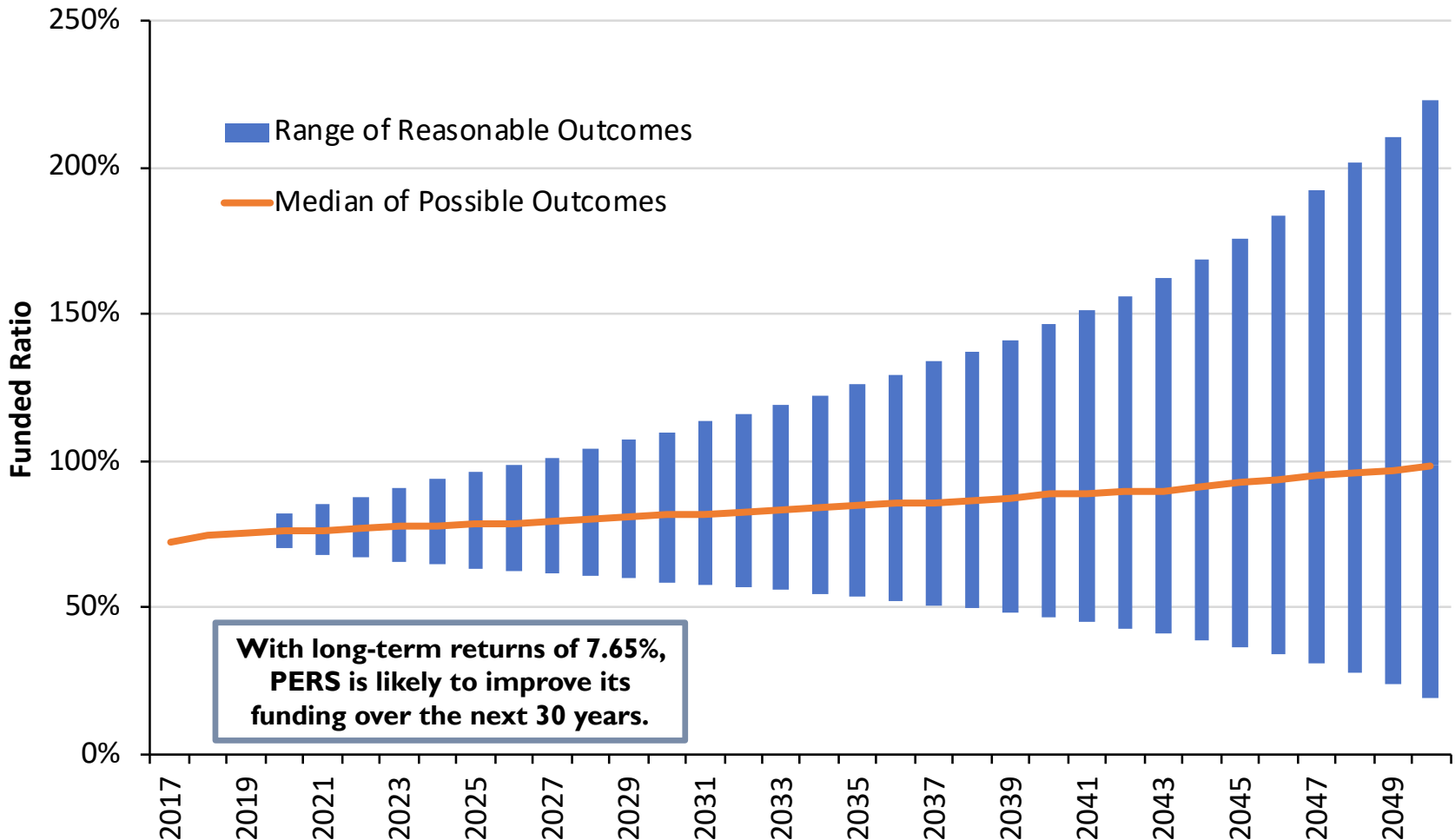
Source: Pension Integrity Project actuarial forecast of PERS. Scenario assumes that the state continues to pay 100% of the fixed statutory contribution each year.



### 30-year Funded Ratio Forecast (current state)

# Funded Ratios are Expected to Improve

Long-term Average Returns of 7.65%



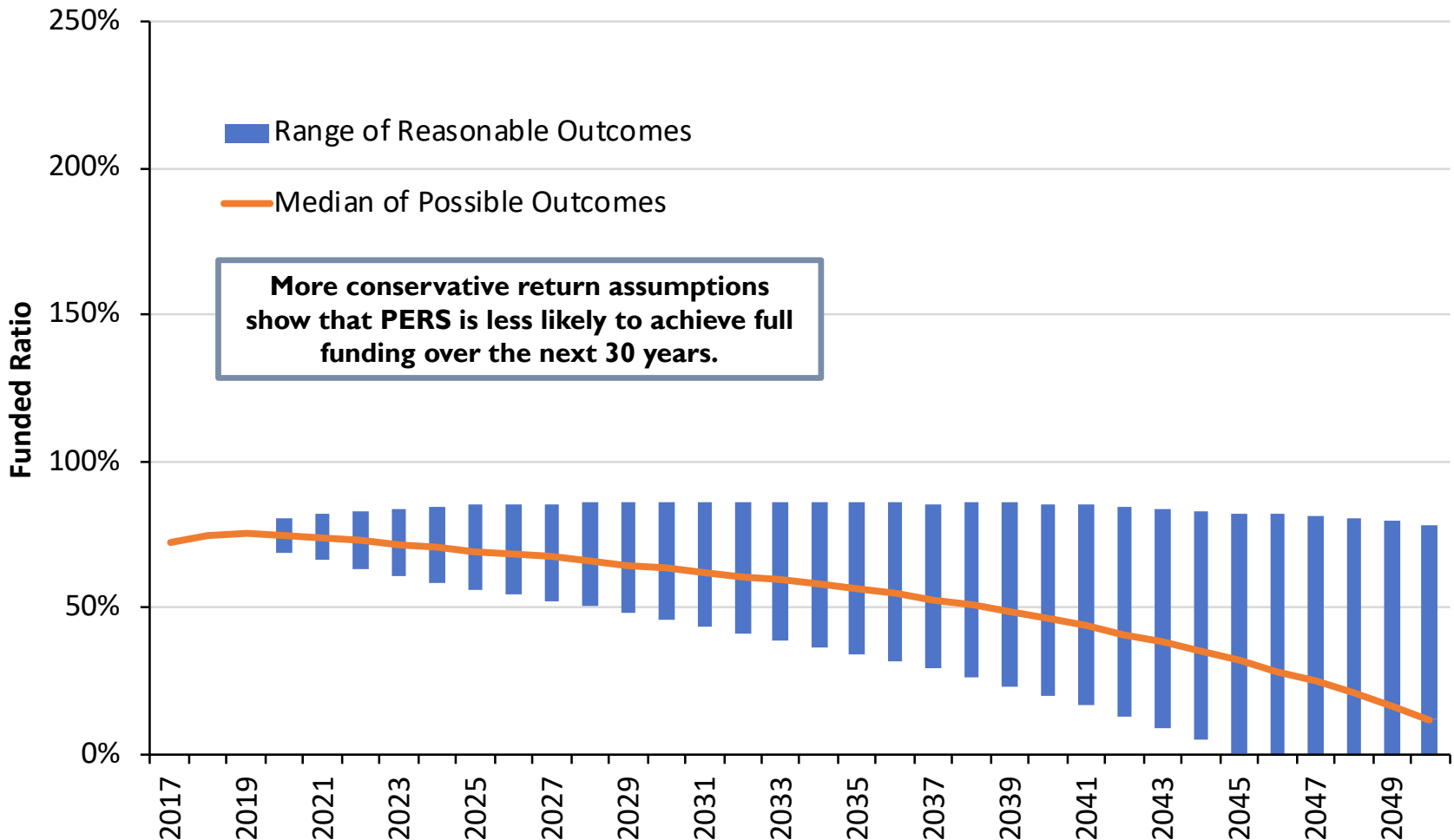
**With long-term returns of 7.65%, PERS is likely to improve its funding over the next 30 years.**

Source: Pension Integrity Project actuarial forecast of PERS plan based on PERS return and risk assumptions. Range of Reasonable Outcomes represents the 50% of possible outcomes closest to the median.

### 30-year Funded Ratio Forecast (current state)

# How Do Missed Returns Impact Funded Ratios?

More Conservative Long-term Average Returns

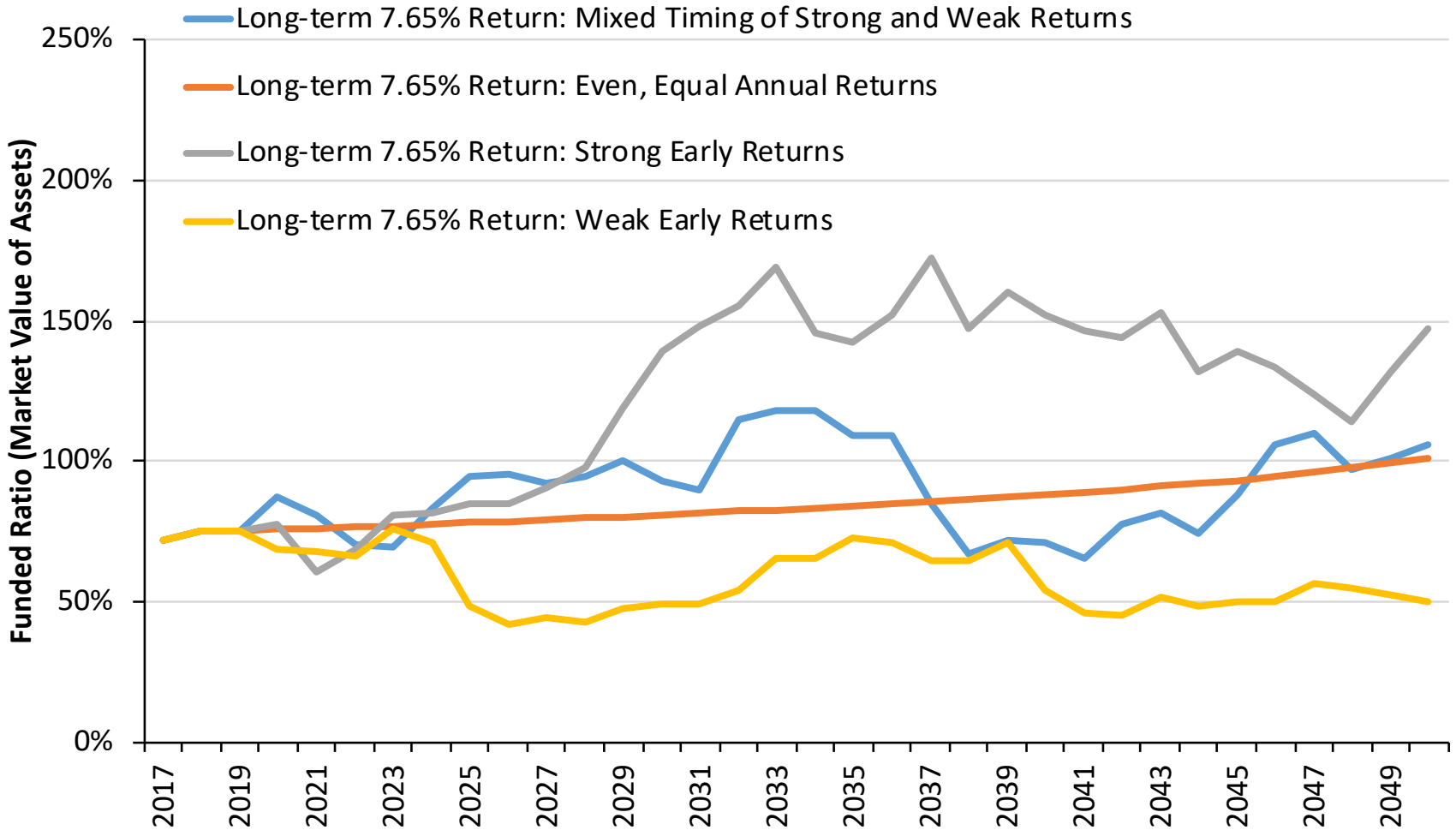


Source: Pension Integrity Project actuarial forecast of PERS plan using the return and risk assumptions of the Monte Carlo analysis. Conservative returns are 5.8%, which are the result of combining the long-term capital market assumptions from four prominent financial firms

### 30-year Funded Ratio Forecast (current state)

# All Paths to a 7.65% Average Return Are Not Equal

Long-Term Average Returns of 7.65%



Source: Pension Integrity Project actuarial forecast of PERS plan. Strong early returns (TWRR=7.65%,MMRR=8.26%), Even, equal annual returns (Constant Return = 7.65%), Mixed timing of strong and weak returns (TWRR=7.65%,MMRR=7.65%), Weak early returns (TWRR=7.65%,MMRR=6.63%) Scenario assumes that PERS pays the fixed statutory rate each year. Years are plan's fiscal years.

