Understanding and Mitigating Risk in Public Funds Investing

North Carolina Local Government Investment Association Summer Conference

July 23, 2026

Riddhima Hinduja, CFA
Director – Senior Strategist, Portfolio Strategies Group

Jennifer Clark, CLGFO, CLGBO
Lenoir County, CFO

Karen Magness
Director

pfm asset management

A Division of U.S. Bancorp Asset Management, Inc.

For Institutional Investor or Investment Professional Use Only – This material is not for inspection by, distribution to, or quotation to the general public

Meet the Presenters

Riddhima Hinduja, CFA

Riddhima Hinduja, CFA is a Director based in Philadelphia, Pennsylvania. She serves as a Senior Strategist within the Portfolio Strategies Group, supporting key clients, creating thought leadership, and guiding the development of tailored investment strategies. Riddhima also speaks at industry conferences and leads training seminars for clients and colleagues. She has over 15 years of fixed income experience and holds the Chartered Financial Analyst ® (CFA) designation. Riddhima earned a Bachelor of Science in Finance and Marketing from New York University and a Master of Business Administration from The University of Chicago.

Jennifer Clark, CFO Lenoir County, CLGBO, CLGFO

Jennifer Clark is the Chief Financial Officer for Lenoir County, North Carolina, where she oversees the County's financial operations, including budgeting, accounting, treasury and cash management, investments, debt management, payroll, and financial reporting.

Jennifer brings more than 25 years of accounting and financial management experience, to include the past eight years in local government. Throughout her career, she has focused on strengthening internal controls, improving financial operations, developing sound fiscal policies, budget development, and promoting responsible stewardship of public funds. Her leadership emphasizes transparency, accountability, and long-term financial sustainability.

Jennifer is a North Carolina Certified Government Finance Officer (NCGFOA) and a Certified Local Government Budget Officer (CLGBO). She is passionate about mentoring finance professionals and sharing practical, real-world strategies that help local governments make informed financial decisions while effectively managing risk. Outside of work, Jennifer is a proud mother of two sons who have served our country in the United States Marine Corps and the United States Army, and a proud grandma to her 4-year-old granddaughter. She enjoys spending time with her family and values the principles of service, commitment, and integrity that guide both her personal and professional life. Jennifer earned a Bachelor of Science in Accounting from New York Institute of Technology and a Master of Science in Accounting with a Concentration in Forensic Accounting from Southern New Hampshire University.

Meet the Presenters

Karen Magness

Karen Magness is a Director based in Charlotte, North Carolina. She serves as the Program Administrator for the North Carolina Investment Pool, helping local government units evaluate investment options for idle funds and bond proceeds. Karen supports clients in developing and implementing investment strategies, reviewing performance, updating policies, and providing training on the structure and use of local government investment pools.

She earned a B.A. in Economics from the University of Maryland, Baltimore County and holds FINRA Series 7, 24 and 63 Licenses.

Understanding and Mitigating Risk in Public Funds Investing

This session will cover current trends in public finance investing and will review the risks and opportunities public entity investors are facing in the fixed income markets.

When you complete this session, you should be able to:

- List at least two ways in which the interest rate environment impacts portfolio strategy
- Identify two opportunities for improving the risk and return profile of public entity investment portfolios
- Evaluate three different decision-making approaches to select among options that might be undesirable in better economic times

N.C.G.S 159-30(c)

Permitted Investments Under 159-30(c)*
U.S. Treasury Obligations
Federal Agency securities
Negotiable Certificates of Deposits with Banks having a principal office in North Carolina
North Carolina State and Local Government Bonds
Repurchase Agreements (see 159-30(c)(12) for details)
Prime quality commercial paper bearing the highest rating of at least one nationally recognized statistical ratings organization (NRSRO) and not bearing a rating below the highest by any NRSRO which rates the issue
Bank Deposits in Approved North Carolina Depositories
Participating shares in a mutual fund for local government investment; provided that the investments of the fund are limited to those qualifying for investment under this subsection (c) and that said fund is certified by the Local Government Commission
A commingled investment pool established by interlocal agreement by two or more units of local government pursuant to G.S.160A-460 through G.S.160A-464, if the investments of the pool are limited to those qualifying for investment under 159-30(c).
Other investments specifically authorized by G.S. 159-30(c)

**Source: https://www.ncleg.net/enactedlegislation/statutes/html/bysection/chapter_159/gs_159-30.html*
Not a comprehensive listing of investments allowable under N.C.G.S. 159-30(c)

Agenda

Reviewing Common Risks Facing Your Portfolio

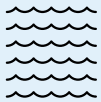
Getting Back to the Basics

Navigating Volatility, Uncertainty, Complexity, and Ambiguity

Reviewing Common Risks Facing Your Portfolio

Investment Risks

Interest Rate Risk
Risk that the value of securities changes with different interest rate environments



Liquidity Risk
Risk that portfolio holdings will not be able to be sold at a competitive price

Credit Risk
Risk of default or decline in security value due to changes in creditworthiness of issuer

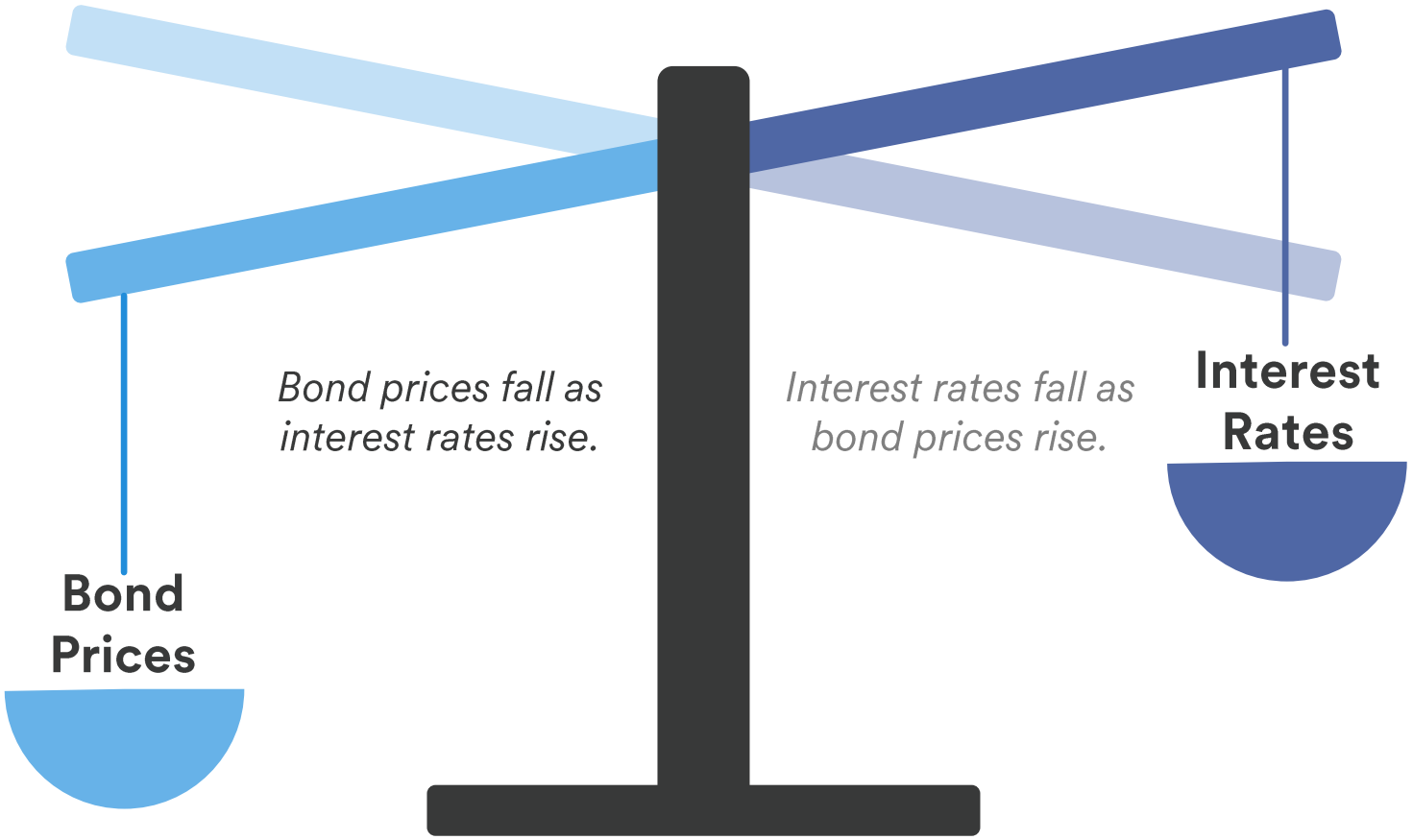
Inflation (Purchasing Power) Risk
Risk that rising inflation causes the loss of purchasing power over time

Political Risk
Risk an investment's returns could suffer as a result of political changes or instability

Sources: PFMAM; Investopedia.

