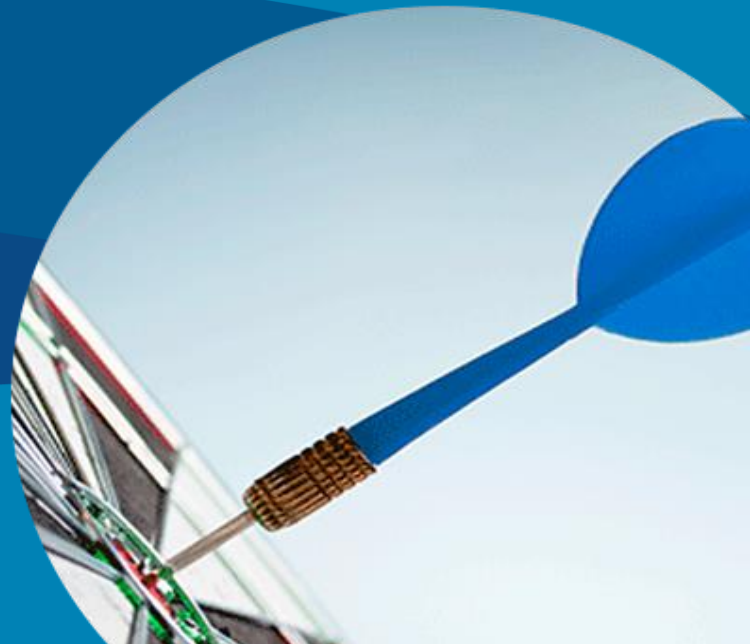
Illinois Municipal Retirement Fund

Funding Policy Discussion and
Dynamic and Flexible Annual Rate of Return
November 21, 2025



Agenda

1. Amortization Policy
2. Discussion of Dynamic and Flexible Annual Rate of Return

AMORTIZATION POLICY

Amortization Policy

- The difference between the actuarial accrued liability and the funding value of assets (unfunded liability) should be paid off in a systematic manner
- Similar to a mortgage, the unfunded liability is amortized over a period of years
- The amortization payment is one component of the required annual contribution
- The amortization period will vary from system to system, but needs to comply with actuarial standards of practice