# Paying Down Unfunded Liabilities with a Variable Contribution Rate

## Current Montana PERS Amortization Policy



If the PERS actuary calculates an unfunded liability amortization window...

### **Greater than 30 years:**

The actuary will recommend a contribution rate increase that can expect to fully amortize the UAAL over a closed 30-year period.

### **Less than 30 years, but greater than 0 and is projected to continue to decline over the remainder of the closed period:**

The actuary will not recommend a change in the statutory contribution rates.

### **Less than 30 years, but has increased over prior valuations and is projected to continue to grow:**

The actuary will recommend a contribution rate increase that is expected to reverse the trend and reestablish a closed amortization period equal to that of the last valuation.

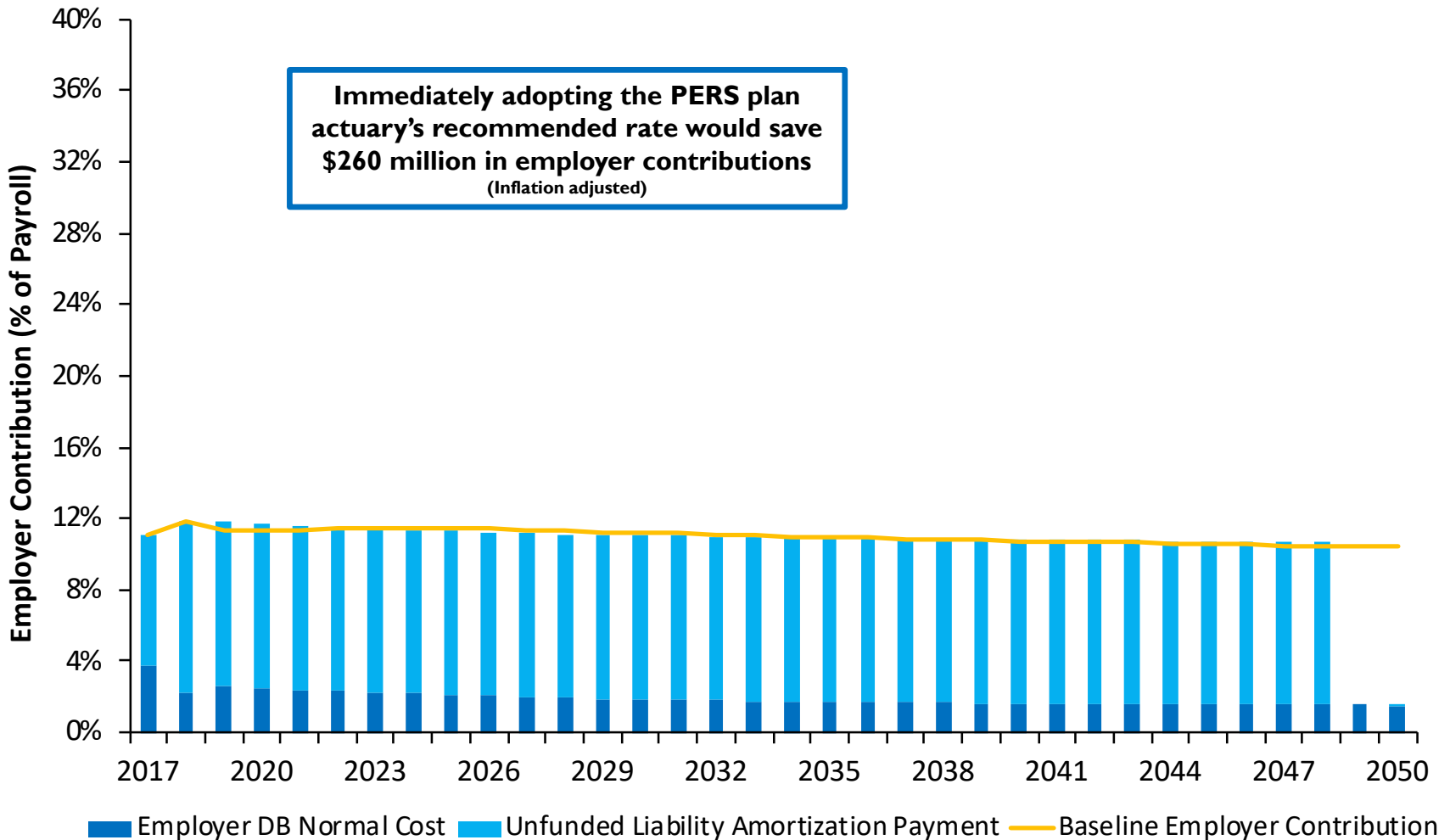
**Unfunded Liability Amortization Payments:** Pension plans are required to make regular payments to reduce any actuarially accrued unfunded liability, which is effectively pension debt. Amortization payments are regular contributions to reduce the unfunded liability and are on a set schedule, similar to paying off a student loan, or a mortgage that allows for negative amortization payments.



Scenario: I (Variable Rate)

# What Happens if PERS Hits its Investment Target?

Discount Rate: 7.65%, Assumed Return: 7.65%, Actual Return: 7.65%, Amo. Period: 30-Year



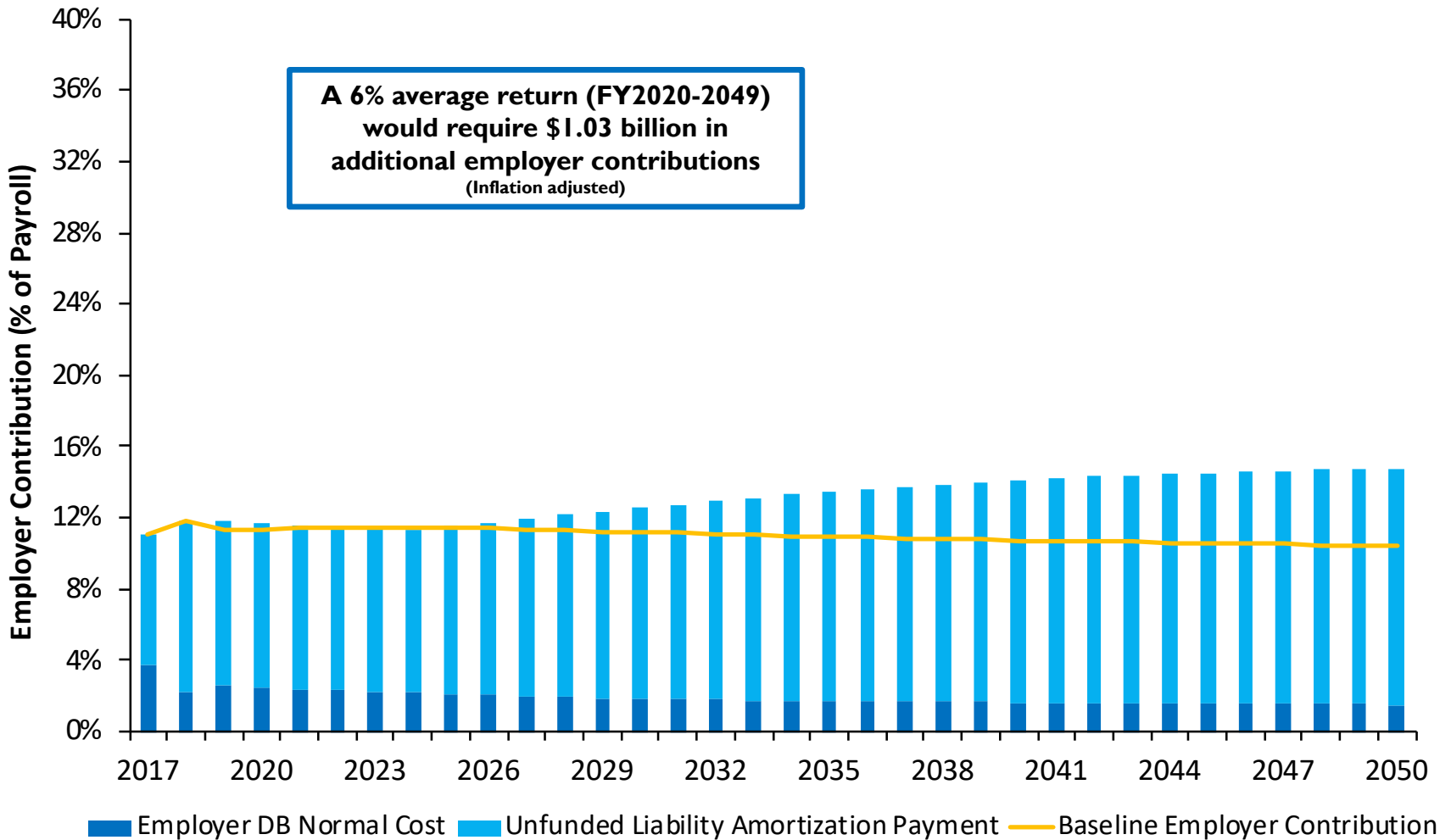
Source: Pension Integrity Project actuarial forecast of PERS. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate. Figures are rounded and adjusted for inflation.



Scenario: 2 (Variable Rate)

# What Happens if PERS Underperforms?

Discount Rate: 7.65%, Assumed Return: 7.65%, Actual Return: 6%, Amo. Period: 30-Year



Source: Pension Integrity Project actuarial forecast of PERS. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate. Figures are rounded and adjusted for inflation.