Interest Rate Risk

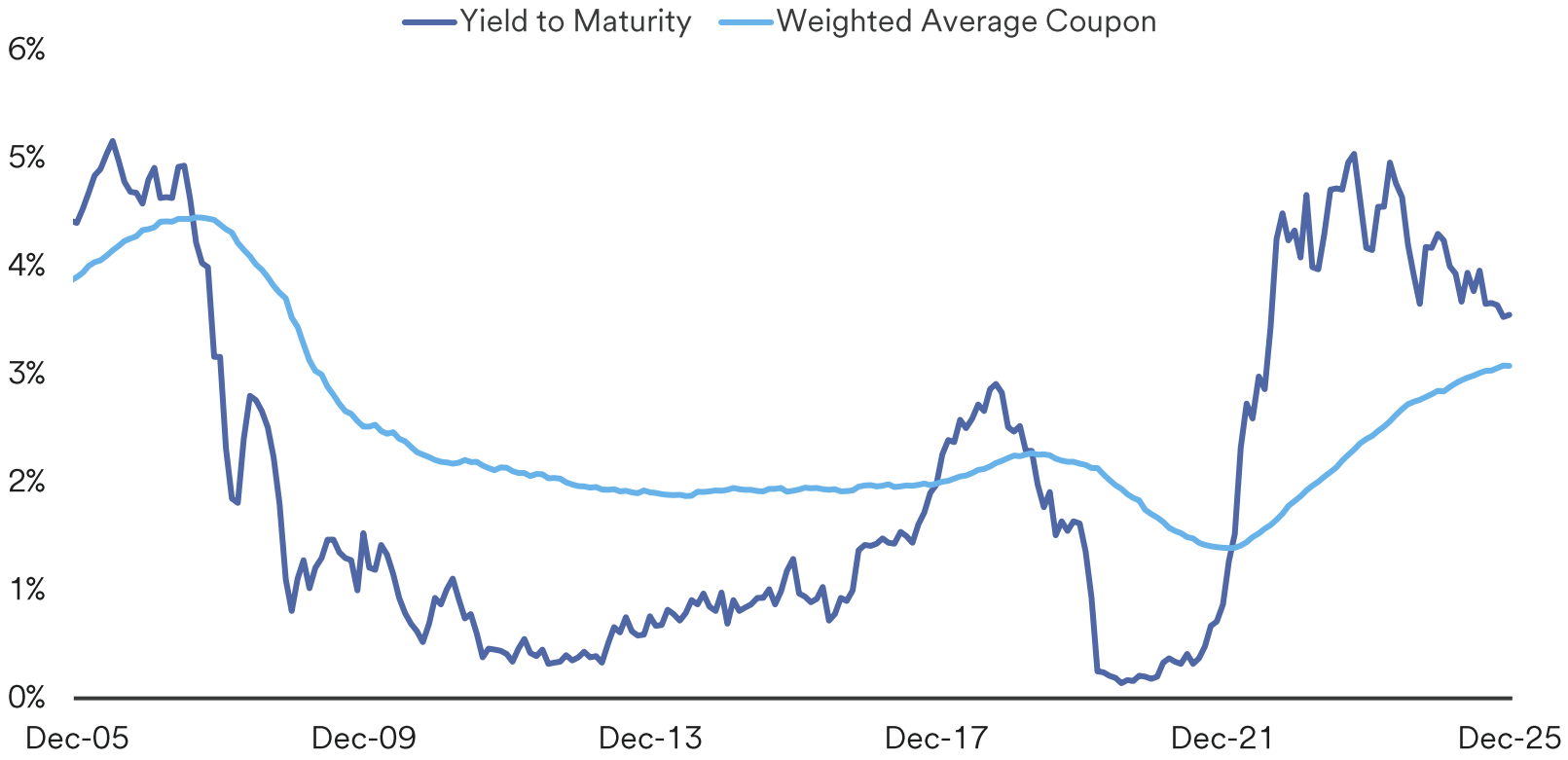
Risk that the value of securities changes with different interest rate environments



Yield to Maturity vs. Weighted Average Coupon Comparison

1-5 Treasury Index YTM vs. Weighted Average Coupon[1]

December 31, 2005 – December 31, 2025



Sources: Bloomberg and ICE BofA Indexes.

[1]The Yield to Maturity at Market (YTM) represents the current market yield of all securities in the index. The Weighted Average Coupon (WAC) is the average original coupon rate on all securities in the index. As securities in the 1-5 Year Treasury index tend to be issued at or near par (with the coupon rate approximately equal to the original yield), the WAC can be viewed as a proxy for the yield at cost of the securities in the index. The WAC tends to exceed the YTM in a falling interest rate environment and trail in a rising interest rate environment.

It is not possible to invest directly in an index. Please see additional notes and disclosures at the end of this presentation.

Poll Question #1

Bond prices and interest rates move in the same direction.

A. True

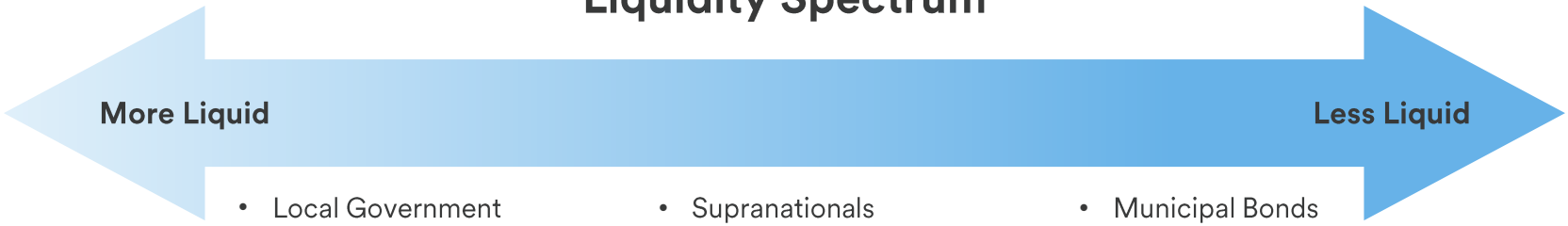
B. False

Liquidity Risk

Risk that portfolio holdings will not be able to be sold at a competitive price

- Substantial penalty for earlier withdrawal
- Capital losses if interest rates have increased

Liquidity Spectrum



- Local Government Investment Pools
- Money Market Funds
- U.S. Treasury Bills
  Agency Discount Notes
- Commercial Paper
- Federal Agencies
- U.S. Treasuries

- Supranationals
- Corporate Bonds
- Asset-Backed Securities
- Federal Agency Mortgage-Backed Securities

- Municipal Bonds
- FDIC-Insured CDs

For illustrative purposes only.

Credit Risk

Risk of default or decline in security value due to changes in creditworthiness of issuer

- Bankruptcy
- Rating agency downgrades
- Regulatory changes

Credit Risk Spectrum

- **Treasuries**
- **Agencies**

- **Munis**
  - State
  - County
  - City

- **Corporates**
  - Commercial paper
  - CDs
  - Corporate notes

Explanation of Credit Ratings

S&P	Moody's	Explanation of Rating
AAA	Aaa	High quality – smallest degree of investment risk
AA	Aa	High quality – differs only slightly from highest-rated issues
A	A	Adequate capacity to pay interest and repay principal
BBB	Baa	More susceptible to adverse effects of changes in economic conditions
BB	Ba	Has speculative elements – future not considered to be well-assured
B	B	Generally lacks characteristics of desirable investment
CCC	Caa	Poor standing – vulnerability to default
C	C	Extremely poor prospect
D	D	In default

Differences in Rating Actions

Jargon	Definition
Credit Rating	• Reflection of the probability of default and loss to investors • Long-term and short-term ratings; local and foreign
Rating Watch	• Indication that a rating agency is reassessing the rating of an entity in response to a change in the credit quality of the issuer • Potential upgrade or downgrade may occur within 3 months
Rating Outlook	• Longer-term projection of a possible ratings change • Potential upgrade or downgrade may occur in 6 months to 2 years

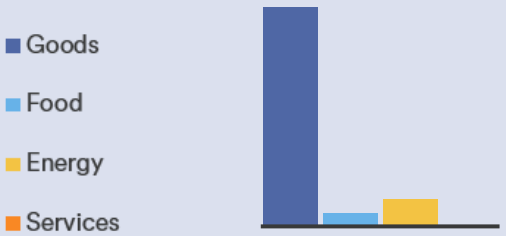
Inflation (Purchasing Power) Risk

Risk that rising inflation causes the loss of purchasing power over time

- Multiple measures of inflation
  - PPI – Producer Price Index
  - CPI – Consumer Price Index
  - PCE – Personal Consumption Expenditures
- Consideration: TIPS – Treasury Inflation-Protected securities
  - Principal adjusts based on CPI
  - Higher inflation will result in higher principal being paid on maturity

Source: PPI, CPI, PCE – Bureau of Labor Statistics and Bureau of Economic Analysis.

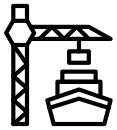
Differences Between Inflation Indicators

	Import Prices	PPI	CPI	PCE
Definition	Price of goods or services purchased from abroad by U.S. residents	Selling prices received by domestic producers of goods and services	Prices paid by urban consumers for a market basket of goods and services	Prices paid for goods and services purchased by or on behalf of persons
Timing	• Monthly • Before the 15th of the month • 1-month lag	• Monthly • Before the 15th of the month • 1-month lag	• Monthly • Before the 15th of the month • 1-month lag	• Monthly • End of month • 1-month lag
Composition				

Sources: Bureau of Labor Statistics and Bureau of Economic Analysis.

