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Risk Management in Local Government Investments

Zach Falconer

Vice President Sales and Relationship Manager PMA Financial Network

Brian Hextell

Institutional Portfolio Manager PMA Asset Management



Today's Agenda

- Introductions
- Investment policy best practices and allowable investments
- Review asset/liability matching strategies for public funds
- Discuss how investment planning can help reduce risk
- Market Update



Today's Presenters: The PMA Team



Zach Falconer
Vice President
Sales and Relationship Manager
PMA Financial Network, LLC



Brian Hextell
Senior Vice President,
Institutional Portfolio Manager
PMA Asset Management, LLC



Website: www.pmanetwork.com

Investment Policy Development and Investing Under FL State Statutes



FL Statute 218.415 - Investment Policy Statement

- Not required to have a policy, but allows you to take control of how you invest
- Must be adopted by a governing body or respective principal officer
- Meant to put parameters on your investment activities
- Revise periodically to reflect current conditions
- Look at Florida peers



Florida Statute 218.415 Requires a Policy to address the following:

- Scope
- Investment Objectives
- Performance Measures
- Prudence & Ethical Standards
- Authorized Investments
- Maturity & Liquidity Requirements
- Portfolio Composition

- Risk & Diversification
- Authorized Broker/Dealers
- Third-Party Custodial Arrangements
- Master Repurchase Agreement
- Bid Requirements
- Internal Controls
- Continuing Education
- Reporting Requirements



Polling Question #1

- When did you last update your investment policy?
- 1. Within 1 year
- 2. 1 to 3 years
- 3. Over 3 years
- 4. I don't know



- Scope
 - Applies to funds in excess of those required to meet current expenses
 - The investment policy shall not apply to pension funds, including those funds in Chapters 175 and 185, or funds related to the issuance of debt where there are other existing policies or indentures in effect for such funds.

- Investment Objectives
 - Safety, Liquidity & Yield
 - Utilize risk management
 - Meet cash needs

Yield is important, but secondary to safety & liquidity



Performance Measurement

- Choose appropriate benchmarks, examples include –
 - ▶ 30-Day Treasury Bill
 - ▶ 3-month Treasury Bill
 - ICE BofA 1-3 Year U.S. Treasury Index
 - Bloomberg 1-3 Year Government Index
 - Bloomberg 1-5 Year US Government / Credit Index

- Prudence
 - Essentially means there is an expectation that those making investments display good judgement and take appropriate care when investing



Maturity and Liquidity Requirements

- The investment policy shall require that the investment portfolio is structured in such manner as to provide sufficient liquidity to pay obligations as they come due.
 - Match investment maturities with known cash needs





Portfolio Composition

- Establish guidelines and limits on security:
- Issues
- Issuers
- Maturities

Risk and Diversification

Investments held should be diversified to the extent practicable to control the <u>risk</u> of loss <u>resulting</u> from overconcentration of assets in a specific maturity, issuer, instrument, dealer, or bank through which financial instruments are bought and sold



Security Type	Type Limit	Issuer Limit	
U.S. Treasury	100%	100%	
U.S. Government Agencies and Instrumentalities	50%	25%	
SEC Registered Money Market Funds	50%	25%	
Florida Intergovernmental Investment Pools (LGIP)	75%	25%	
QPD Certificates of Deposit	50%	25%	
QPD Savings Deposits	75%	25%	
State & Local Government Debt	25%	5%	
Corporate Obligations and Commercial Paper	25%	5%	



- Authorized Dealers
 - Specify the authorized securities dealers, issuers, and banks from whom local government may purchase securities.
 - Review and update list periodically

- Custodial Agreements
 - Lay out appropriate arrangements for the holding of assets
 - No withdrawal of securities, except by an authorized staff member of the unit of local government.
 - "Delivery vs. Payment" basis, if applicable



- Master Repurchase Agreement
 - IPS shall require all approved institutions and dealers transacting repurchase agreements to execute and perform as stated in the Master repurchase agreement.

- Competitive Bidding
 - Require that staff determines the approximate maturity date based on cash-flow needs and market conditions, analyze and select one or more optimal types of investment, and competitively bid the security in question when feasible and appropriate.



Internal Controls

- Provide for a system of internal controls and operational procedures.
- Provide for review of such controls by independent auditors
- The internal controls should be designed to prevent losses

Continuing Education

Investment officials must annually complete 8 hours of continuing education in subjects or courses of study related to investment practices and products.