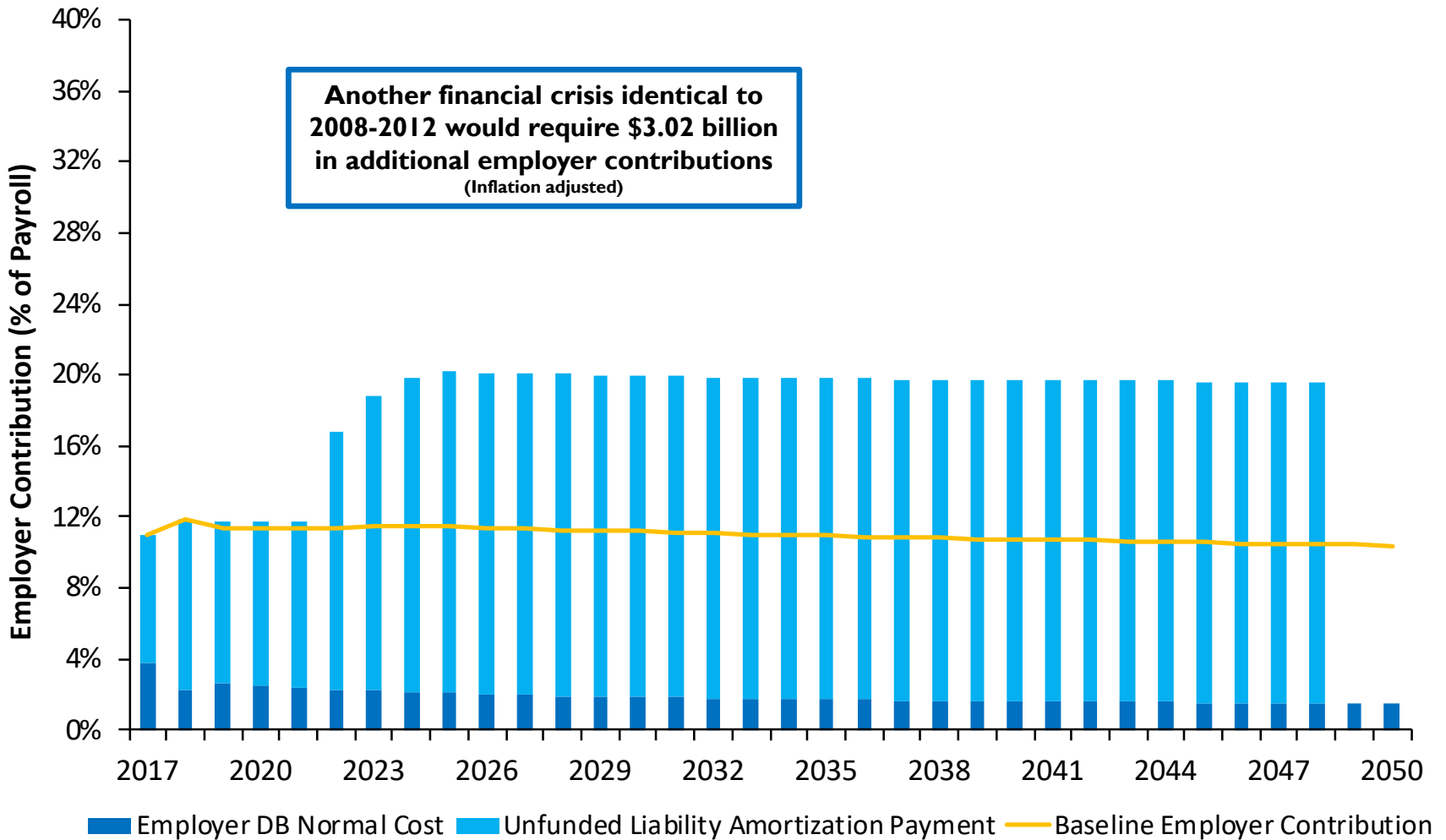


Scenario: 3 (Variable Rate)

# What Happens if PERS Experiences Another Crisis?



Discount Rate: 7.65%, Assumed Return: 7.65%, Actual Return: Crisis Returns 2020-24, 7.65% Following Years

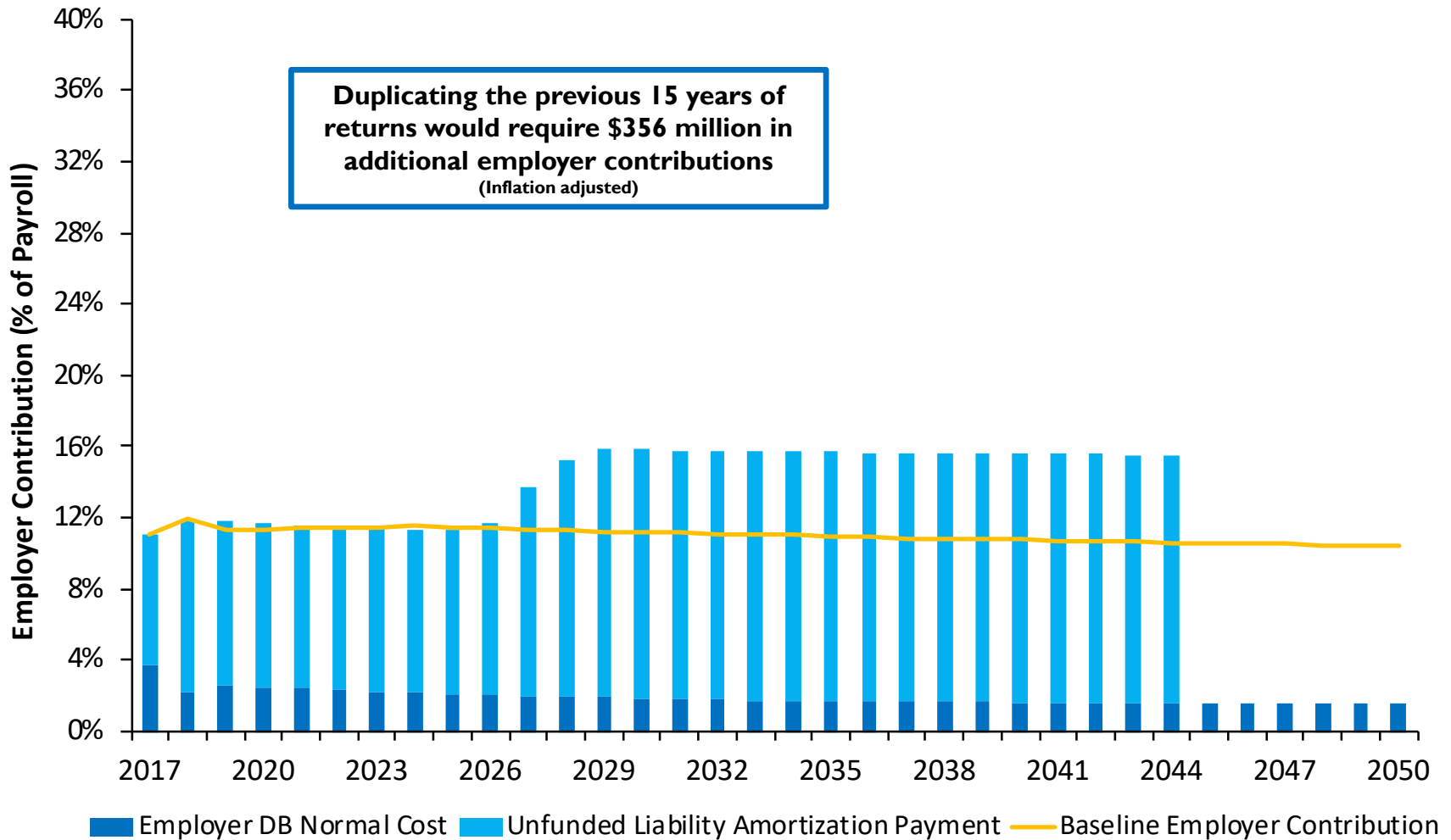


Source: Pension Integrity Project actuarial forecast of PERS. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate. Figures are rounded and adjusted for inflation.

Scenario: 4 (Variable Rate)

# What if the Next 15 Years are the Same as the Last 15?

Discount Rate: 7.65%, Assumed Return: 7.65%, Actual Return: Same as last 15 years, 7.65% Following Years



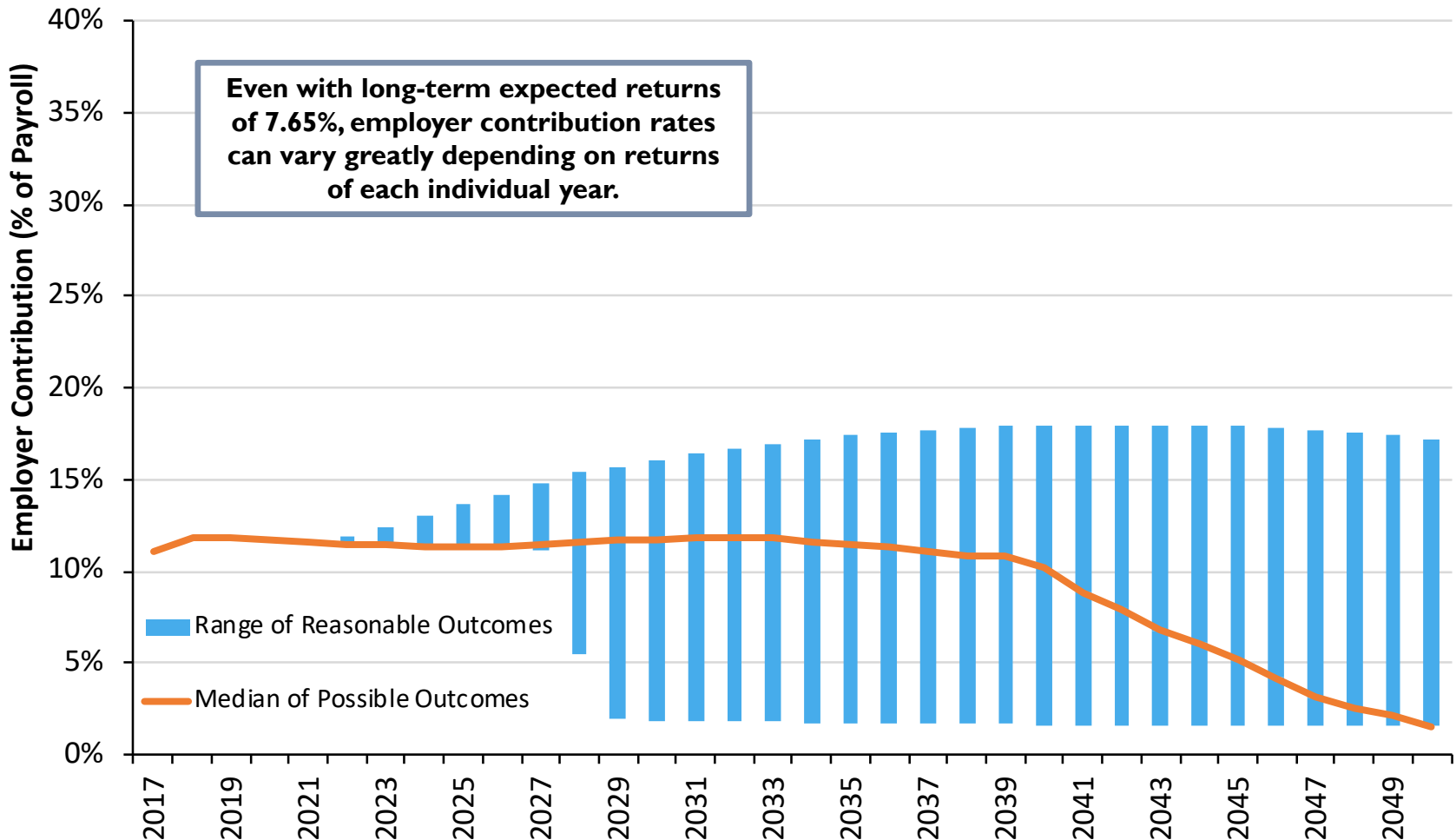
Source: Pension Integrity Project actuarial forecast of PERS. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate. Figures are rounded and adjusted for inflation.