Potential Areas of Policy Uncertainty

Taxes
Lower generally taxes viewed as positive for growth but negative for the deficit



Tariffs
Uncertainty surrounding the scope and scale of tariff policy

Immigration
Tighter border policy may have adverse impacts on the labor market

Regulation
Easing regulation is generally viewed as positive for growth

Source: PFMAM.

Poll Question #2

What type of risk is risk of default or decline in security value due to changes in creditworthiness of an issuer?

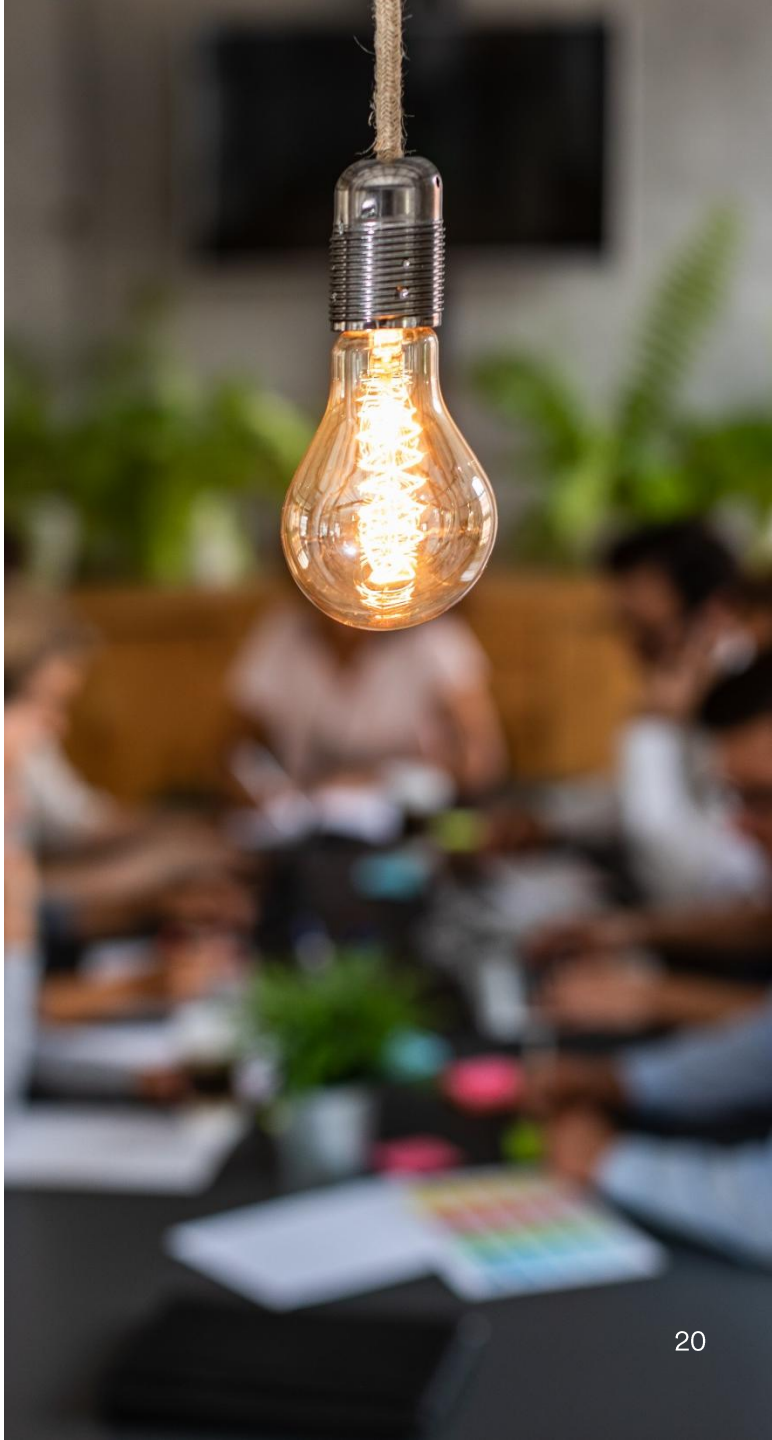
A. Credit risk

B. Inflation power

C. Liquidity risk

D. Interest rate risk

Getting Back to the Basics

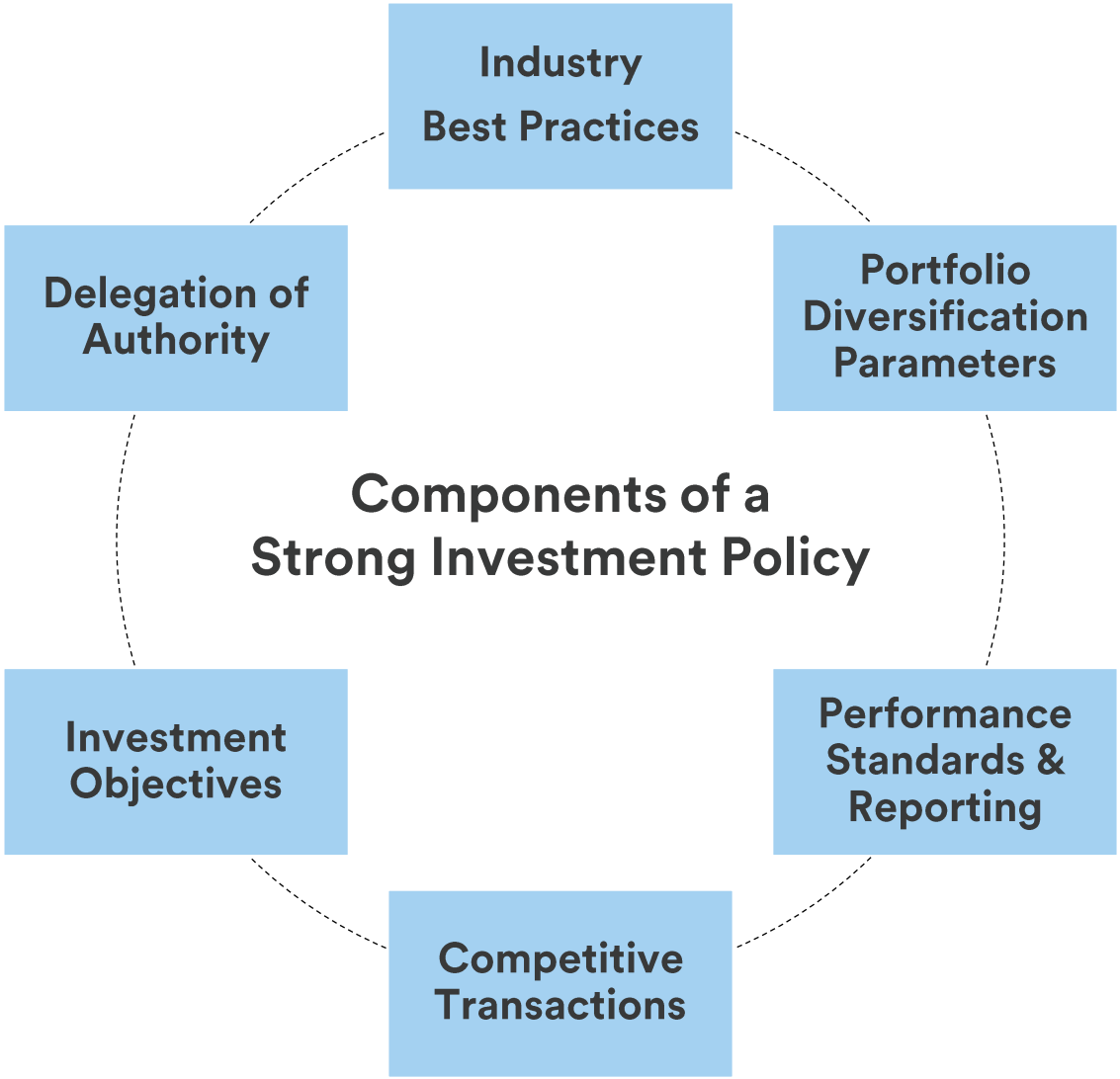


The Decision-Making Process

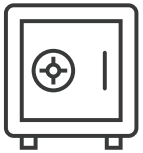
When analyzing the current investment strategy, you should consider the following questions:

- Does the Investment Policy reflect our goals and objectives?
- What is the Council/Board's risk tolerance?
- What is the asset allocation?
- What is the expected return and risk?
- What are my current, short-term, and long-term capital market assumptions?
- Should we change the asset allocation?

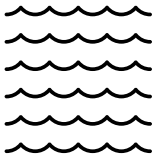
Investment Policy Development and Review



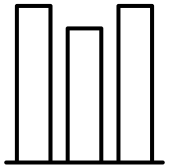
Key Investment Objectives



Safety
of principal



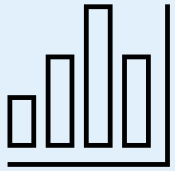
Liquidity
to provide for upcoming needs



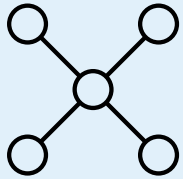
Yield
for competitive returns

But how do you design an investment strategy to meet these objectives in varying market conditions?