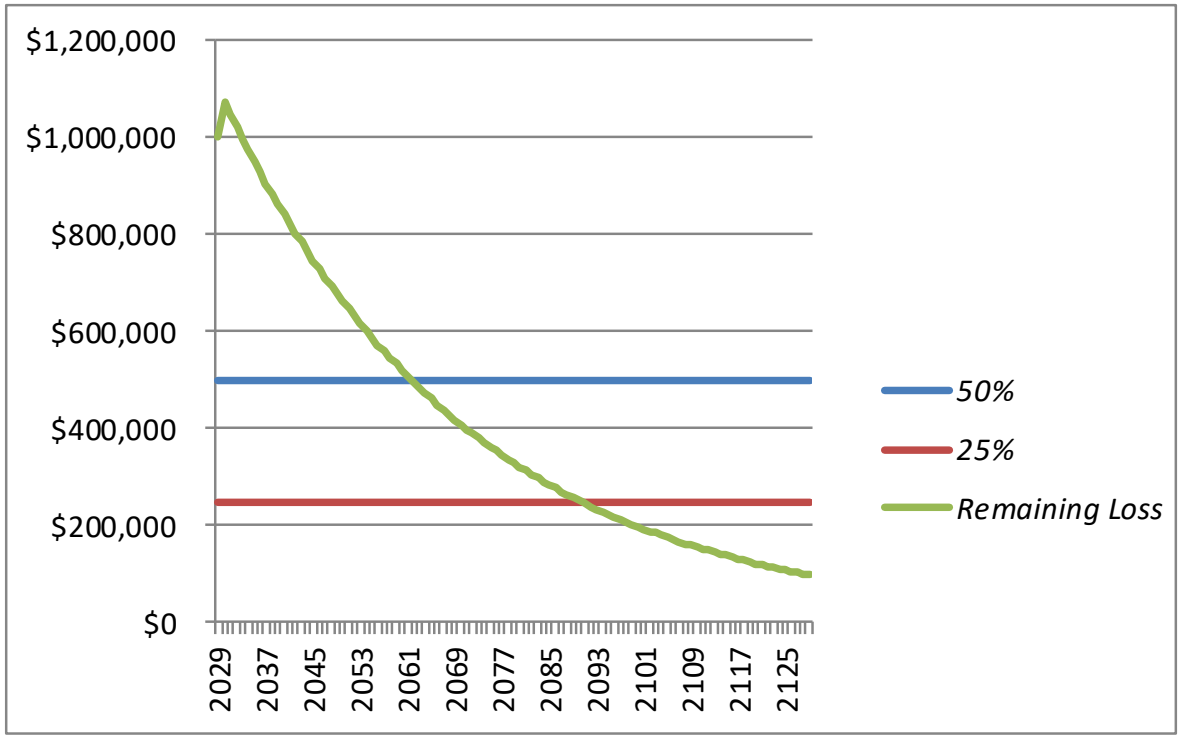
Amortization Policy

- Similar to most employers, IMRF uses a closed 30-year period beginning with the 2011 valuation, which affected the 2013 contribution rates. (Remaining period in 2024 valuation was 17 years)
- For unfunded liabilities incurred after 2026, IMRF uses a 15 year open (“rolling”) amortization period
- This results in two layers of unfunded liability
  - Original layer to be fully extinguished at the end of 2042
  - All new unfunded liability after 2026 to be amortized over rolling (open) 15 years

IMRF Amortization Period

- Taxing Employers
  - For most liabilities: Closed 30-year period beginning in 2011 valuation (affecting 2013 rates)
    - Period declines by 1 each year until it reaches 15 years in 2026 valuation (affecting 2028)
    - Rolling 15-year period for all unfunded liabilities that develop after that as long as 15 years does not result in “negative amortization”
    - Continue original schedule for other liabilities
    - If over 120% funded on a market basis, grant employer the option to amortize overfunding over 5 years.
- Instrumentalities (Agencies without taxing authority)
  - For most liabilities: 10-year rolling period
- For ERI liabilities: Up to 10 year closed period selected by the employer

15-Year Rolling Amortization (Example)



This chart shows 15-year rolling amortization of a $1,000,000 loss that occurs in 2027. Amortization begins in 2029. In nominal terms, half of the loss is paid off by 2060, and another 25% by the end of 2089. Even after 100 years almost 10% of the loss remains. In real terms, half of the loss is paid off in 2044, 17 years after it occurred.

New Concept – Layered Amortization

- In 2014, the Conference of Consulting Actuaries, in their Public Plans Community White Paper recommended layered amortization as best practice
- Layered amortization creates a new unfunded (overfunded) layer each year, while also maintaining the amortization schedule for any current unfunded (overfunded) liability
- The purpose is to avoid 'resetting' of the amortization period that typically occurs once the period gets low and avoid an open (rolling) period which will never fully pay off the unfunded liability
- Hypothetical example: Amortization schedule after 5 years

Current

Date Layer Established[1]	Original Balance[2]	Original Amortization Period	Amounts for Calendar Year Beginning 1/1/2033		
			Outstanding UAL Balance[3]	Remaining Amortization Period	Annual Amortization Payment
12/31/2026	$ 2,500,000	15	$ 2,240,954	10	$ 282,100
12/31/2031	100,000	15	88,176	15	8,200
Total			**$ 2,329,130**		**$ 290,300**

[1] 12/31/2026 layer is the initial layer and is the total UAL for periods before 1/1/2027.

[2] For each layer, this is the original balance as of the date the layer was established.

[3] This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

Proposed

Date Layer Established[1]	Original Balance[2]	Original Amortization Period	Amounts for Calendar Year Beginning 1/1/2033		
			Outstanding UAL Balance[3]	Remaining Amortization Period	Annual Amortization Payment
12/31/2026	$ 2,500,000	15	$ 2,240,954	10	$ 282,100
12/31/2027	100,000	15	94,211	11	11,009
12/31/2028	(100,000)	15	(98,216)	12	(10,740)
12/31/2029	100,000	15	101,696	13	10,478
12/31/2030	(100,000)	15	(104,695)	14	(10,223)
12/31/2031	100,000	15	107,250	15	9,973
Total			**$ 2,341,200**		**$ 292,597**

[1] 12/31/2026 layer is the initial layer and is the total UAL for periods before 1/1/2027.

[2] For each layer, this is the original balance as of the date the layer was established.

[3] This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

Summary

- Since the current IMRF policy was adopted, there have been 2 major changes in actuarial best practices
- ASOP 4 was adopted which requires the actuary to:
  - Assess whether the unfunded liabilities is expected to be fully amortized
  - Provide statement as to whether actuarial determined contribution meets the definition of a reasonable ADC (and if not, compute and disclose a reasonable ADC)
- The CCA published a white paper on amortization best practices for public pension plans
  - Recommends against the use of open (“rolling”) amortization periods
  - Recommends layered amortization as model (best) practice
- The current IMRF policy uses open amortization periods -> UAL not fully amortized
- The current IMRF policy may cause some ADCs to not meet the definition of reasonable ADC after 2026 (particularly some of the smaller employers)
- The current IMRF amortization policy has become outdated and should be updated