# 30-year Employer Contribution Forecast (Variable Rate)

## If PERS Performs as Expected, Rates Can Still Vary

Long-term Average Returns of 7.65%

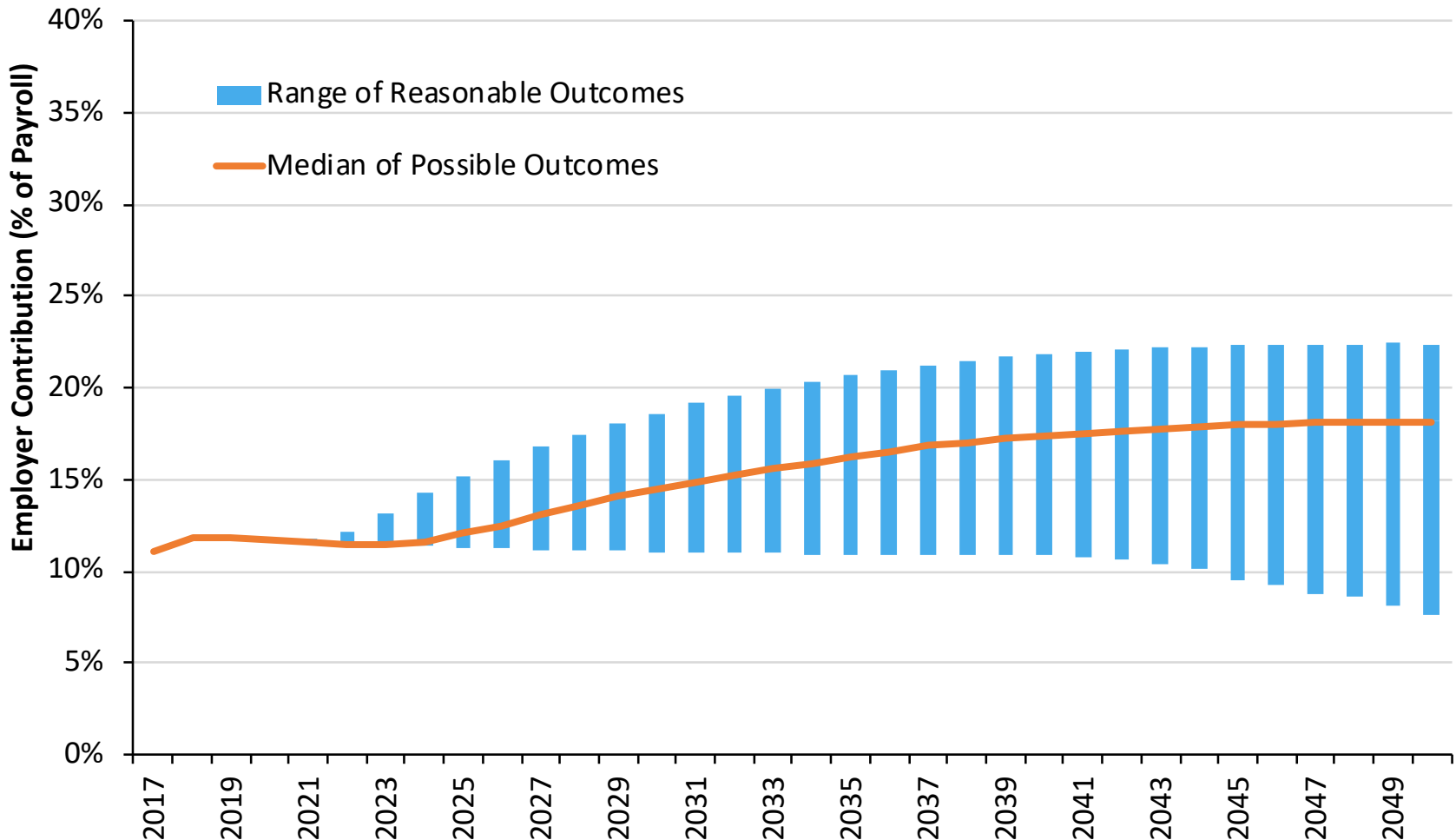


Source: Pension Integrity Project actuarial forecast of PERS. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate. Figures are rounded and adjusted for inflation.

### 30-year Employer Contribution Forecast (Variable Rate)

# If PERS Underperforms, Expect Higher Contribution Rates

More Conservative Long-term Average Expected Returns



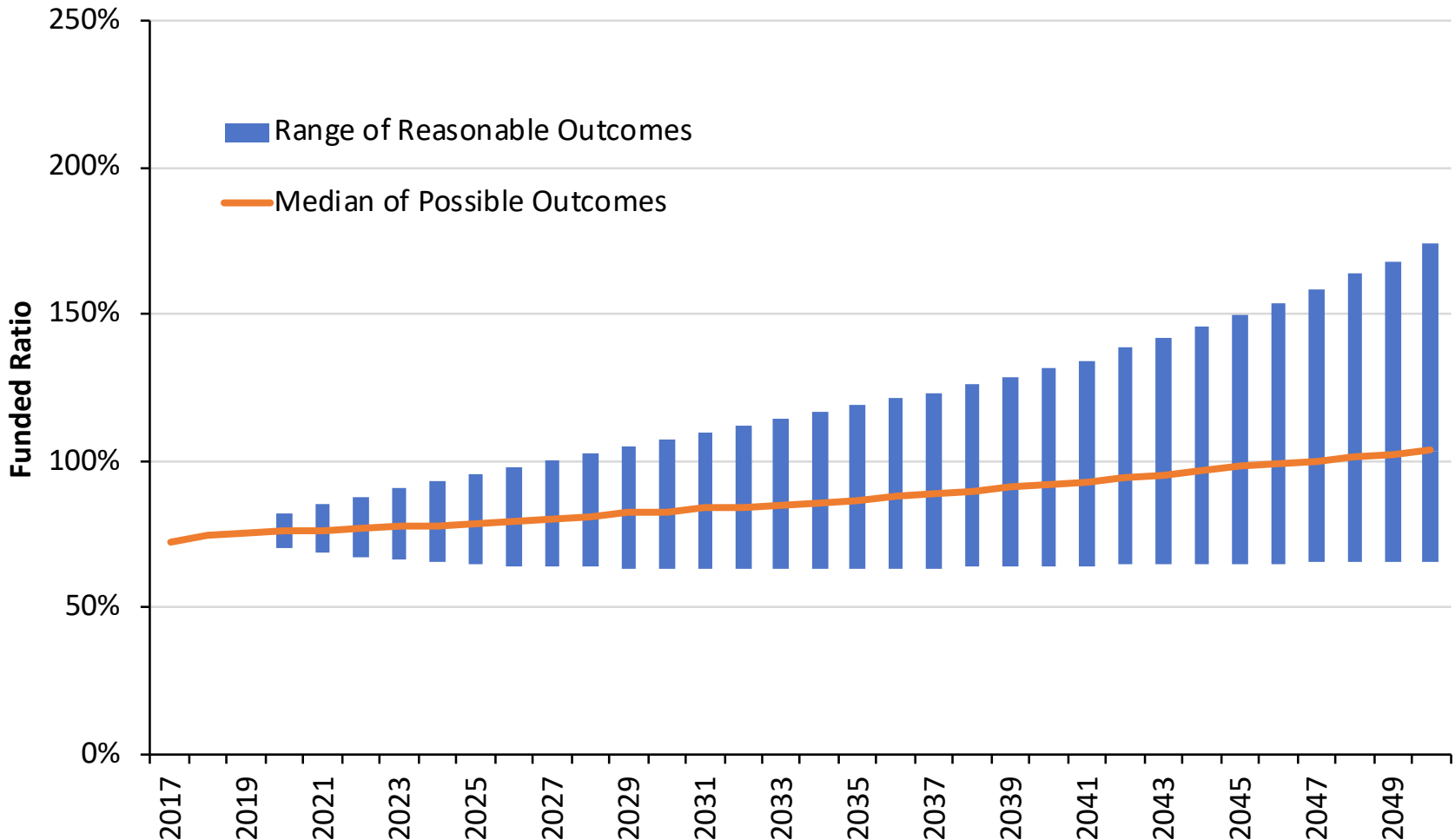
Source: Pension Integrity Project actuarial forecast of PERS plan using the return and risk assumptions of the Monte Carlo analysis. Conservative returns are 5.8%, which are the result of combining the long-term capital market assumptions from four prominent financial firms. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate.



## 30-year Funded Ratio Forecast (Variable Rate)

# Funded Ratios are Expected to Improve

Long-term Average Returns of 7.65%



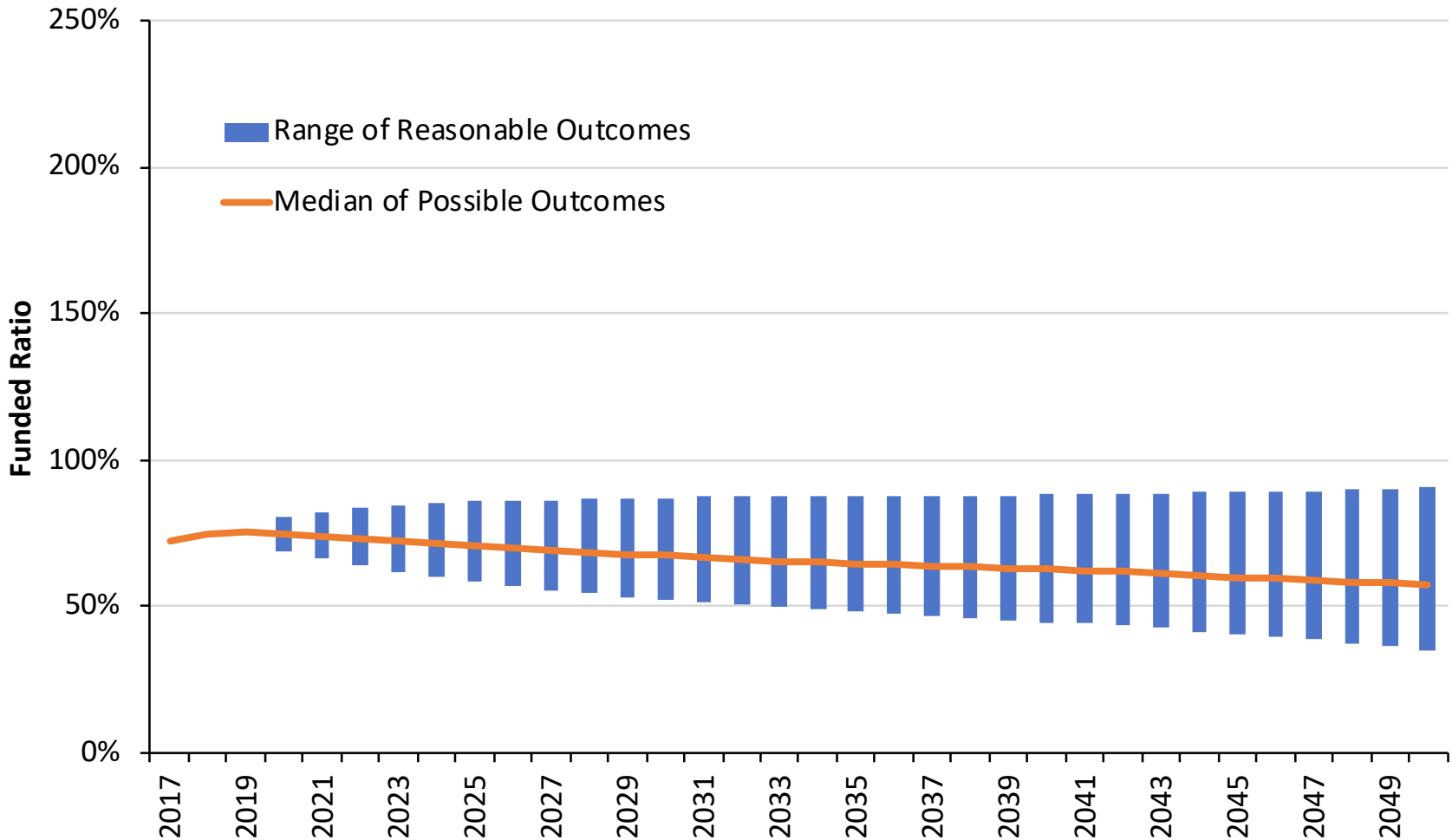
Source: Pension Integrity Project actuarial forecast of PERS plan based on PERS return and risk assumptions. Range of Reasonable Outcomes represents the 50% of possible outcomes closest to the median. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate.



### 30-year Funded Ratio Forecast (Variable Rate)

# How Do Missed Returns Impact Funded Ratios?

More Conservative Long-term Average Returns



Source: Pension Integrity Project actuarial forecast of PERS plan using the return and risk assumptions of the Monte Carlo analysis. Conservative returns are 5.8%, which are the result of combining the long-term capital market assumptions from four prominent financial firms. The variable statutory contribution policy assumes the employer contribution will be adjusted to bring the amortization period down to 30 years immediately whenever the period exceeds 30 years. When the amortization period is below 30 years, the contribution is assumed to stay fixed as a percent of payroll. The absolute contribution amount is assumed to grow at the payroll growth rate.



## CHALLENGE 2: ACTUARIAL ASSUMPTIONS AND METHODS

---

- Failure to meet actuarial assumptions, and delay in updating those assumptions, has led to an underestimation of the total pension liability.
- Adjusting actuarial assumptions to reflect the changing demographics and new normal in investment markets exposes hidden pension cost by uncovering existing—but unrecognized—unfunded liabilities.