Reporting

- Provide for appropriate annual or more frequent reporting of investment activities.
- Officials responsible for making investment decisions shall prepare periodic reports
- Such reports shall be available to the public.

- Things to think about
 - Are you able to invest in all the asset types you think are appropriate?
 - Has the entity's risk profile changed since you started?
 - Do you understand your cash flow needs? Are you investing a portion of your core funds further out the yield curve?
 - Are you okay with some level of price volatility, especially if you intend to hold investments to maturity?





(17) Authorized Investments: No Written Investment Policy

Those units of local government electing not to adopt a written investment policy in accordance with investment policies developed as provided in subsections (1)-(15) may invest or reinvest any surplus public funds in their control or possession in:

- a) The Local Government Surplus Funds Trust Fund, or any intergovernmental investment pool authorized pursuant to the Florida Interlocal Cooperation Act of 1969, as provided in s. 163.01.
- b) Securities and Exchange Commission registered money market funds with the highest credit quality rating from a nationally recognized rating agency.
- c) Interest-bearing time deposits or savings accounts in qualified public depositories, as defined in s. 280.02.
- d) Direct obligations of the U.S. Treasury.





(16) Authorized Investments: Written Investment Policies

-Typical Investment Types



Deposit Accounts (QPD)

- Transactional Checking Accounts
 - Payroll, A/P
- Earnings Credit Rate
 - Rates applied to non-interest bearing balances to offset services charges
 - Used to calculate compensating balance
 - Typically settles monthly
- Savings/Money Market Accounts
 - Compounding, frequency varies
- Check in with banker regularly
 - Ask about structure of accounts
 - Ask about interest rates earned



Certificates of Deposit (QPD CD)

- Must be placed with Qualified Public Depositories (F.S. Chapter 280)
- Fixed term investment with specified maturity date
- Penalties for early withdrawal
- Negotiable certificates of deposit are prohibited under Chapter 280
- CDARS are allowable under Chapter 218.415(23)
 - Funds must initially be deposited in a qualified public depository



U.S. Treasury Securities

Treasury Bills

- Issued by US. Treasury maturities of 1-year or less
- Issued at a discount of face value (Zero Coupon)
- Same or next day settlement date

Government Notes

- Maturities of 2 to 10 years mature on 15th and Last Day of Month
- Issued in denominations of \$1k, \$5k, \$10k, \$100k & \$1.0mm
- Coupon Bonds Purchase at par, premium or discount
- Interest (Coupons) paid semi-annually
- Same or next day settlement date

Government Bonds

- Maturities of 10 to 30 years Mature on 15th and Last Day of Month
- Coupon Bonds Purchase at par, premium or discount
- Interest (Coupons) paid semi-annually
- Same or next day settlement date





Government Sponsored Enterprises (U.S. Agency and Instrumentality Securities)

- Financing entities to fund loans to certain groups of borrowers
- Unsecured debt obligations with implied guarantee of the US Government
 - Federal National Mortgage Association (FNMA) (Fannie Mae)
 - Federal Home Loan Mortgage Corporation (FHLMC) (Freddie Mac)
 - Federal Home Loan Bank (FHLB)
 - Federal Farm Credit System (FFC)



Callable Agency Notes

- Issuer has right to redeem the security on a given date or dates - call date(s)
- The value of the "call option" varies depending on the following factors:
 - Current market rates relative to the security's coupon rate
 - Time remaining to the call date
 - Call type





Registered Money Market Fund / Local Government Investment Pools (LGIPs)

- Investors own shares of the fund/pool
- Net Asset Value (NAV)
 - Stable NAV (Managed to dollar in/dollar out)
 - Floating NAV (bond funds/pools)
- ► Maximum WAM = 60 days (WAM to Reset for Stable NAV funds)
- Look for funds rated by S&P or other rating agencies (AAA)
- Not a bank deposit



Municipal Securities

- Obligation of a State, County, City, Village, School District or other special purpose district
- General Obligation
 - Not all GO bonds are the same
 - Limited versus Unlimited Tax
 - Some GO bonds have no separate tax levy
- Revenue
 - Essential service revenue bonds (water & sewer)
 - Other revenue generating entities including toll roads, airports, parking and many others



Commercial Paper (CP) & Corporates

Commercial Paper

- Short-term unsecured promissory note
- Default risk present
- Industrial & financial firms are issuers of CP
- Commercial paper usually offers a higher return compared to other short-term investments such as Treasury bills, compensating for the slightly higher risk.