Recommendation

- Adopt 15-year single layered amortization (10-year layered for instrumentalities) beginning with the December 31, 2026 actuarial valuation
- Note that this would first impact employer rates determined in the December 31, 2027 valuation which impacts employer rates in 2029
- Note that any potential impact on employer rates would be minimal
- Helps achieve 100% funded and reduce contribution volatility
- Results in current actuarial best practice (used by most systems)
- Updating the policy now allows staff the needed time to implement
- Topic is informational today – to adopt at December Board meeting

DISCUSSION OF DYNAMIC AND FLEXIBLE ANNUAL RATE OF RETURN

Dynamic Investment Return Assumption

- In 2024, a Board member introduced a proposed concept to review the investment return assumption policy
- The purpose of the concept was to have a system to decrease/(increase) the return assumption when markets were favorable/(unfavorable) and the current return assumption was higher/(lower) than the projected forecasts
- The annual review would be based on three Tests:
  - Is the current **actual** smoothed return higher or lower than the current **assumed** return?
  - Is the current **assumed** return higher or lower than the **target** return?
  - Is the current **assumed** return higher or lower than the **target** return by more than 50 basis points?
- The target return is defined as the average of the 10 and 30 year forward looking forecasts based on survey information and IMRF's current asset allocation

Hypothetical Example

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Valuation Year	**Target Retun (Average of 10-Yr and 30-Yr CMAM)**	**Actual Return (5-Yr Smoothed)**	**Hypothetical Assumed Return (before adjustment)**	**Test 1 Is (3) Higher/Lower than (4)**	**Test 2 Is (4) Higher/Lower than (2)**	**Test 3 Is Actual Return higher than Assum Return by 50 bp?**	**Assumed Return Adjustment**	**Hypothetical Assumed Return (after adjustment)**	**Hypothetical Impact on Contribution Requirement***
2014	7.00%	N/A	7.50%	N/A	N/A	N/A	N/A	7.50%	N/A
2015	6.96%	8.47%	7.50%	**Higher**	**Higher**	**Yes**	-0.05%	7.45%	-0.16%
2016	6.85%	7.18%	7.45%	Lower	Higher	No	0.00%	7.45%	0.14%
2017	6.48%	8.81%	7.45%	**Higher**	**Higher**	**Yes**	-0.05%	7.40%	-0.36%
2018&	6.31%	6.50%	7.40%	Lower	Higher	No	0.00%	7.40%	0.45%
2019	6.67%	8.16%	7.40%	**Higher**	**Higher**	**Yes**	-0.05%	7.35%	-0.06%
2020	6.29%	10.03%	7.35%	**Higher**	**Higher**	**Yes**	-0.05%	7.30%	-1.02%
2021	5.88%	12.04%	7.30%	**Higher**	**Higher**	**Yes**	-0.05%	7.25%	-2.05%
2022	5.69%	7.20%	7.25%	Lower	Higher	No	0.00%	7.25%	0.03%
2023	6.77%	6.39%	7.25%	Lower	Higher	No	0.00%	7.25%	0.43%
2024	6.61%	6.95%	7.25%	Lower	Higher	No	0.00%	7.25%	0.15%
2025@	6.65%	8.43%	7.25%	Higher	Higher	Yes	-0.05%	7.20%	-0.24%

* *This is the combined impact on the average contribution rate (as a percentage of payroll) due to the actual investment performance and any potential change in assumed rate of return for the valuation year.*

& *Decreasing the assumed rate of return from 7.50% to 7.25% increased the average Regular contribution rate by approximately 1.57% of payroll.*

@ *Actual return based on estimates supplied as of end of October 2025.*

Test 1 – Is Actual Return (5-Yr Smoothed) higher or lower than Hypothetical Assumed Return?
Test 2 – Is Hypothetical Assumed Return higher or lower than Target Return (Average of 10/30 Yr CMAM)?
Test 3 – Is the actual return higher than assumed return by 50 bp?
If both answers are higher AND test 3 is YES, then reduce assumed return by 5 basis points
If both answers are lower, then increase assumed return by 5 basis points

Summary

- Potentially decreases/(increases) the discount rate during favorable /(unfavorable) markets – thereby mitigating volatility
- Small incremental changes would have minimal impact to plan costs in any given year
- Avoids having to make any large changes at once during difficult economic times:
  - 2008 had largest one time impact to pension plans across the county
  - Employers across the country were forced to lower future expectations (increasing costs) at the same time as they were experience asset losses (increasing costs)
- Helps maintain a healthy funded status