# Acknowledging Outdated Actuarial Assumptions When Experience Differs from Assumptions

## **(-) Actuarial Assumption and Methods**

- PERS unfunded liabilities have increased by \$540 million between 2002-2018 due to updates in actuarial assumptions and actuarial methods such as lowering the assumed rate of return.

## **(+) Salary Increase Assumptions**

- PERS employers have not raised salaries as fast as expected, resulting in lower payrolls and thus lower earned pension benefits, a common situation for many state-level pension plans.

## **(-) Withdrawal Rate, Service Retirement, and Mortality Assumptions**

- PERS unfunded liabilities have increased by a combined \$54 million between 2002-2018 due to misaligned demographic assumptions.
- This likely stems from a combination of one or more of the following factors:
  - Actual withdrawal rates before members have reached either a reduced or normal retirement threshold have been lower than anticipated.
  - PERS members have been retiring earlier than expected, receiving more pension checks.





# Acknowledging Outdated Actuarial Assumptions When Experience Differs from Assumptions

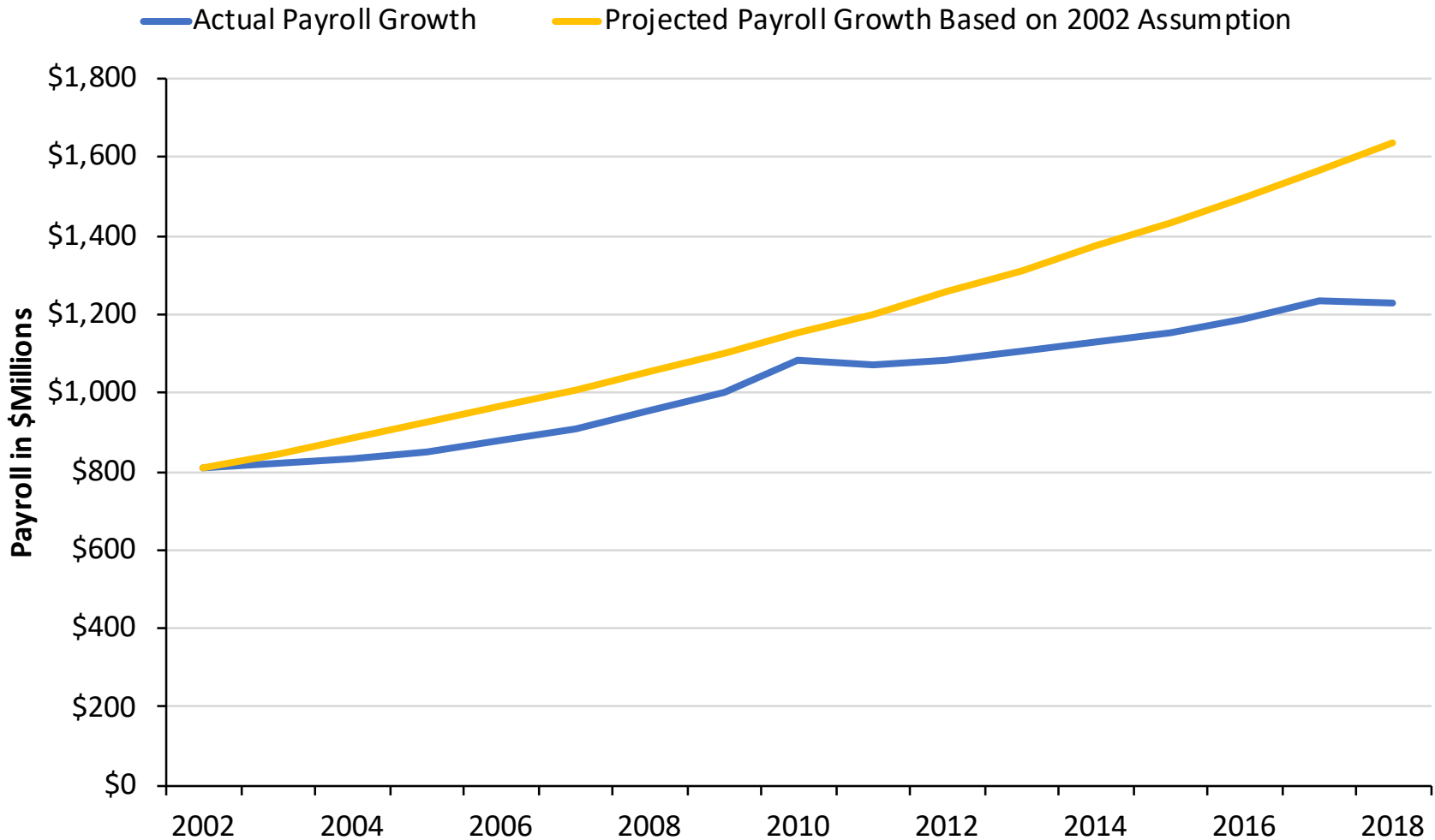
## (-) Overestimated Payroll Growth

- Overestimating payroll growth may create a long-term problem for PERS in combination with the level-percentage of payroll amortization method used by the plan.
- This method *backloads pension debt payments* by assuming that future payrolls will be larger than today (a reasonable assumption).
- While in and of itself, a growing payroll is a reasonable assumption, if payroll does not grow as fast as assumed, employer contributions must rise as a percentage of payroll.
  - This means the amortization method combined with the inaccurate assumption is delaying debt payments.



# Acknowledging Outdated Actuarial Assumptions

## Actual Change in Payroll v. Assumption

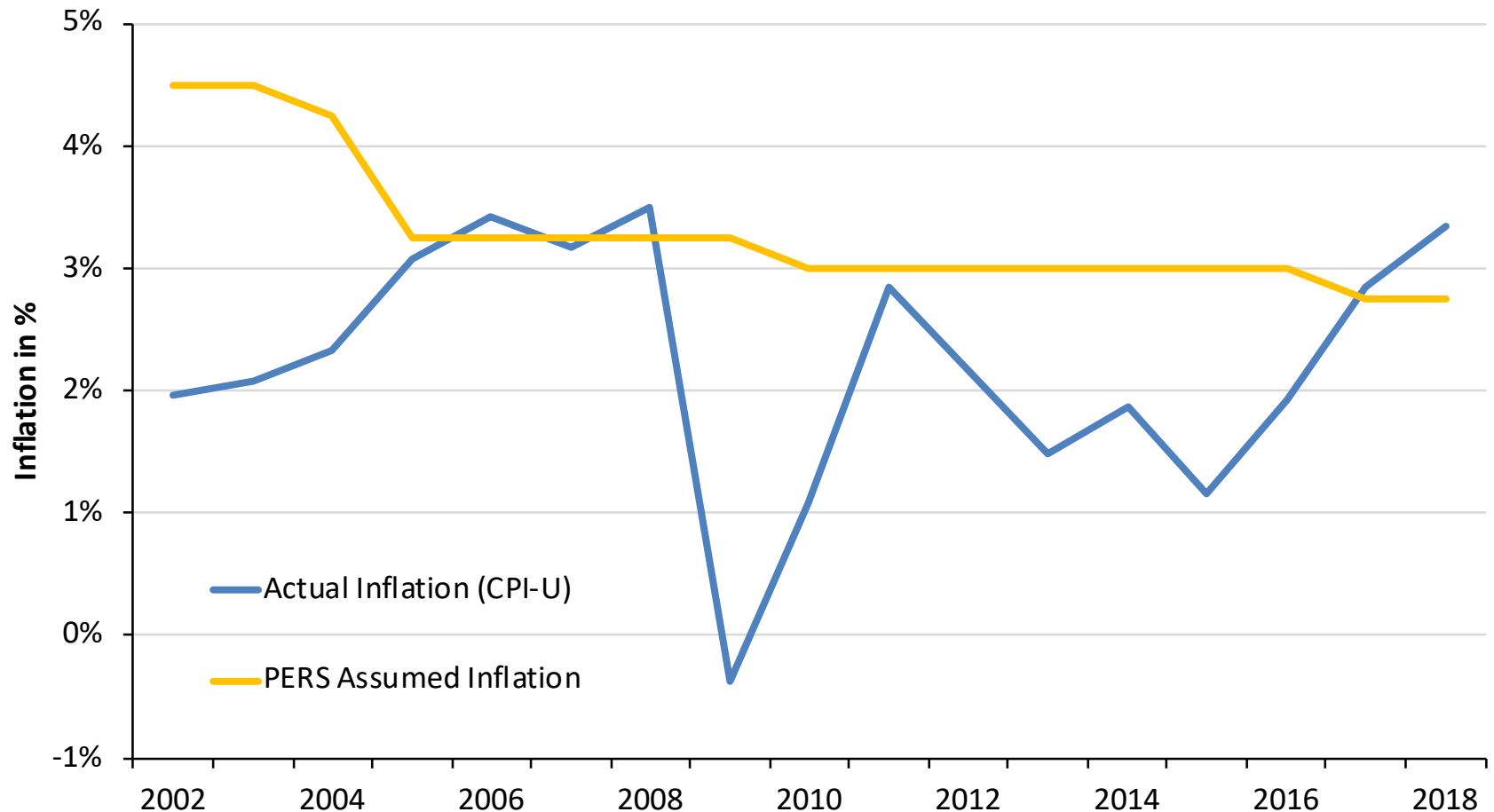


Source: Pension Integrity Project analysis PERS actuarial valuation reports and CAFRs.



# Acknowledging Outdated Actuarial Assumptions

## Actual Inflation vs. Assumption



Source: Pension Integrity Project analysis PERS actuarial valuation reports and CPI-U data from the Bureau of Labor Statistics.



# CHALLENGE 3: INSUFFICIENT CONTRIBUTIONS

---

- Over the past two decades employer contributions to PERS have frequently fallen short of the amount plan actuaries determined would be needed to reach 100% funding in 30 years.
- State contributions towards paying off pension debt are less than the interest accruing on the pension debt.



# Sensitivity Analysis: Normal Cost Comparison Under Alternative Assumed Rates of Return

<b>PERS</b>	<b>Gross Normal Cost</b>	<b>Employer Normal Cost</b>	<b>Employee Normal Cost</b>
<b>7.65%</b> Assumed Return (FYE 2018 Baseline)	10.27%	2.37%	7.9%
<b>7.00%</b> Assumed Return	11.72%	3.82%	7.9%
<b>6.00%</b> Assumed Return	14.37%	6.47%	7.9%
<b>5.00%</b> Assumed Return	17.62%	9.72%	7.9%

Note: These alternative gross normal cost figures should be considered approximate guides to how much more normal cost should be under different discount rates. Any policy changes should be based on more precise normal cost forecasts using detailed plan data. Alternative normal cost rates based on reported liability sensitivity from the FYE 2017 PERS CAFR.