Corporate Notes and Bonds

- Similar to commercial paper, but with maturities greater than 1 year
 - Can offer higher returns compared to government securities
 - Credit risk is generally higher
 - Risk and return can vary greatly depending on the specific security and the issuing corporation's financial health



Polling Question #2

What's the maximum Weighted Average Maturity (to Reset) of a Stable Net Asset Value fund?

- 45 days
- 60 days
- 120 days
- 365 days



Investment Risks





Credit Risk

- Broad term that includes multiple factors that may impact an issuer's ability to meet its obligations:
 - Default risk
 - Downgrades in credit ratings
 - Shifts in economic conditions
 - Changes in an issuer's financial position



Credit Ratings

Investment Grade Ratings				
Moody's	S&P	Fitch	Credit Worthiness	
Aaa	AAA	AAA	An obligor has EXTREMELY STRONG capacity to meet its financial commitments.	
Aa1	AA+	AA+	An obligor has VERY STRONG capacity to meet its financial commitments. It differ from the highest rated obligors only in small degree	
Aa2	AA	AA		
Aa3	AA-	AA-	from the highest rated obligors only in small degree	
A1	A+	A+	An obligor has STRONG capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories	
A2	Α	А		
А3	A-	A-		
Baa1	BBB+	BBB+	An obligor has ADEQUATE capacity to meet its financial commitments. However,	
Baa2	BBB	BBB		
Baa3	BBB-	BBB-	adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.	



Default Risk

- Risk of an issuer failing to make timely payments of interest or principal on its outstanding obligations
- Happens occasionally but it is rare for investment grade securities
- Securities are more likely to be downgraded than to default
- Must monitor security credit quality and ratings on an ongoing basis to make sure they remain appropriate investments



Interest Rate Risk

- Potential for the value of an investment to decrease as a result of changes in the level of interest rates
- Affects fixed income investments such as bonds, where a rise in interest rates makes existing bonds less attractive, leading to a decrease in their prices
- Measured through duration
 - A measure of the sensitivity of a bond's or portfolio's price to a change in interest rates

Bond prices and interest rates generally move in opposite directions





Reinvestment Risk

- The risk that yields will be lower when reinvesting cash flows such as maturities, calls, paydowns or coupons
- Callable bonds may hold higher reinvestment risk because these bonds are typically called when interest rates decline
- Investing to a shorter maturity than needed increases reinvestment risk
 - Match investment maturities with expected cash needs
 - An <u>inverted yield curve</u> may inadvertently encourage shorter term investments and thereby increase reinvestment risk



Timing Risk

- Many investors try to "time the market", meaning they attempt to predict when the market will rise or fall
- This extremely challenging even for the best and brightest in the industry
- "Time In" the market typically produces better results over time than trying to time the market
- It is important to invest to a plan and maintain commitment over time



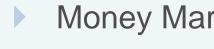
Liquidity Risk

- Can you sell a security? At what price?
- Must understand the liquidity of each investment you make
- Factors that may contribute to liquidity risk include low trading volume, market disruptions, changes in investor sentiment or economic conditions
- Some investments such as CD's have penalties for early withdrawals