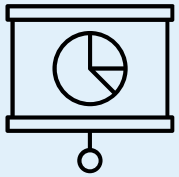
Key Pillars of Investment Strategy Development



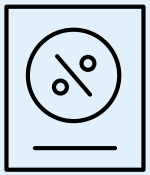
Cash Flow Analysis



Portfolio Segmentation



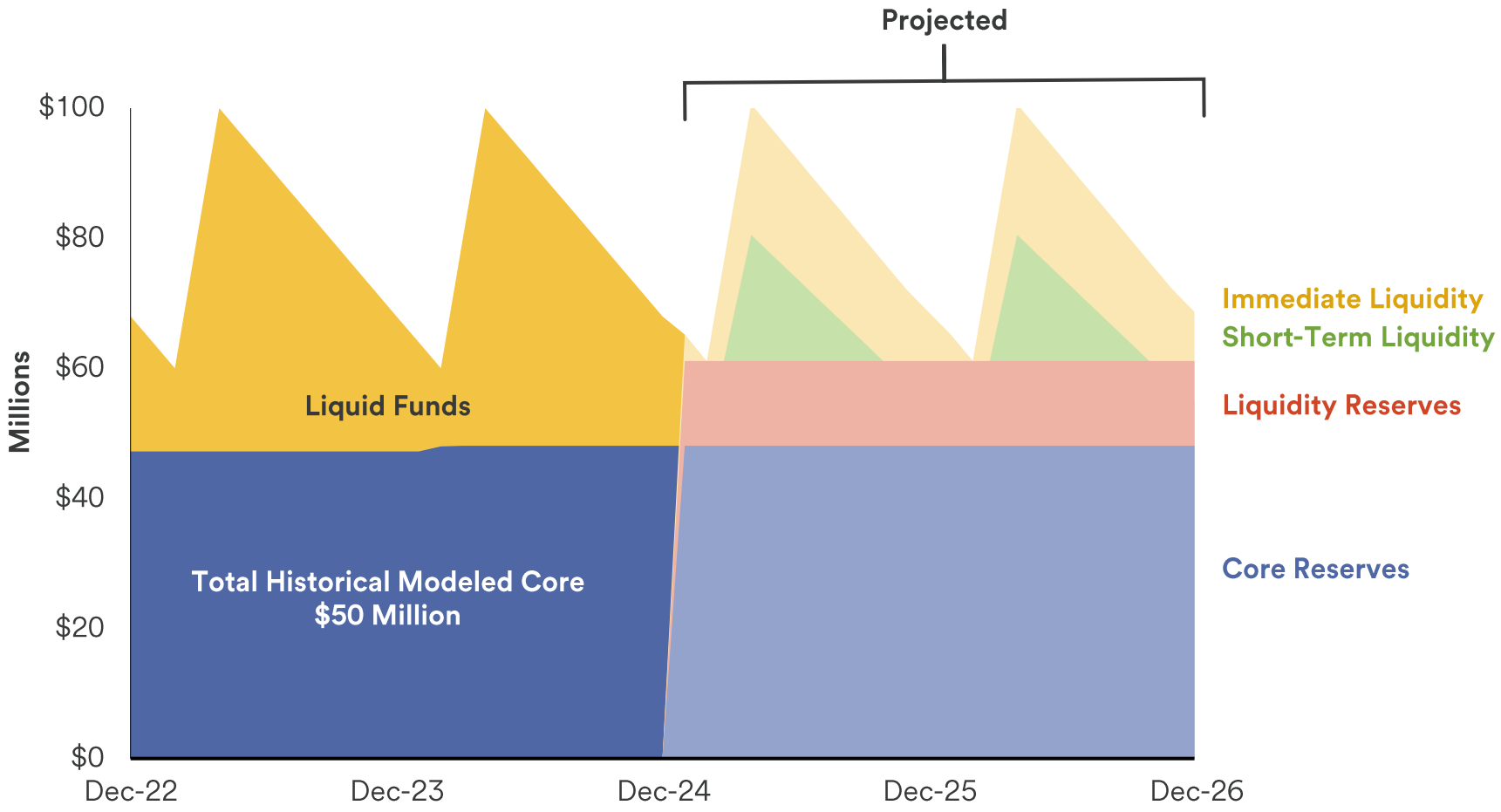
Diversification



Reporting Total Return

Disciplined Long-Term Strategy

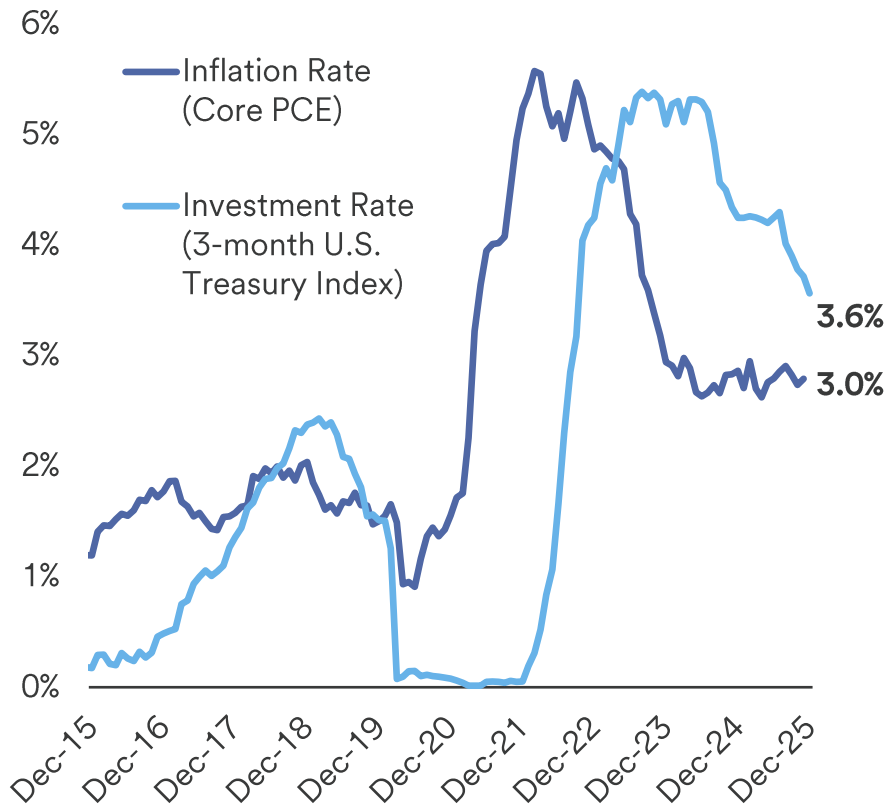
Conduct Cash Flow Analysis to Optimize Portfolio Segmentation



For illustrative purposes only.

Erosion of Principal Purchasing Power Over 10 Years

$6.2 Million in Lost Purchasing Power



$1.00 in February 2016

has the same purchasing power as

$1.36 in February 2026

Careful planning and well-informed stewardship can help minimize inflation's adverse effects on entity finances.

Source: Bloomberg Finance L.P., as of 12/31/2025. Loss calculation is based on a starting portfolio size of $100,000,000 and a starting date of 12/31/2015.

Portfolio Segmentation and Strategy Considerations

Portfolio Segment	Strategy Consideration	Potential Characteristics
Immediate Liquidity	Daily Liquidity	• Bank operating cash • Money market funds • Local government investment pools (LGIPs)
Short-Term Liquidity	Up to 1 Year Laddered Maturities	• Short-term fixed rate investments • Commercial paper • LGIP Term investments • Certificates of deposit

Liquidity Reserves	Short Duration Target
	(6 Months-2 Year Duration)
		• Highly liquid securities
		  - Securities/sectors with active secondary markets
		  - Limited structure/optionality risk
		• Allocation to high-quality, diversified credit securities to maximize the income potential of short duration needs
		• Commercial paper, ABS, corporate notes

Core Reserves	Longer Duration Target (1-3, 1-5 years)	• Diversified across high-quality asset classes • Realize the benefits of a positively sloped yield curve • Greater focus on income generation (lower liquidity profile) - Corporate notes, MBS, federal agencies

Considerations for Segmenting the Portfolio

Portfolio Type	Strategy Components	Uses
Liquidity/ Short-Term	Overnight to 12 months	• Highly liquid for daily needs and unforeseen expenditures • Funds are meant to cover specific, predictable cash flows (payrolls, debt service) • Can be lower during periods of net cash inflow • Comprises short-term money market instruments (e.g., bank deposits, money market mutual funds, and local government investment pools (LGIPs))
Core/Intermediate	Longer Duration Strategy	• Funds that are not expected to be spent—may be disbursed in extraordinary circumstances • Can be invested in longer-term securities