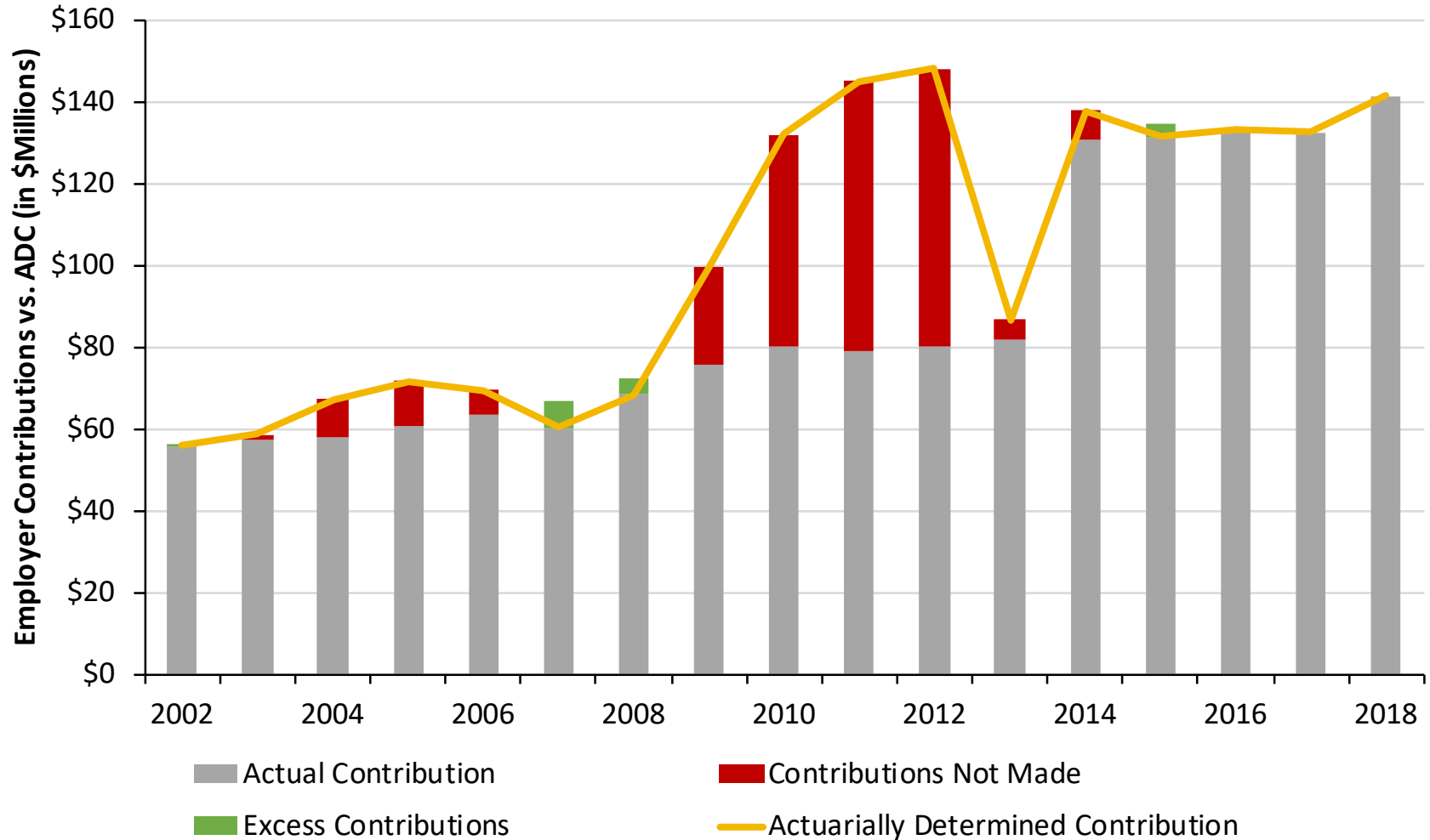


# State Statutes and Policy Perpetuate Structural Underfunding Problems for PERS

1. Since 2003 annual employer contributions to PERS have fallen short of the actuarially determined contribution (ADC) rate.
  - The legislative process makes it difficult to quickly respond to the recommendations of plan actuaries leading to growth in unfunded liabilities.
  - The ADC rate for PERS is based on an open amortization period that resets annually – a similar policy to refinancing a home mortgage every year.
2. Negative amortization: Plan actuaries report that contributions available to cover the unfunded liability are less than the interest accruing on the pension debt each year.
3. Under current contribution rates and current assumptions it will take 38 years for PERS to amortize the debt.

# Actuarially Determined Employer Contribution History, 2002-2018

## Actual v. Required Contributions

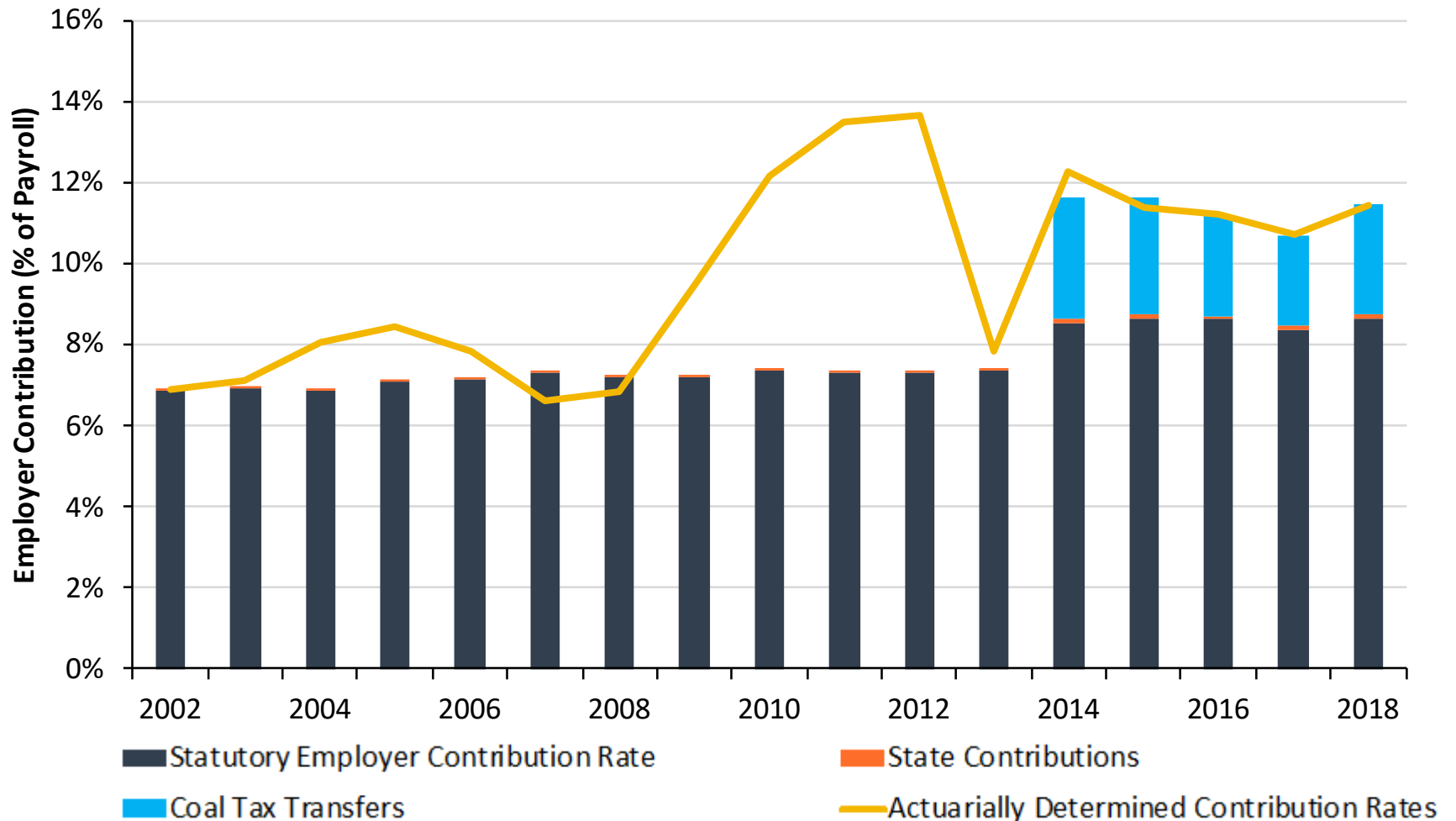


Source: Pension Integrity Project analysis of Montana PERS actuarial reports and CAFRs.



# Actuarially Determined Employer Contribution History, 2002-2018

## Actual v. Required Contributions



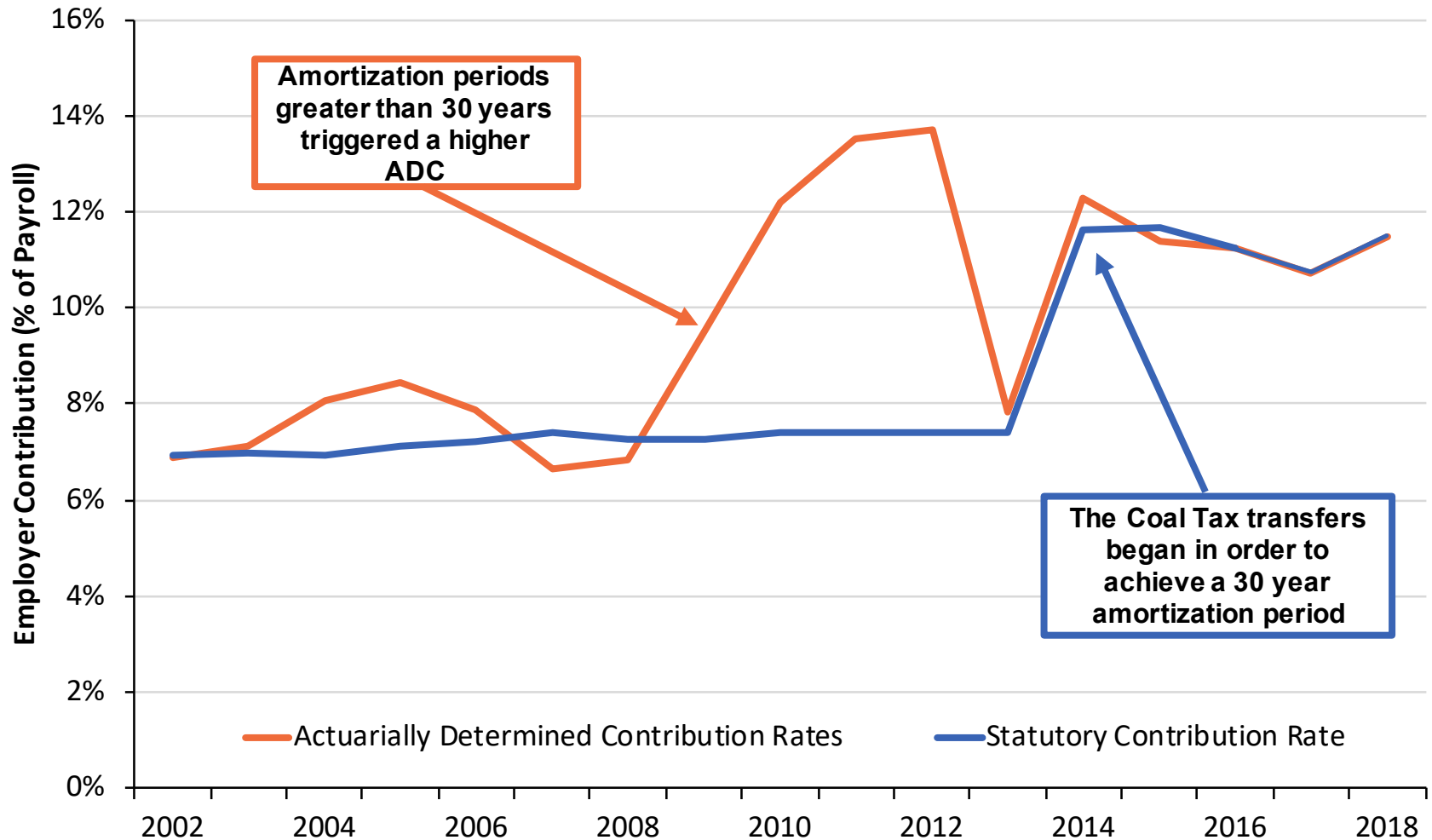
Source: Pension Integrity Project analysis of Montana PERS actuarial reports and CAFRs. The ADC for PERS is effectively whatever amount is contributed to the plan as long as the implied funding period is less than 30 years. Statutory Employer Contribution refers to state employers. State Contribution refers to contributions from the state general fund.