Liquid



Money Market Accounts

Degree Liquidity



Treasury Instruments

Commercial Paper / Corporate Notes



Municipal Securities



Illiquid



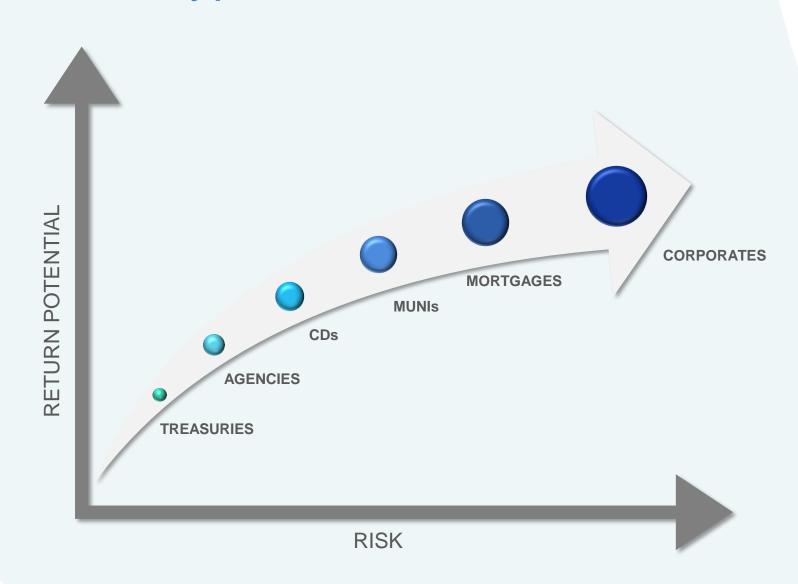
Certificates of Deposit

Headline Risk

- Risk that news can negatively affect investment performance or public perception
- Information can spread through various channels faster than ever
- Examples:
 - Volkswagen Dieselgate
 - Wells Fargo consumer product issues
 - Recent regional bank woes



Investment Types





Investments along with Corresponding Risks

- US Treasuries
 - Interest Rate, Reinvestment, Default Risk, Headline Risk
- Registered MMFs/Stable NAV LGIPs
 - Reinvestment, Credit, Default, Headline Risk
- Municipal Securities
 - Interest Rate, Reinvestment, Credit, Default, Liquidity, Headline Risk
- Commercial Paper
 - Interest Rate, Reinvestment, Credit, Default, Liquidity, Headline Risk
- Certificates of Deposit (QPD)
 - Reinvestment, Liquidity, Headline Risk



Managing Investment Risks

- Effective Investment Planning is the best way to manage investment risks
 - Match assets and liabilities
 - Reduces reinvestment risk
 - Reduces liquidity risk
 - Promotes diversification
 - Diversify investments by:
 - Security type
 - Issuer (bank or company)
 - Sector (financial, industrial, technology, municipal, etc.)
 - Limit investments to ones you thoroughly understand
 - Don't try to time the market
 - Monitor credit ratings or utilize a Registered Investment Advisor



Polling Question #2

Which investment type typically carries with it the most liquidity risk?

- 1. Corporate Obligations
- 2. Municipal Securities
- 3. Certificates of Deposit
- 4. Demand Deposit Accounts
- 5. Stable NAV Funds



Investment Planning





Investment Planning Process



Goals and Objectives

State Statute Safety, Liquidity, Return



Cash Flow Forecast

Asset-Liability Alignment Identify Reserves



Investment Strategy Development

Investment Ladder
Active Management



Diversification

Utilize Full Spectrum of Allowable Investments



Invest with a Purpose

Reduce Risk Enhance Returns



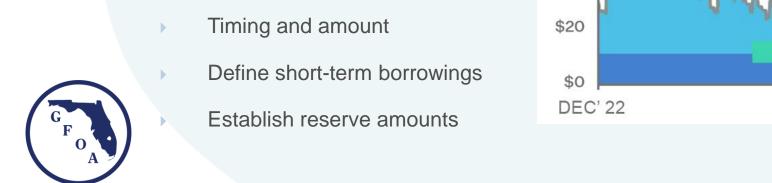
When Should a Public Entity Invest?

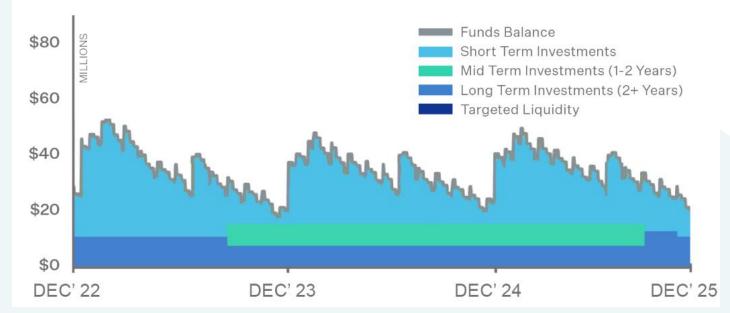
- Determined by an entity's cash flow
- A good Cash Flow plan will...
 - Ensure all liabilities are properly funded
 - Project / identify cash flow timing & amount
 - Avoid over-funding of liabilities
 - Use just-in-time funding
 - Establish / maintain adequate liquidity level
 - Allow immediate investment execution maximize interest