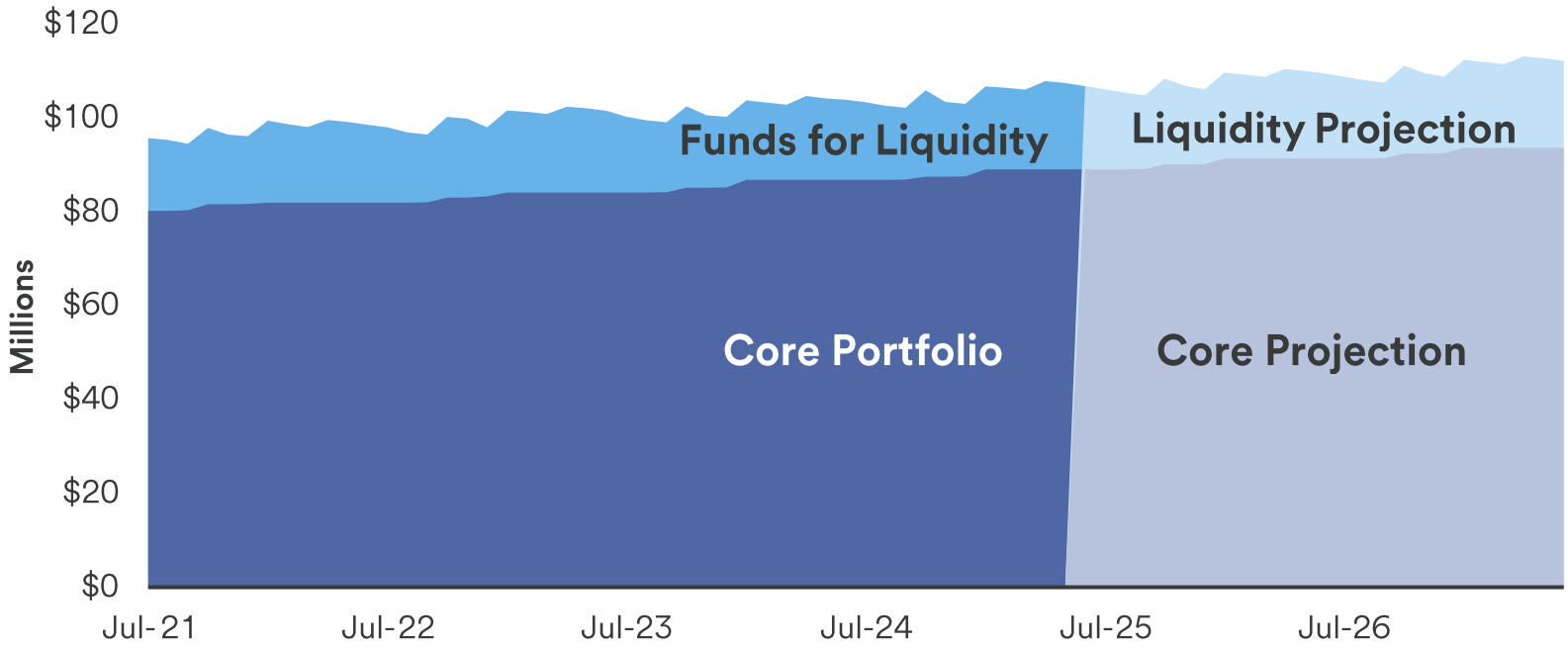
Conduct Cash Flow Analysis to Optimize Portfolio Segmentation

Liquidity

- Cash and equivalents
- Available to meet known (and provide for unknown) near-term cash needs

Core

- Intermediate and longer-term investments
- Reserve funds not expected to be spent for the foreseeable future



For illustrative purposes only.

Strategic Allocation is Unique to Each Client

- Investment Policy Considerations
- Spending Considerations
- Rating Implications

- Investment Universe
- Capital Market Assumptions
- Risk/Return Analysis

- Strategic Initiatives
- Client Preferences
- Other Outside Factors

Customized Asset Allocation

N.C.G.S 159-30(c)

Permitted Investments Under 159-30(c)*
U.S. Treasury Obligations
Federal Agency securities
Negotiable Certificates of Deposits with Banks having a principal office in North Carolina
North Carolina State and Local Government Bonds
Repurchase Agreements (see 159-30(c)(12) for details)
Prime quality commercial paper bearing the highest rating of at least one nationally recognized statistical ratings organization (NRSRO) and not bearing a rating below the highest by any NRSRO which rates the issue
Bank Deposits in Approved North Carolina Depositories
Participating shares in a mutual fund for local government investment; provided that the investments of the fund are limited to those qualifying for investment under this subsection (c) and that said fund is certified by the Local Government Commission
A commingled investment pool established by interlocal agreement by two or more units of local government pursuant to G.S.160A-460 through G.S.160A-464, if the investments of the pool are limited to those qualifying for investment under 159-30(c).
Other investments specifically authorized by G.S. 159-30(c)

**Source: https://www.ncleg.net/enactedlegislation/statutes/html/bysection/chapter_159/gs_159-30.html*
Not a comprehensive listing of investments allowable under N.C.G.S. 159-30(c)

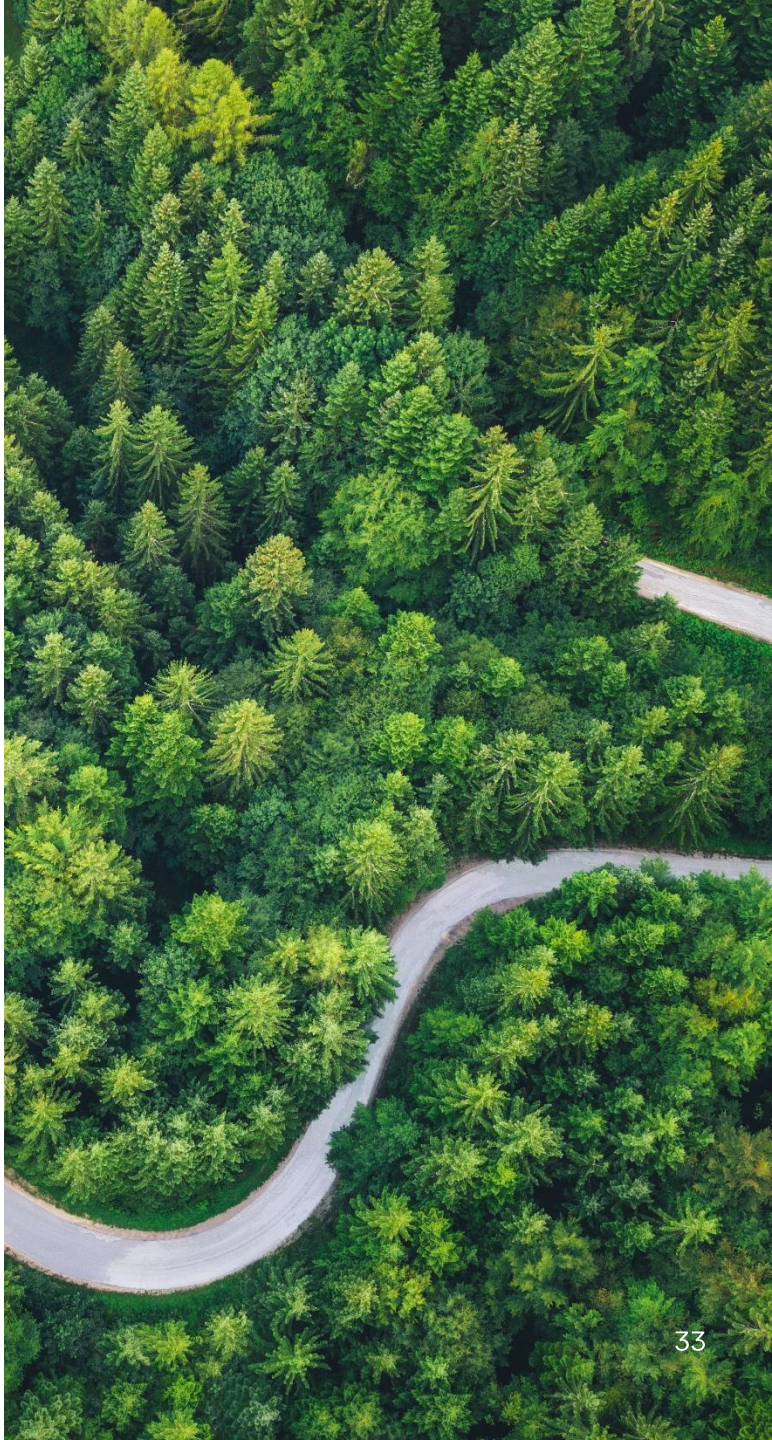
Poll Question #3

What type of portfolio consists of intermediate and longer-term investments for reserve funds that are not expected to be spent for the foreseeable future?