Potential Timeline for Assumed Rate of Return Determination

- For the November 2025 Board meeting, the "pilot" program parameters would be calculated as follows:
  - Target return = average of 2025 10-yr and 30-yr CMAM (6.65%) ✓
  - Estimate of Market Value and investment rate of return provided by IMRF staff as of October 2025 (13.16%) ✓
  - An estimated 5-year smoothed return through 12/31/2025 would be calculated (8.43%) ✓
  - The model would determine whether a 5bp increase or decrease is recommended based on information year to date ✓
  - If Board decides not to adopt the "pilot" program, nothing further will be done in 2025 and 12/31/2025 valuation parameters will be unchanged
- For the December 2025 Board meeting, the 5-year smoothed return will be updated based on most recent investment return information:
  - Board will decide whether to increase/decrease the assumed rate of return or keep the rate of return unchanged for the 12/31/2025 valuation
  - Decision could also be conditional based on no significant changes to Market Value between the Board meeting and December 31
- If adopted at the December Board meeting, the decrease (or increase) in assumed discount rate would be reflected in the 12/31/2025 valuations:
  - Retiree liabilities are calculated in January of 2026
  - Contribution rates are published in March of 2026 and impact contribution rates in 2027

Summary

- In 2024, the Board adopted a proposed concept of looking at this investment return annually
- There is no requirement to automatically adopt any changes (only review)
- Based on the current results of the test, the Board could adopt a reduction in the discount rate of 5 basis points (effective December 31, 2025) and still have overall lower contributions next year
- However, market returns are volatile and this test would most likely not pass if the 2025 return on market value were to drop below 11% prior to year end
- It may be better to wait until the there are more pent up unrecognized gains, and hypothetical reduction in contribution rate is larger (see years 2020 or 2021 of item 10)

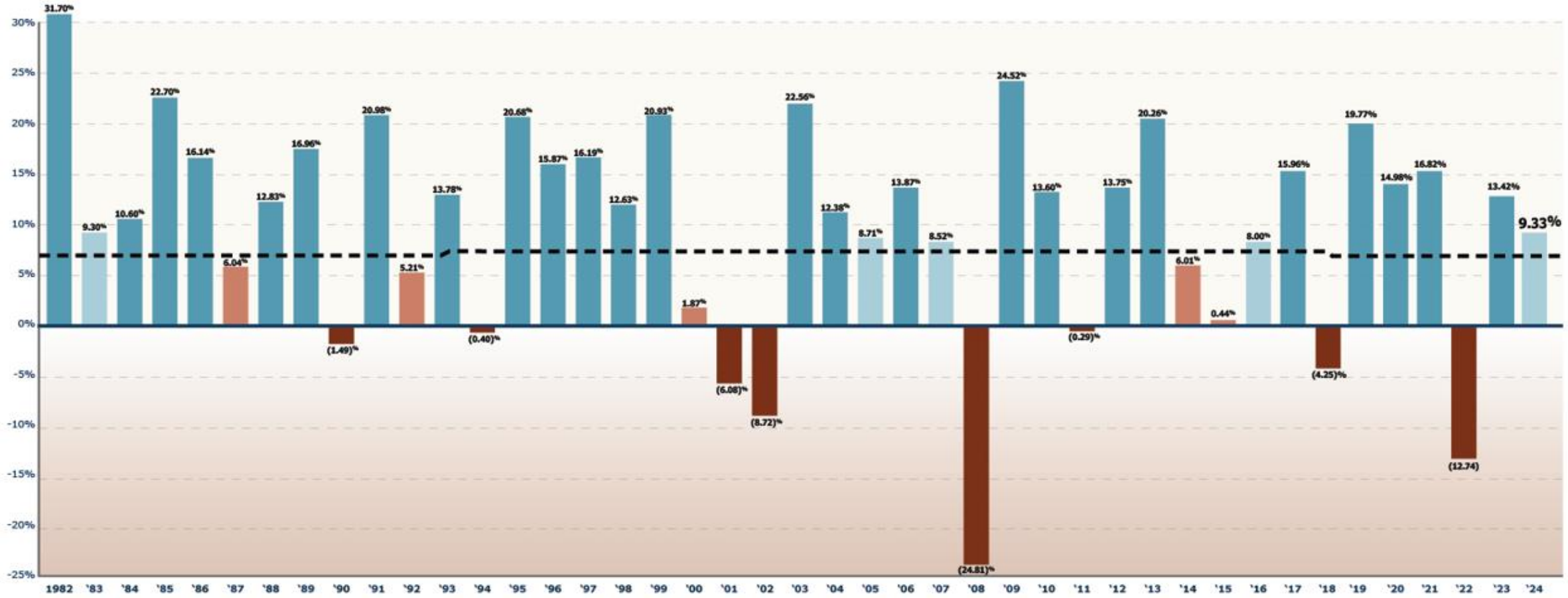
QUESTIONS? DISCUSSION?