# Actuarially Determined Employer Contribution History, 2002-2018

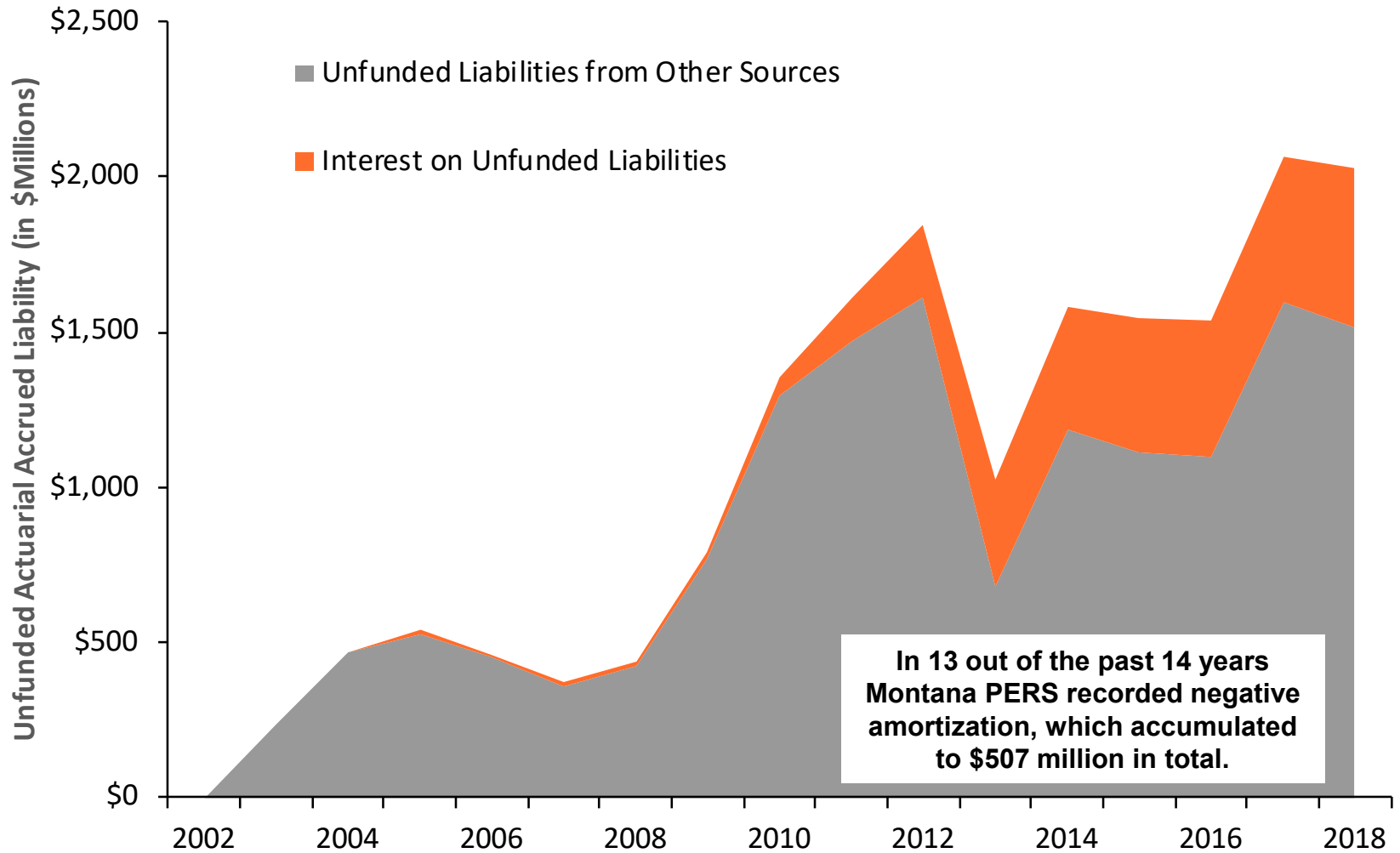
## Actual v. Required Contributions



Source: Pension Integrity Project analysis of Montana PERS actuarial reports and CAFRs.

# PERS: Negative Amortization Growth (2002-2018)

## Interest on the Debt as a Portion of UAAL



**In 13 out of the past 14 years  
Montana PERS recorded negative  
amortization, which accumulated  
to \$507 million in total.**

Source: Pension Integrity Project analysis of Montana PERS actuarial reports and CAFRs.



# CHALLENGE 4: DISCOUNT RATE AND UNDERVALUING DEBT

---

- The discount rate undervalues the total amount of existing pension obligations

# Montana PERS Discount Rate Methodology is Undervaluing Liabilities



- 1. The “discount rate” for a public pension plan should reflect the risk inherent in the pension plan’s liabilities:**
  - Most public sector pension plans — including Montana PERS — use the assumed rate of return and discount rate interchangeably, even though each serve a different purpose.
  - The **Assumed Rate of Return (ARR)** adopted by PERS estimates what the plan will return on average in the long run and is used to calculate contributions needed each year to fund the plans.
  - The **Discount Rate (DR)**, on the other hand, is used to determine the net present value of all of the already promised pension benefits and supposed to reflect the risk of the plan sponsor not being able to pay the promised pensions.

# Montana PERS Discount Rate Methodology is Undervaluing Liabilities



- 2. Setting a discount rate too high will lead to undervaluing the amount of pension benefits actually promised:**
  - If a pension plan is choosing to target a high rate of return with its portfolio of assets, and that high assumed return is then used to calculate/discount the value of existing promised benefits, the result will likely be that the actuarially recognized amount of accrued liabilities is undervalued.
- 3. It is reasonable to conclude that there is almost no risk that Montana would pay out less than 100% of promised retirement income benefits to members and retirees.**
  - The Contract Clause in the Montana Constitution is similar to the U.S. Constitution's Contract Clause. There is little basis to conclude PERS has the kind of liability risks implied by a high discount rate.
- 4. The discount rate used to account for this minimal risk should be appropriately low.**
  - The higher the discount rate used by a pension plan, the higher the implied assumption of risk for the pension obligations.

# Sensitivity Analysis: Pension Debt Sensitivity

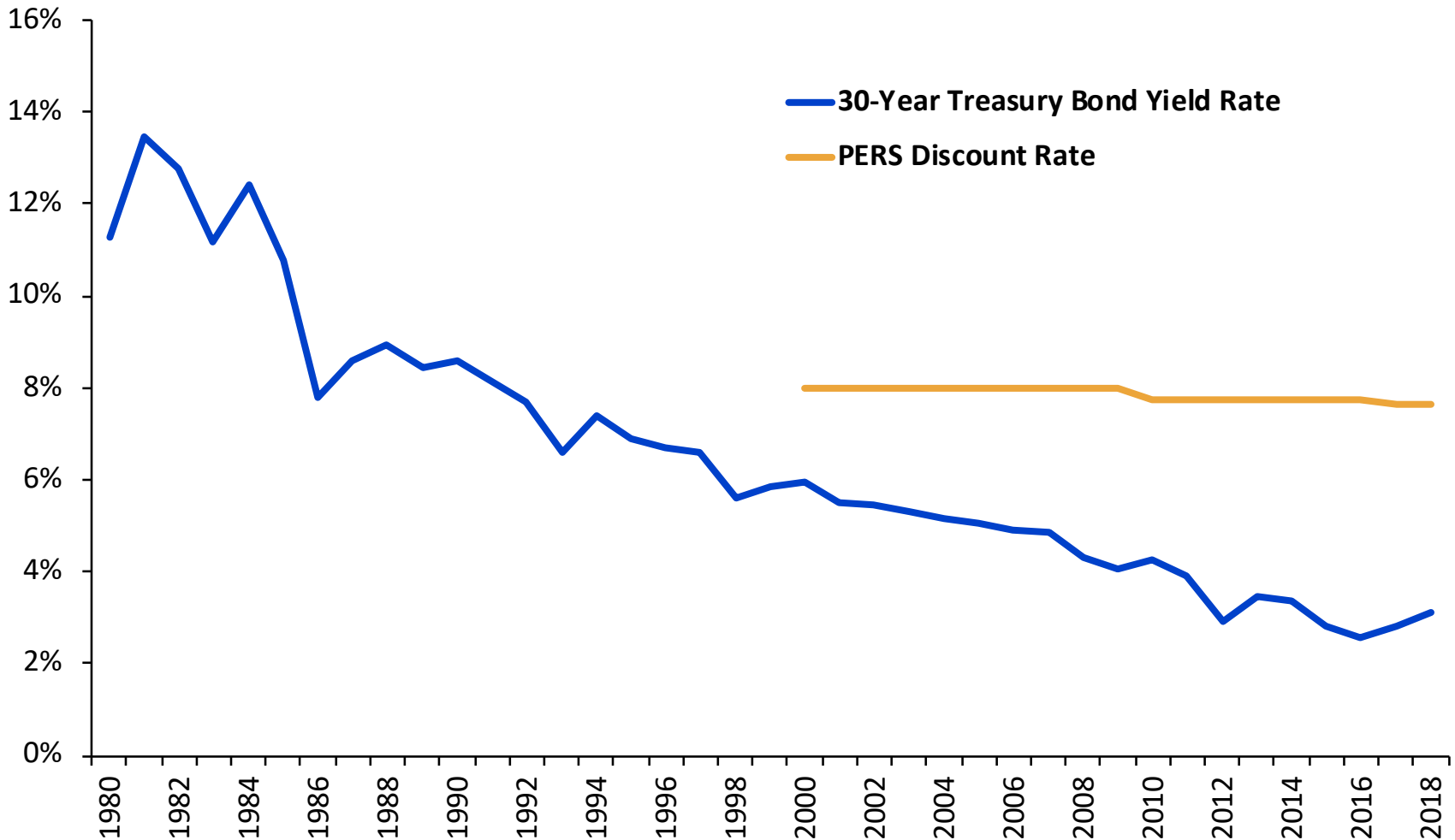
## FYE 2017 Net Pension Liability Under Varying Discount Rates



<b>PERS</b>	<b>Funded Ratio (Market Value)</b>	<b>Unfunded Liability (Market Value)</b>	<b>Actuarial Accrued Liability</b>
<b>7.65%</b> Discount Rate (FYE 2018 Baseline)	73%	\$2.1 billion	\$7.9 billion
<b>7.00%</b> Discount Rate	68%	\$2.7 billion	\$8.5 billion
<b>6.00%</b> Discount Rate	61%	\$3.7 billion	\$9.5 billion
<b>5.00%</b> Discount Rate	53%	\$5.0 billion	\$10.8 billion