A. Liquidity

B. Core

Navigating Volatility, Uncertainty, Complexity, and Ambiguity



Considerations for Navigating Uncertainty Together

- Establish regular periodic meetings between staff, board, and investment advisors
  - More frequent conversations during volatile environments
- Investment policies → not set it and forget it
  - Establish annual reviews
- Set communication expectations
  - Quarterly review of portfolio performance
  - Annual review of asset allocation
  - More often if there are substantial changes to liabilities/cash flows

Considerations for Navigating Uncertainty Together

	Program Analysis	Reporting Meetings	Training
January		Annual Presentation	Educational Webinars
February		Presentation of 4th Quarter to Board or Investment Committee	Conferences
March	Annual Investment Policy Review		In-Office Custom Training Session
May		Presentation of 1st Quarter to Board or Investment Committee	
August		Presentation of 2nd Quarter to Board or Investment Committee	
October	Cash Flow Analysis Update Core Portfolio Size Review		
November	Portfolio Summaries for GASB 40 Preparation	Presentation of 3rd Quarter to Board or Investment Committee	
December			

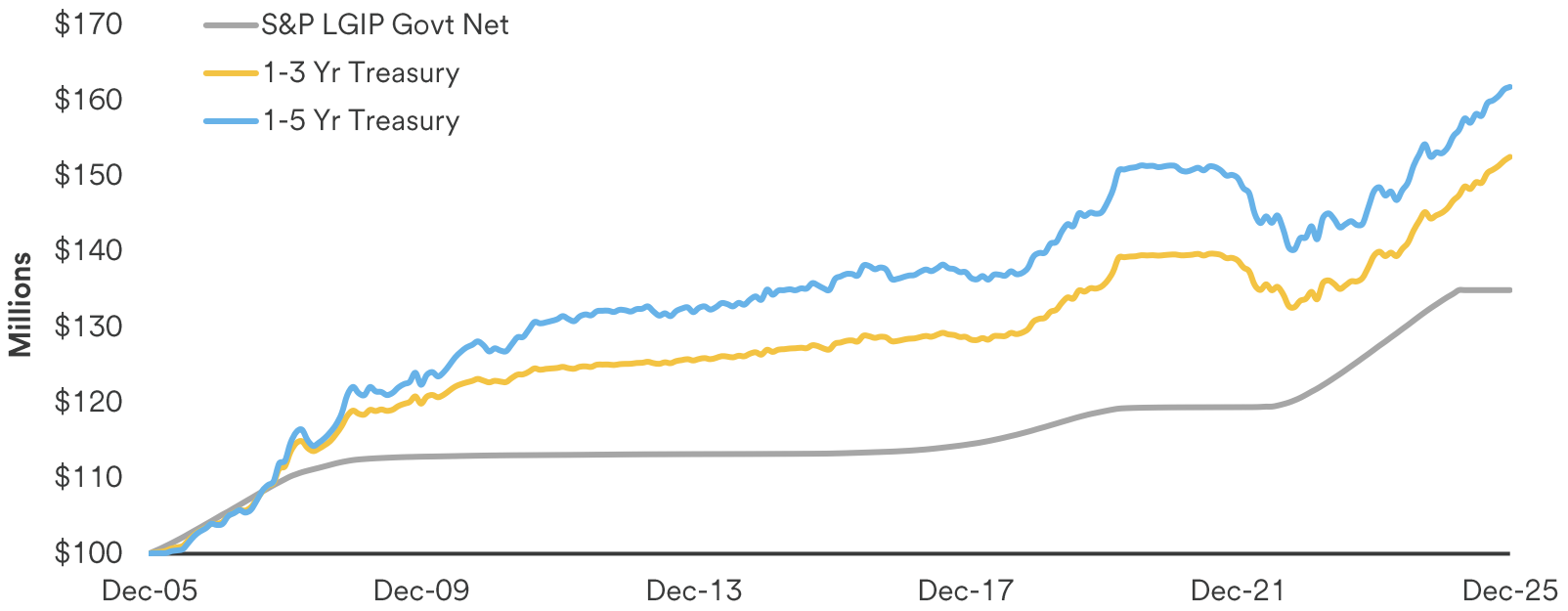
For illustrative purposes only.

Investment Program Considerations

What is our thought process? What worries us? What are our pain points?

- Liquidity
- Irregular cash flows
- Adding riskier asset classes
- Reporting issues
- Valuation issues
- Market volatility

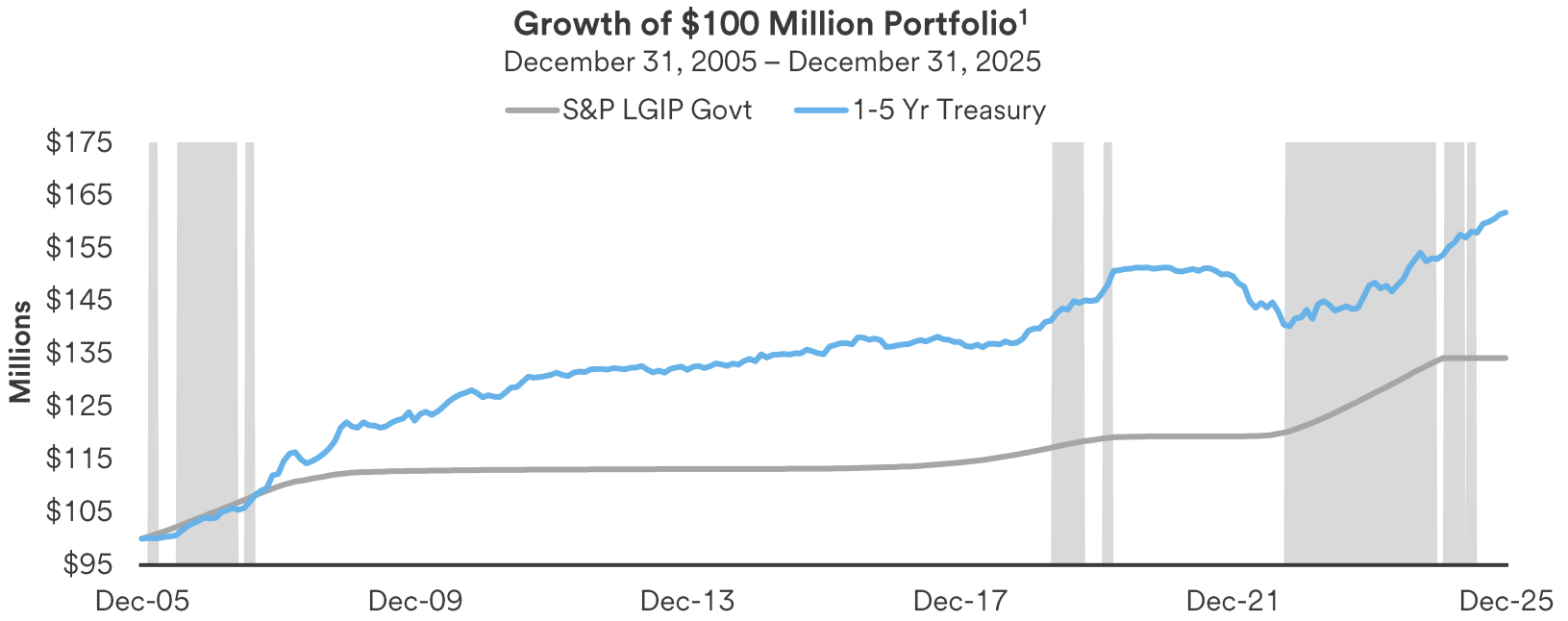
Interest Rate Cycles Throughout Recent History



20 Years Ended December 31, 2025				
Bank of America Treasury Index	**Duration (years)**	**Annualized Total Return**	**Cumulative Value of $100 Million**	**Months with Negative Return**
S&P LGIP Govt	0.00	1.51%	$134,898,503	0 out of 240
1-3 Treasury	1.83	2.13%	$152,538,280	74 out of 240
1-5 Treasury	2.54	2.43%	$161,804,521	85 out of 240

Sources: Bloomberg Finance L.P., ICE BofA Indexes, and effective federal funds rate.
It is not possible to invest directly in an index. Please see disclosures at the end of this presentation.

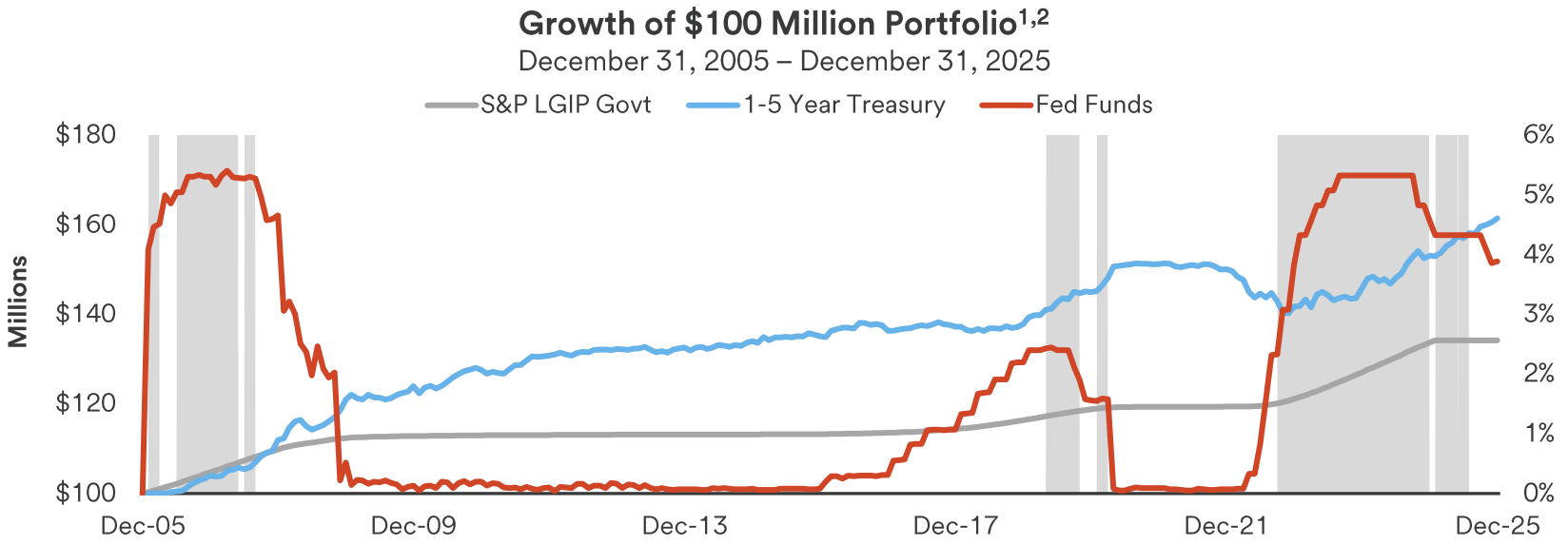
Longer Duration Portfolios Have Historically Outperformed