APPENDIX

12/31/2025 Actuarial Valuation Assumptions

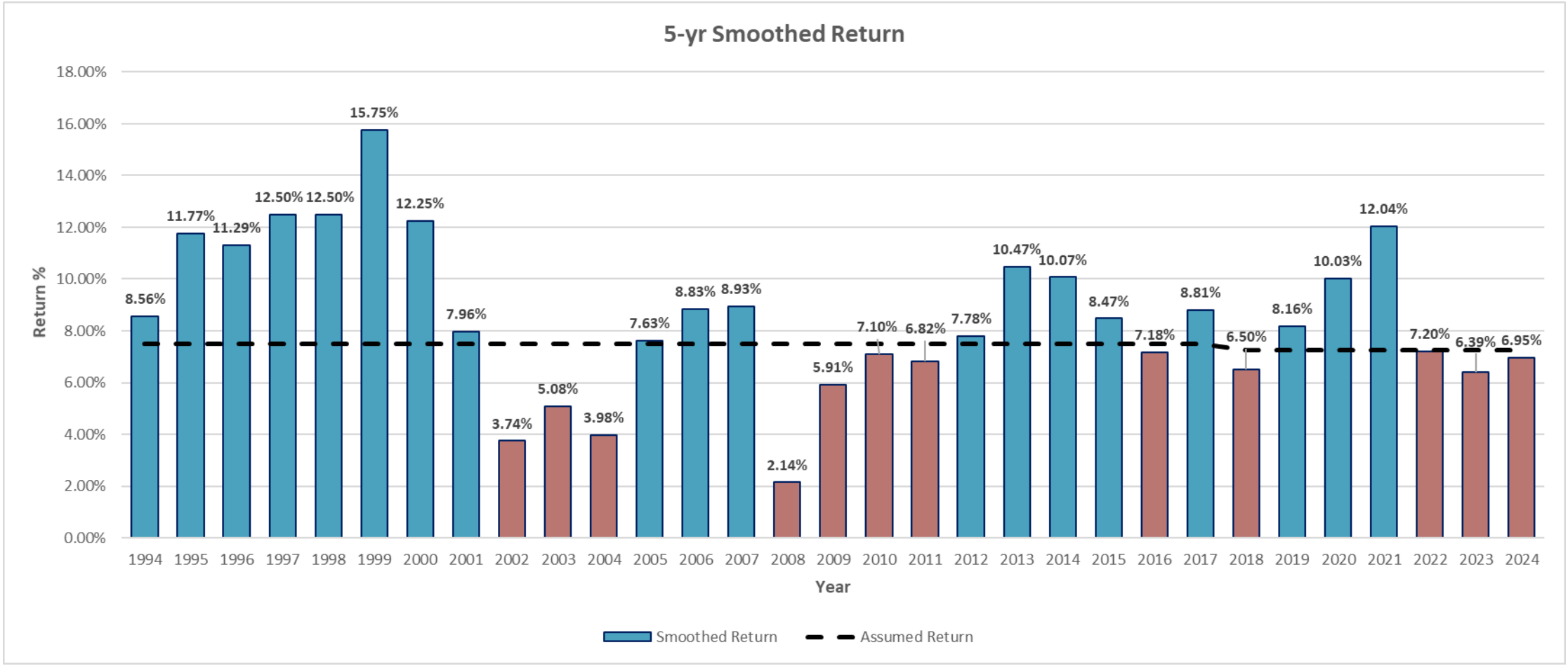
- Price Inflation: 2.25%
- Wage Inflation: 2.75%
- Investment Return: 7.25%
- Mortality Assumptions: The Pub-2010 mortality tables with adjustments for IMRF experience and the MP-2021 projection scale with administrative factors to be implemented by the actuary when appropriate.
- Contributions for unfunded liabilities:
  - For employers with taxing authority: 16-year closed period.
  - For non-taxing employers 10-year rolling period.
  - Unfunded liabilities associated with benefit changes for SLEP members (Public Act 94-712) are amortized over 11 years for most employers.
- Tier 2 wage cap: $129,192