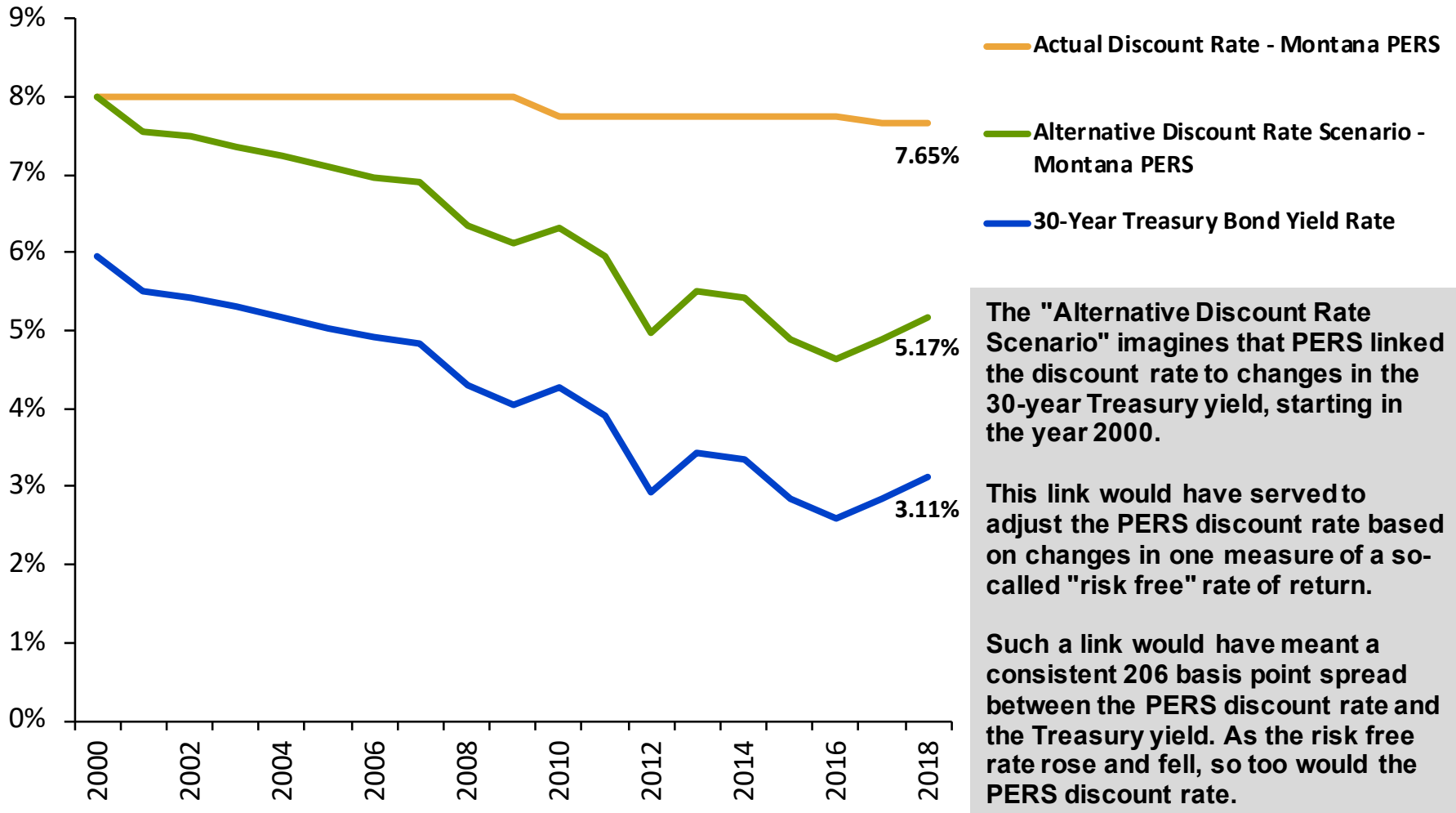
Source: Pension Integrity Project analysis of Montana PERS GASB Statements. Market values used are fiduciary net position. Figures are rounded.

# Change in the Risk Free Rate Compared to PERS Discount Rate (1980-2018)



Source: Pension Integrity Project analysis of Montana PERS actuarial reports and Treasury yield data from the Federal Reserve

# Change in the Risk Free Rate Compared to PERS Discount Rate (2000-2018)



The "Alternative Discount Rate Scenario" imagines that PERS linked the discount rate to changes in the 30-year Treasury yield, starting in the year 2000.

This link would have served to adjust the PERS discount rate based on changes in one measure of a so-called "risk free" rate of return.

Such a link would have meant a consistent 206 basis point spread between the PERS discount rate and the Treasury yield. As the risk free rate rose and fell, so too would the PERS discount rate.

Source: Pension Integrity Project analysis of Montana PERS actuarial reports and Treasury yield data from the Federal Reserve





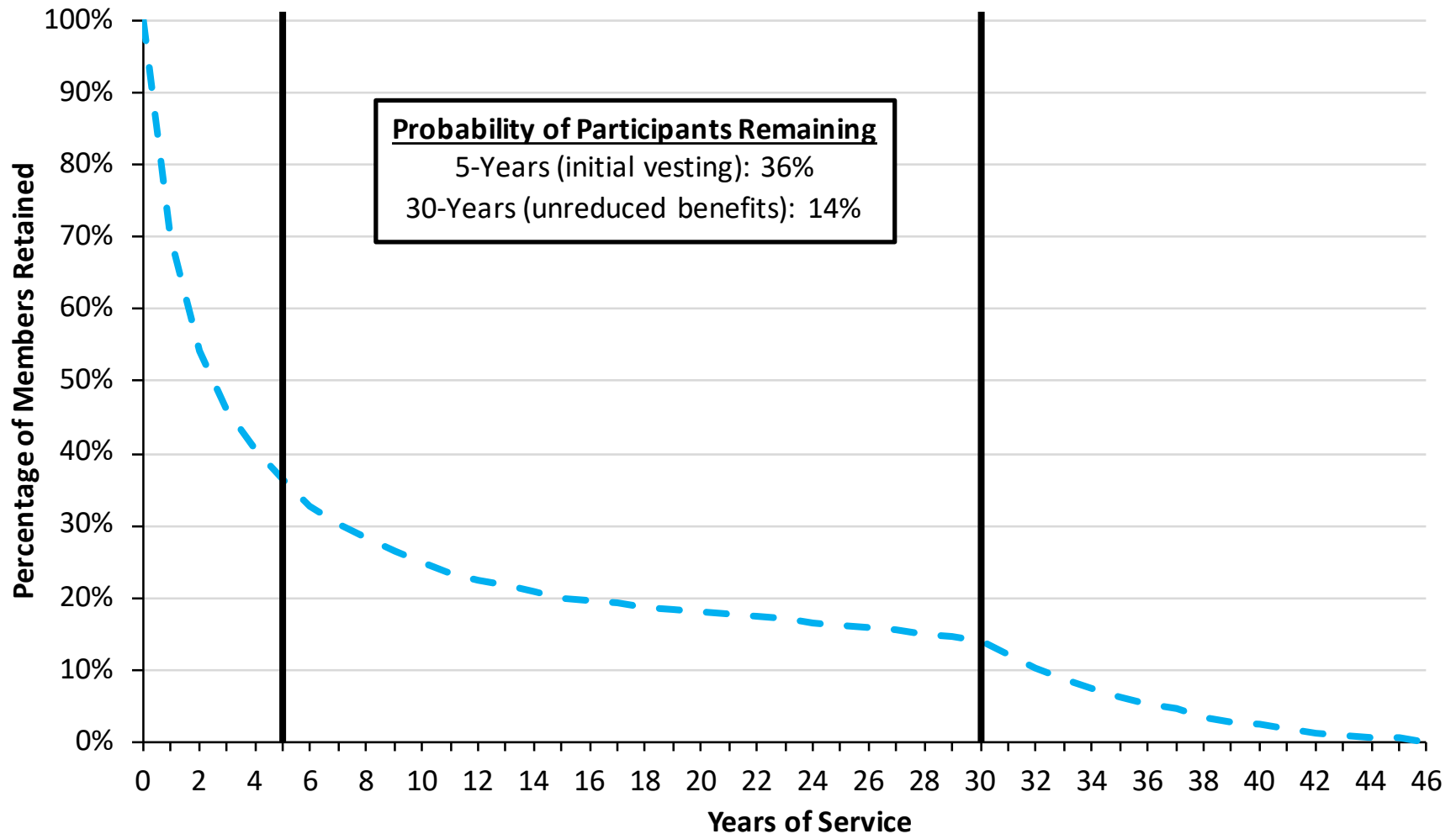
# CHALLENGE 5: THE EXISTING BENEFIT DESIGN DOES NOT WORK FOR EVERYONE

---

- More than 85% of PERS members do not work long enough to earn a full pension
- The turnover rate for Montana public employees suggests that the current retirement benefit design is not effective at encouraging retention in the near-term, and may be pushing out employees at the end of their careers.



# Probability of Members Remaining in PERS



Source: Pension Integrity Project analysis of PERS Actuarial Valuations

# Does PERS Retirement Plan Work for All Public Employees?



- **64%** of new employees leave before 5 years
  - PERS members need to work for 5 years before their benefits become vested.
  - Another 11% of new public employees who are still working after 5 years will leave before 10 years of service
- **14%** of all members hired will still be working after 30 years, long enough to qualify for benefits



# FRAMEWORK FOR SOLUTIONS & REFORM

---



# Objectives of Good Reform

- **Keeping Promises:** Ensure the ability to pay 100% of the benefits earned and accrued by active workers and retirees
- **Retirement Security:** Provide retirement security for all current and future employees
- **Predictability:** Stabilize contribution rates for the long-term
- **Risk Reduction:** Reduce pension system exposure to financial risk and market volatility
- **Affordability:** Reduce long-term costs for employers/taxpayers and employees
- **Attractive Benefits:** Ensure the ability to recruit 21st Century employees
- **Good Governance:** Adopt best practices for board organization, investment management, and financial reporting



# Practical Policy Framework

1. Establish a plan to pay off the unfunded liability as quickly as possible.
  - The Society of Actuaries Blue Ribbon Panel recommends amortization schedules be no longer than 15 to 20 years
2. Adopt better funding policy, risk assessment, and actuarial assumptions
  - These changes should aim at minimizing risk and contribution rate volatility for employers and employees
3. Create a path to retirement security for all participants
  - Consider offering members that won't accrue a full pension benefit access to other plan design options (e.g., cash balance, DC, hybrid, etc.)

# I. Establish a Plan to Pay Off the Unfunded Liability as Quickly as Possible



- **Current amortization policy for PERS targets time horizons that are too long**
  - The PERS board targets a 30-year window to pay off unfunded liabilities.
  - The Society of Actuaries Blue Ribbon Panel recommends amortization schedules be no longer than 15 to 20 years.
  
- **The legislature could put maximum amortization periods in place and/or require a gradual reduction in the funding period to target a lower number of years**
  - Other states have phased in changes by reducing the amortization schedules one year at a time
  - The legislature could require that PERS be funded on a certain time period under specific scenarios, such as alternative assumptions and/or stress test scenarios

## 2. Adopt Better Funding Policy, Investment Policy, and Actuarial Assumptions



- **Current funding policy has created negative amortization and exposes the plan to significant risk of additional unfunded liabilities**
  - Establishing PERS contribution rates in statute, and requiring political intervention with uncertain outcomes, makes it difficult in practice to respond quickly to changing economic circumstances.
    - This policy is in contrast with the more common funding method based on normal cost and the amortization cost that pays down unfunded liabilities over a predetermined, closed period.
  - Under current contribution rates and actuarial assumptions it will take between 30-40 years to amortize current unfunded liabilities, exposing PERS to major financial risks over that period.
  - Options to consider include:
    - Requiring employers and future employees that accrue defined benefits to make contributions on a pre-defined cost sharing basis (such as a 50-50 split), as actuarially determined
    - Shifting to a “layered” amortization method that uses short (10-year or less) periods to pay off any new, annual unfunded liabilities that might accrue



## 2. Adopt Better Funding Policy, Risk Assessment, and Actuarial Assumptions (cont'd)



### ■ Improve risk assessment and actuarial assumptions

- Look to lower the assumed return to align with a more realistic probability of success
- Adjust the portfolio to reduce high risk assets no longer needed with a lower assumed investment return target
- Work to reduce fees and costs of active management
- Consider adopting an even more conservative assumption for a new-hire defined benefit plan
- Require regular stress testing for contribution rates, funded ratios, and cash flows with look-forward forecasts for a range of scenarios
  - While pension plans can, and some do, implement a limited risk assessment under current financial reporting, an independent risk assessment/stress test review using a range of pre-built stress scenarios is the ideal approach

### 3. Create a Path to Retirement Security for All Participants of PERS



- **Montana PERS are not providing a path for retirement income security to all public employees**
  - Only 14% of public employees remain in the government workforce for the 30 years necessary to earn a full pension. This means the majority of public employees could potentially be better served by having the choice of an alternative plan design — such as a DC plan or Cash Balance plan
  
- **Employees should have options when selecting a retirement plan design that fits their career and lifestyle goals**
  - Cash balance plans can be designed to provide a steady accrual rate, offer portability, and ensure a path to retirement security
  - Defined contribution plans can be designed to auto-enroll members into professionally managed accounts with low fees that target specified retirement income and offer access to annuities



# Questions?

## Pension Integrity Project at Reason Foundation

**Len Gilroy, Vice President**

[leonard.gilroy@reason.org](mailto:leonard.gilroy@reason.org)

**Andrew Abbott, Quantitative Analyst**

[andrew.abbott@reason.org](mailto:andrew.abbott@reason.org)

**Steven Gassenberger, Policy Analyst**

[steven.gassenberger@reason.org](mailto:steven.gassenberger@reason.org)