20 Years Ended December 31, 2025				
Indexes	**Duration (years)**	**Annualized Total Return**	**Cumulative Value of $100 Million**	**Quarters with Negative Return**
S&P LGIP Govt	0.00	1.51%	$134,901,607	0 out of 80
1-5 Year Treasury	2.54	2.43%	$161,803,703	23 out of 80

Sources: Bloomberg; ICE BofA Indexes; S&P LGIP 30-Day Government Net Yield.
[1]Shaded regions in the growth chart refer to time periods in which the yield curve, between the 3-Month and the 10-Year Treasury, was inverted – defined by short-term interest rates being higher than long-term interest rates of the same or similar securities.
It is not possible to invest directly in such an index. Please see additional notes and disclosures at the end of this presentation.

Annual Returns Across Interest Rate Cycles

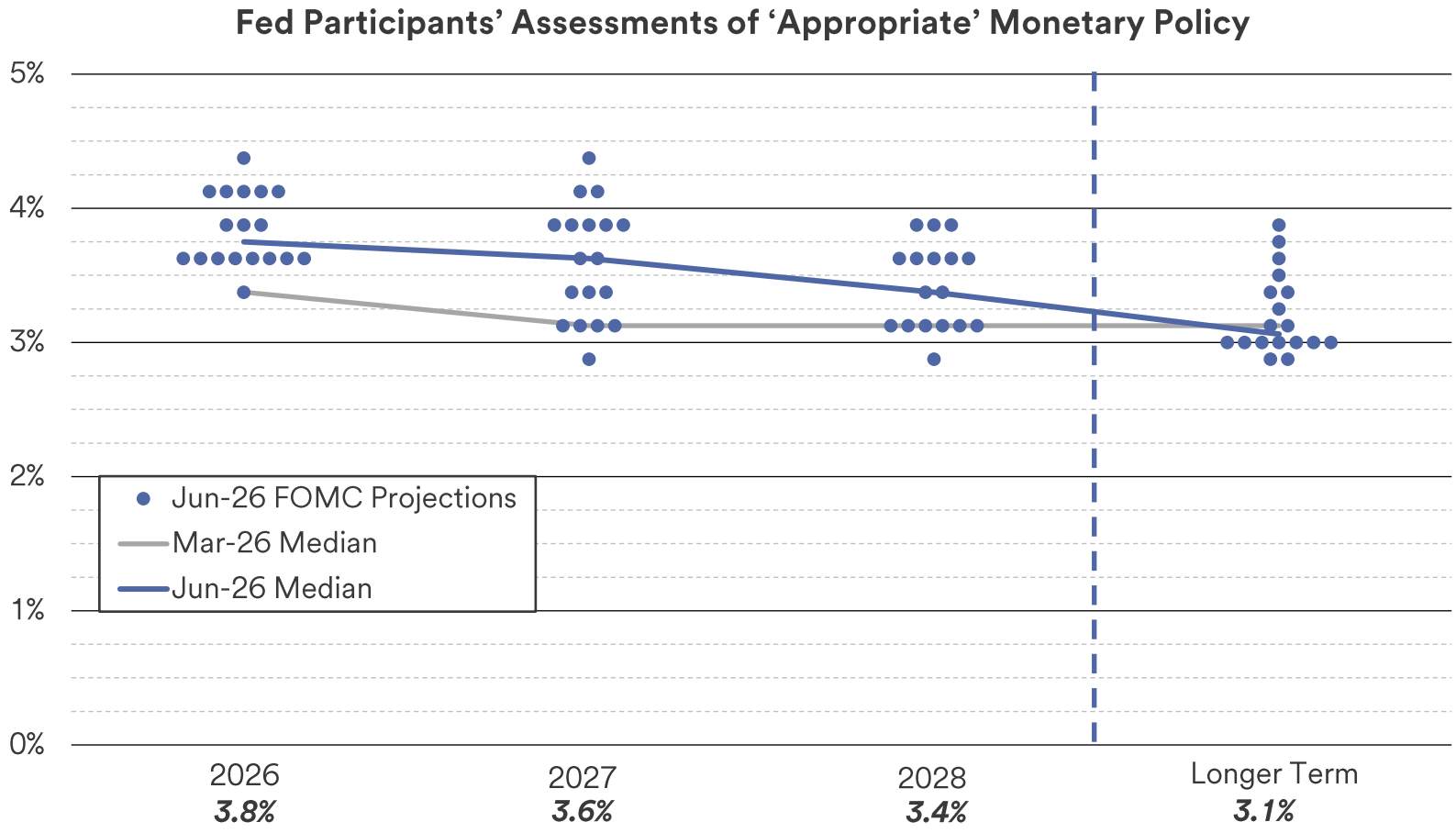


Annual Total Returns
December 31, 2005 – December 31, 2025

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
S&P LGIP Govt	2.93%	4.75%	4.89%	2.30%	0.40%	0.14%	0.06%	0.06%	0.04%	0.02%	0.05%	0.26%	0.76%	1.70%	2.10%	0.48%	0.02%	1.44%	4.93%	5.12%	1.04%
1-5 Year Treasury	1.39%	3.81%	8.16%	8.73%	0.23%	3.61%	3.36%	0.91%	-0.19%	1.24%	0.98%	1.09%	0.65%	1.52%	4.20%	4.25%	-1.10%	-5.25%	4.30%	3.41%	5.74%
Difference	(1.54%)	(0.94%)	**3.27%**	**6.43%**	(0.17%)	**3.47%**	**3.29%**	**0.85%**	(0.22%)	**1.22%**	**0.93%**	**0.83%**	(0.10%)	(0.18%)	**2.10%**	**3.77%**	(1.12%)	(6.69%)	(0.63%)	(1.71%)	**4.70%**

Sources: Bloomberg; ICE BofA Indexes; S&P LGIP 30-Day Government Net Yield.
[1]Shaded regions in the growth chart refer to time periods in which the yield curve, between the 3-Month and the 10-Year Treasury, was inverted – defined by short-term interest rates being higher than long-term interest rates of the same or similar securities.
[2]Returns for periods less than one year are shown on a periodic basis.
It is not possible to invest directly in such an index. Please see additional notes and disclosures at the end of this presentation.

Fed's Latest "Dot Plot"



Source: Federal Reserve; Bloomberg Finance L.P. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the federal funds rate at each year-end. As of June 2026.

Letter Rating Migration Rates

2025 One-Year Letter Rating Migration Rates										
From\To:	Aaa	Aa	A	Baa	Ba	B	Caa	Ca-C	Default	WR
Aaa	57.14%	36.73%	4.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.04%
Aa	0.00%	95.83%	0.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.27%
A	0.00%	0.74%	93.20%	2.07%	0.07%	0.00%	0.00%	0.00%	0.00%	3.92%
Baa	0.00%	0.00%	3.44%	90.01%	1.41%	0.00%	0.00%	0.00%	0.00%	5.14%
Ba	0.00%	0.00%	0.00%	4.76%	83.89%	4.06%	0.14%	0.14%	0.00%	7.00%
B	0.00%	0.00%	0.00%	0.00%	7.15%	72.29%	5.87%	0.51%	0.64%	13.54%
Caa	0.00%	0.00%	0.00%	0.00%	0.00%	3.58%	75.65%	3.83%	3.75%	13.19%
Ca-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.14%	40.12%	38.37%	13.37%

Average One-Year Letter Rating Migration Rates, 1970-2025										
From\To:	Aaa	Aa	A	Baa	Ba	B	Caa	Ca-C	Default	WR
Aaa	87.90%	7.67%	0.60%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%	3.76%
Aa	0.71%	85.91%	8.17%	0.38%	0.05%	0.03%	0.01%	0.00%	0.02%	4.71%
A	0.04%	2.34%	87.92%	4.71%	0.38%	0.08%	0.03%	0.00%	0.05%	4.45%
Baa	0.02%	0.11%	3.59%	87.18%	3.11%	0.55%	0.11%	0.02%	0.15%	5.16%
Ba	0.00%	0.03%	0.34%	5.75%	77.47%	6.54%	0.69%	0.10%	0.82%	8.28%
B	0.01%	0.02%	0.11%	0.37%	4.91%	74.04%	6.69%	0.48%	2.86%	10.52%
Caa	0.00%	0.01%	0.01%	0.05%	0.23%	5.38%	71.68%	2.96%	6.28/%	13.41%
Ca-C	0.00%	0.00%	0.02%	0.05%	0.29%	1.68%	10.80%	39.23%	33.28%	14.65%