IMRF Gross Investment Returns*

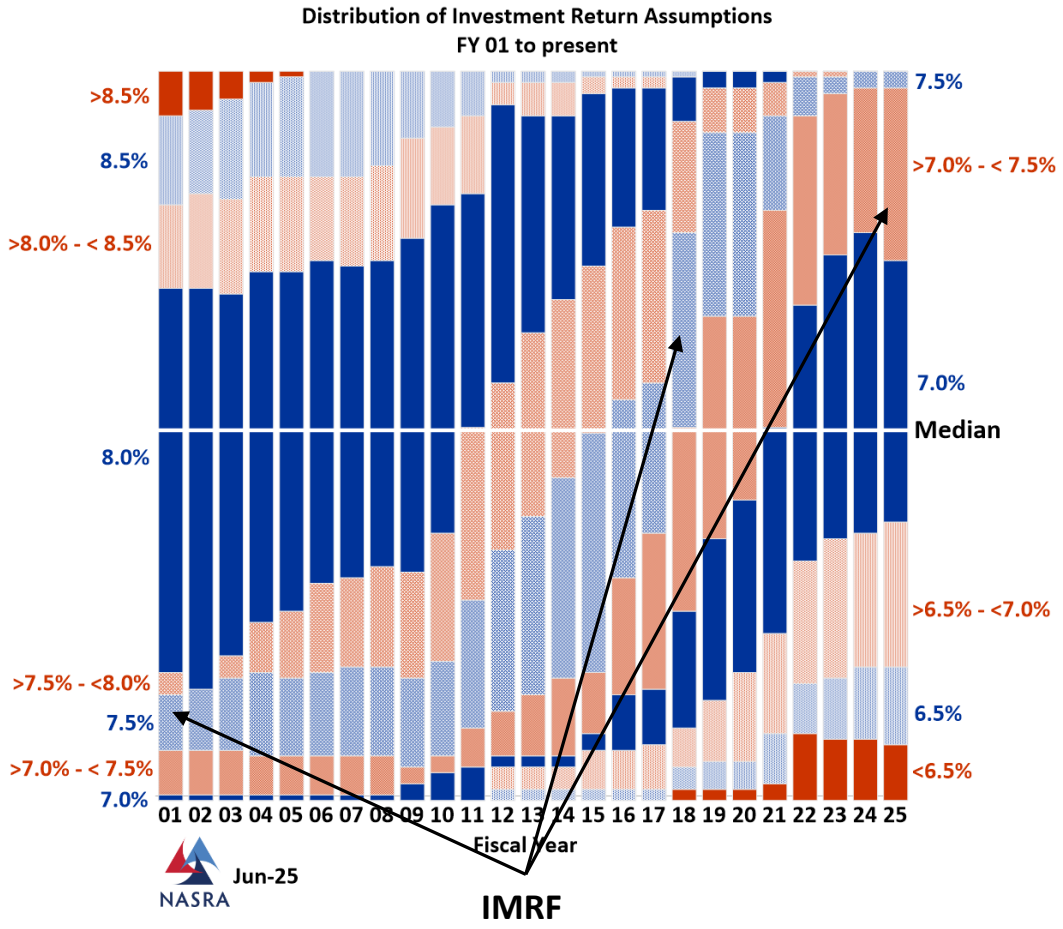


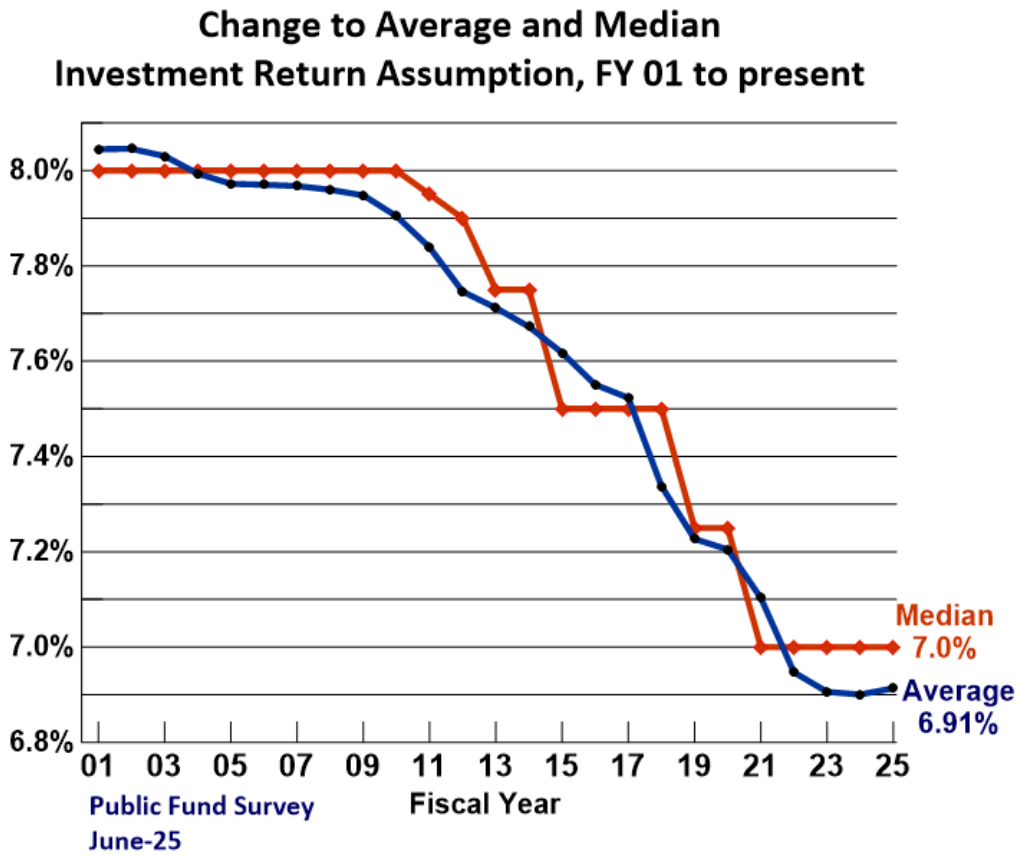
** Supplied by IMRF Staff*

IMRF 5-Year Smoothed Returns

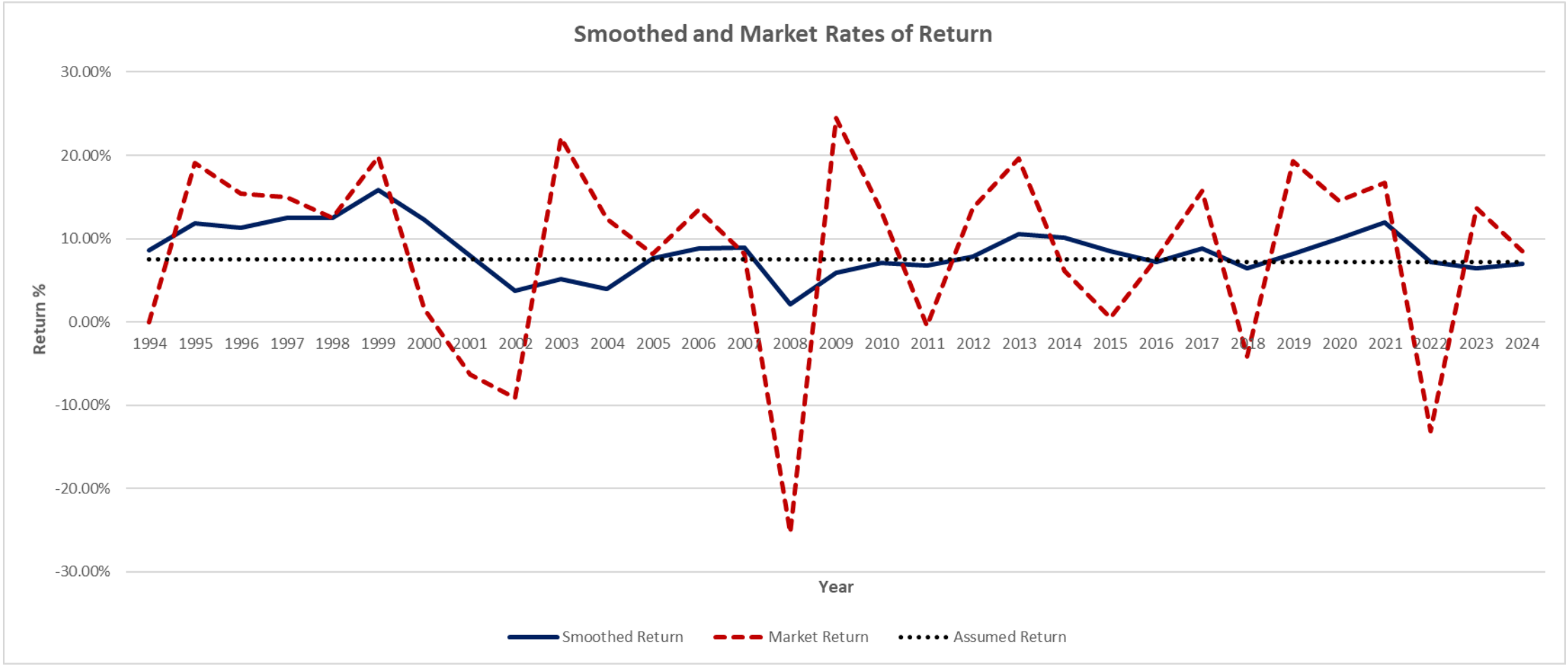


Assumed Rate of Return Assumption Universe

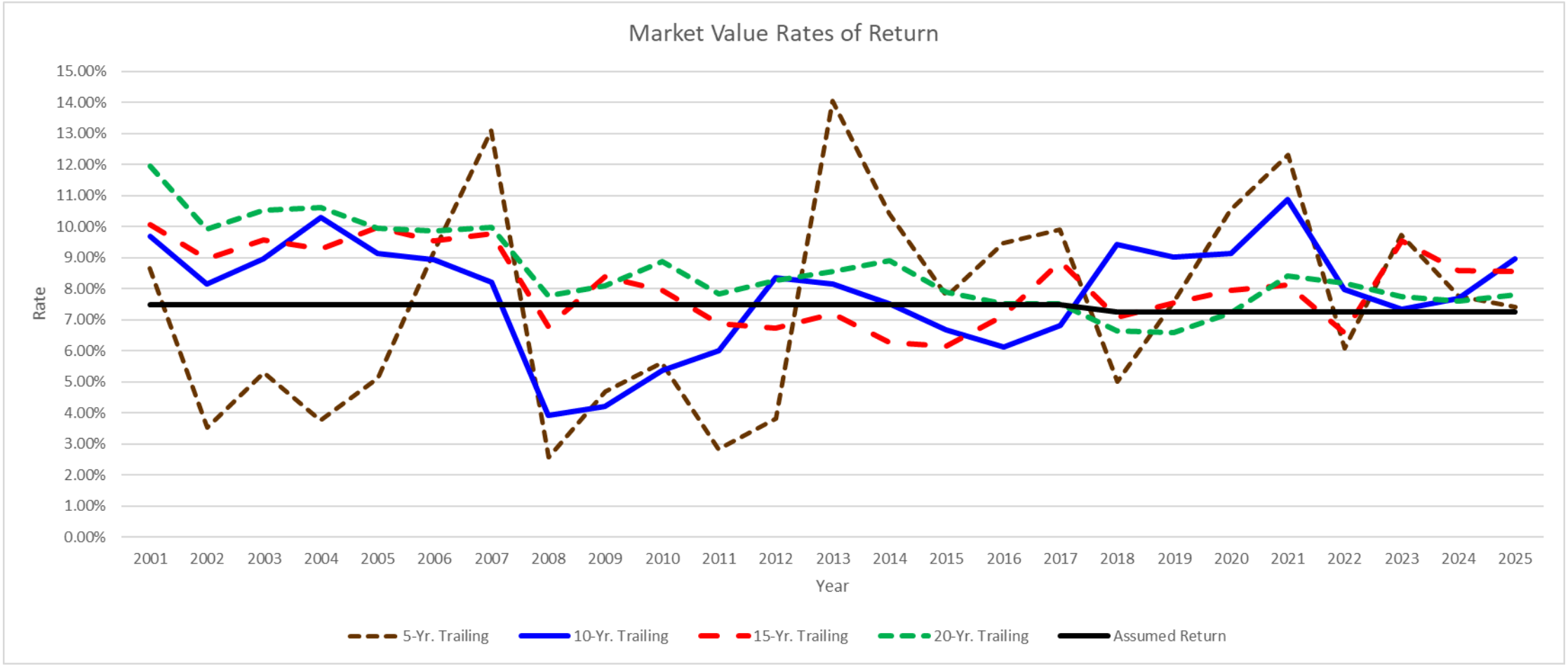




Historical Return Rates



IMRF Gross Investment Returns Trailing Period Returns



Historical Return Discussion

- While historical returns are important, actuarial standards require the assumed return to be based on forward looking returns
- Volatility in market returns tends to lower market value
  - Example: You have $100
  - Suppose -50% return in year 1 = $100x(1-.5) = $50
  - Suppose +50% return in year 2 = $50x(1+.5) = $75
  - You might think after 2 years you broke even
  - But you now have $25 less than when you started

What is the Appropriate Target Return