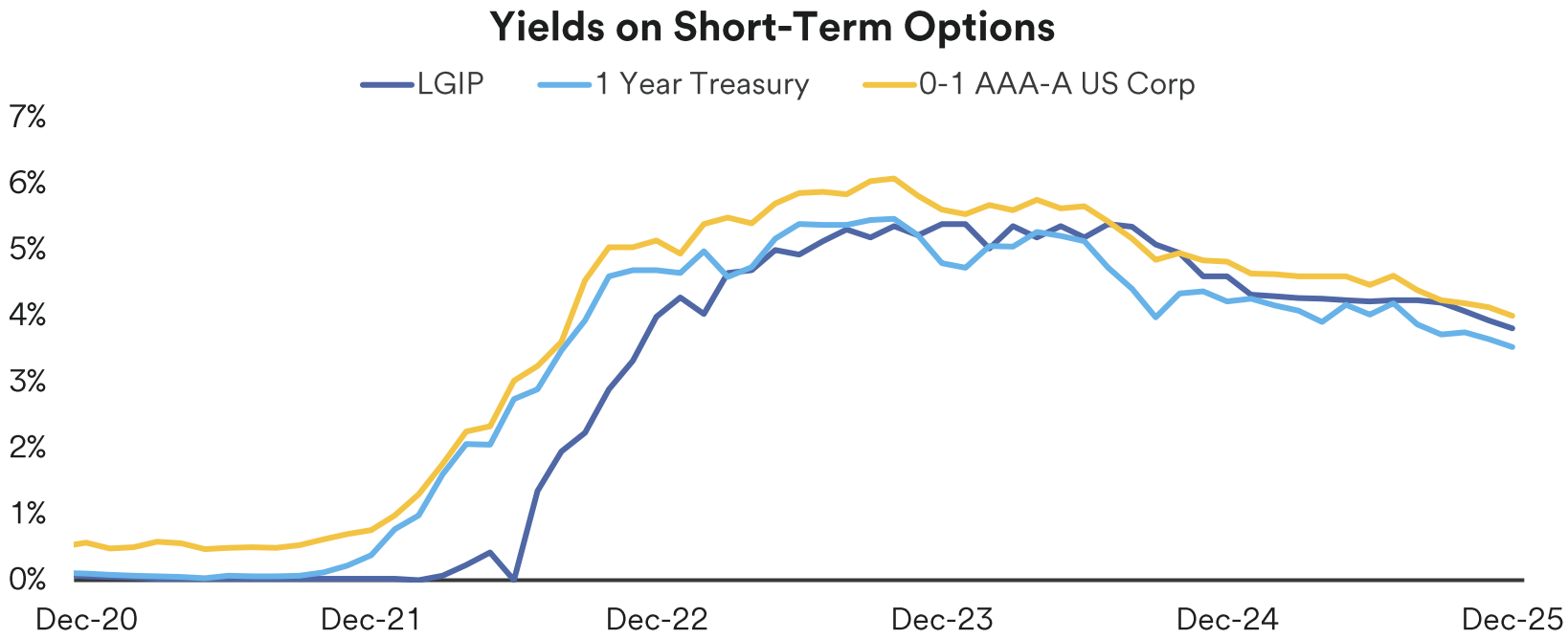
Legend:

- Upgrades
- Downgrades to Non-Investment Grade
- Downgrades to Investment Grade
- Defaults

Source: Moody's Annual Default Study: Corporate Default and Recovery Rates, 1920-2025.

Opportunities in Short-Term Market

- Evaluate all your options for cash and short-term investments
  - Bank deposits and earnings credit rates
  - Investment pools (LGIPs)
  - Short-term securities (portfolio)



Sources: Bloomberg Finance L.P. and ICE BofA Indexes, as of 12/31/2025.
The S&PLGIP Govt Net average monthly effective yield is used as a proxy for LGIP yields.
It is not possible to invest directly in an index. Please see disclosures at the end of this presentation.

Diversification Potentially Reduces Portfolio Volatility

Index / Ending Duration	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Annualized Average
1-3 Year Treasury Duration: 1.83	1.30%	1.16%	1.81%	1.67%	1.88%	4.99%	4.25%	-0.05%	-1.74%	5.61%	**5.83%**	5.77%	2.38%
1-3 Year Agency Duration: 1.55	1.24%	1.05%	1.54%	1.47%	1.82%	4.65%	3.98%	-0.24%	-2.27%	5.33%	**5.14%**	5.74%	2.37%
1-3 Year AAA Supranational Duration: 1.88	1.08%	0.98%	1.54%	1.31%	1.78%	4.20%	3.59%	-0.28%	-3.50%	4.83%	**4.71%**	5.45%	2.14%
1-3 Year Corporate AAA-AA Duration: 1.75	0.93%	0.97%	1.12%	0.92%	1.71%	3.78%	3.35%	-0.37%	-3.53%	4.70%	**4.46%**	5.37%	1.75%
1-3 Year Corporate AAA-A Duration: 1.76	0.86%	0.80%	1.09%	0.86%	1.70%	3.73%	3.15%	-0.43%	-3.65%	4.69%	**4.31%**	5.23%	1.72%
1-3 Year Government Duration: 1.83	0.72%	0.69%	0.96%	0.65%	1.69%	3.57%	3.10%	-0.46%	-3.65%	4.54%	**4.09%**	5.19%	1.72%
0-3 Year Treasury Duration: 1.41	0.70%	0.56%	0.89%	0.65%	1.64%	3.55%	3.09%	-0.55%	-3.74%	4.30%	**4.08%**	5.09%	1.71%
0-3 Year AAA US Fixed Rate ABS Index Duration: 1.31	0.63%	0.55%	0.89%	0.55%	1.60%	3.55%	2.87%	-0.55%	-3.75%	4.30%	**4.06%**	5.09%	1.69%
1-5 Year Treasury Duration: 2.54	0.62%	0.54%	0.89%	0.44%	1.58%	3.48%	2.67%	-0.86%	-5.22%	4.27%	**3.98%**	4.89%	1.64%
1-5 Year Agency Duration: 2.24	0.46%	0.43%	0.78%	0.42%	1.52%	3.25%	2.49%	-1.10%	-5.25%	4.26%	**3.41%**	4.86%	1.63%

Source: Bloomberg Finance L.P.
It is not possible to invest directly in an index. Please see disclosures at the end of this presentation.

Poll Question #4

Which of the following are options for cash and short-term investments?

A. Bank deposits and earnings credit rates

B. Investment pools (LGIPs)

C. Short-term securities (portfolio)

D. All of the above

Final Takeaways

- **Remember: connections are everywhere.**
  - Investment returns impact balance sheets. Ratings and rate-setting abilities are tied to your balance sheets. All can be impacted if cash flows are inadequate.

- **Remember the "how and why" of your investment strategy.**
  - Market volatility is inevitable: focus on establishing clear goals and tracking your progress toward those goals.
  - Discussions should center on:
    - Target asset allocation
    - Return assumptions
    - Capital market assumptions
  - Does your strategy match expected cash flows and business needs?

Questions?

Thank you for joining us!

pfm asset management

Additional Notes

Falling, stable, and rising interest rate environments determined by the effective federal funds rate.

1. Falling rate periods defined as:

- *1/31/2007 – 12/31/2008*
- *5/31/2019 – 3/31/2020*
- *3/31/2024 – 2/28/2026*

2. Stable rate periods defined as:

- *6/30/2003 – 4/30/2004*
- *1/31/2009 – 12/31/2015*
- *4/30/2020 – 2/28/2022*

3. Rising rate periods defined as:

- *5/31/2004 – 12/31/2006*
- *1/31/2016 – 4/30/2019*
- *3/31/2022 – 2/29/2024*

Source: Bloomberg, Effective Fed Funds Rate.

Disclosures

Indexes shown are not available for investment. The index data reference herein is the property of the index provider and/or its licensors. The index provider assumes no liability in connections with its use and does not sponsor, endorse or recommend the products or services contained herein. Index returns do not reflect payment of any sales charges or fees an investor would pay to purchase the securities they represent. The imposition of these fees and charges would cause investment performance to be lower than the performance shown.

The views expressed within this material constitute the perspective and judgment of U.S. Bancorp Asset Management, Inc. at the time of distribution and are subject to change. Any forecast, projection, or prediction of the market, the economy, economic trends, and equity or fixed-income markets are based upon current opinion as of the date of issue and are also subject to change. Opinions and data presented are not necessarily indicative of future events or expected performance. Information contained herein is based on data obtained from recognized statistical services, issuer reports or communications, or other sources, believed to be reliable. No representation is made as to its accuracy or completeness.

PFM Asset Management serves clients in the public sector and is a division of U.S. Bancorp Asset Management, Inc., which is the legal entity providing investment advisory services. U.S. Bancorp Asset Management, Inc. is a registered investment adviser, a direct subsidiary of U.S. Bank N.A. and an indirect subsidiary of U.S. Bancorp. U.S. Bank N.A. is not responsible for and does not guarantee the products, services, or performance of U.S. Bancorp Asset Management, Inc.

NOT FDIC INSURED : NO BANK GUARANTEE : MAY LOSE VALUE