- 10-Year forward looking return
  - Most commonly accepted actuarial return
  - Can be volatile from year to year
  - Typically decreases after a favorable year (and vice versa)
- 30-Year forward looking return
  - Less commonly accepted actuarial return (less reliable)
  - Almost half of liability is due to benefit payments in first 10 years
  - Typically less volatile
  - Typically synonymous with the 20-year return
- Could consider something in between 10 and 20/30 years
  - Duration of IMRF Liabilities is approximately 16 years for retirees

Short-Term or Longer-Term Investor

- December 31, 2024 Valuation
  - Present Value of IMRF obligations: $64.1 billion
  - 24% of PVB (approx. $15 billion) associated with expected benefit payments in years first 5 years
  - 44% of PVB (approx. $28 billion) in first 10 years
  - 60% of PVB (approx. $39 billion) in first 15 years
  - 73% of PVB (approx. $47 billion) in first 20 years
- Investment returns in short-term (next 10-15 years) are very important
- Benefits are projected to be paid 90 years from now – longer-term also important

Resource List

- Conference of Consulting Actuaries Public Plans Community White Paper: “Actuarial Funding Policies and Practices for Public Pension Plans Second Edition”
- American Academy of Actuaries Issue Brief “Objectives and Principles for Funding Public Sector Pension Plans”
- Gabriel, Roeder, Smith & Company Research Report on “Developing a Pension Funding Policy for State and Local Governments”

Resource List

- 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"
- Blue Ribbon Panel on Public Pension Plan Funding (Society of Actuaries)
- GFOA Best Practice "Core Elements of a Pension Funding Policy"

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