Cash Flow Forecasting

- **Maximize Efficiency & Income Potential**
- **Liability Matching**
 - Revenue and Expense Projections
 - Avoid excess liquidity
- **Maintains Liquidity Levels**
 - Money market balances
 - Other liquid investments
- **Identifies Balance Low Points**







Investments Should Align with Strategy

HIGH LONG-TERM INVESTMENTS Long-term Reserves, Debt Service Reserves, OPEB, Pension Funds Return Target MID-TERM INVESTMENTS Intermediate-term Reserves. **Bond Proceeds SHORT-TERM INVESTMENTS** Operating Reserves, Short-term Reserves. Liquidity Needs



LOW

THS _

HIGH

Allowable Investments by Term

Short Term Investments (0-12 Months)

- -Treasury Bills
- Agency Discount Notes
- -CDs
- -Commercial Paper
- -LGIPs
- -Term Series
- Money Markets

Mid Term Investments (9 months – 2 years)

- -CDs
- -Treasury Notes
- Agency Notes
- -Taxable Municipal Bonds
- Agency Mortgage-BackedSecurities
- -Corporate Notes
- -Variable NAV LGIP's

Long-Term Investments (2+ Years)

- -Treasury Notes
- Agency Notes
- -Taxable Municipal Bonds
- Agency Mortgage-BackedSecurities
- -Corporate Notes
- -Variable NAV LGIP's





Investment Approach: Buy and Hold versus Active Management

- Buy and Hold: Hold to maturity investments such as CD's.
- Active Management: Continuous review of best alternatives
 - Hold to maturity
 - Roll down the yield curve
 - Sell security as it ages and rolls to a lower yield (higher price)
- Credit Spreads
 - What has value today?
 - Determine if we are getting paid to take credit risk
 - Diversification
- Duration/Curve positioning
 - Evaluate best duration fit for client objectives
 - Continuously evaluate yield curve for best return potential



Laddering: A Proven Investment Strategy

- Power of a ladder
 - Reinvest over time
 - Similar to dollar cost averaging in stocks
 - Works in all rate environments
 - Rates Fall: Locked in higher yields in longer maturities
 - Rates Stable: Longer maturities will enhance yield
 - Rates Rise: Reinvest at higher yields as bonds mature



Disciplined Investment Approach

Average Treasury Yields Over Past 20 Years				
3-Month	6-Month	2-Year		
1.49%	1.61%	1.83%		

Why Invest Longer Today at a Lower Yield?

- Markets are efficient
- It is very difficult to time the market
- Through time, investing longer generates higher yields and income







Investment Returns Extending and Diversifying



- Extending from 1-3
 month T bills to 1-3
 year Treasuries
 added 36 basis
 points of annualized
 returns over the past
 20 years
- Diversifying with corporates added 20-40 basis points of returns to 1-3 year and 1-10 year index returns



Efficient Markets

- Stay Invested
 - Investing longer now "locks in" income
 - ▶ The market is efficient

Example:

Investment Amount	\$1,000,000	
2-Year Rate	4.88%	\$97,600
1-Year Rate	5.18%	\$51,800
Breakeven Rate	4.58%	\$45,800
		\$97,600



Don't Leave Money on the Table



Consider this:

- Do my investments closely match my liabilities?
- Does my current investment strategy optimize results in different economic and market scenarios?
- Don't pay for liquidity you don't need



Key Takeaways

- Good investing begins with good planning
- Analyze cash flow needs to maximize investment horizon
- Compare yields and returns to a benchmark
- The market is efficient
- Invest with a Purpose



Polling Question #4

What does cash flow analysis allow you to do?

- 1. Identify liquidity needs
- 2. Identify reserve assets
- 3. Match investments with liabilities
- 4. All of the above



Case Study



Case Study Considerations

- First Time Utilizing an Investment Advisor
- Investment Policy Updates Needed
- Most Prior Investments in Banks and LGIPs
- Determine Amount of Long-term Reserves
- Add Cash Management Needs



Investing Long Term Reserves

- Maintain high quality portfolio aligned with State Statute, Investment Policy and portfolio goals & objectives
- Strategically diversify across allowable fixed income sectors





Investment Policy Updates

- Revised the Investment Policy format to align with Florida Statute 218.415 and GFOA Best Practices
- Updated authorized personnel such as City Manager, Director of Finance and their duties as to the IPS and deleted the Investment Advisory Committee
- Added an easy-to-read schedule of authorized investments that includes sector limits, ratings and maximum effective duration
- Created two benchmarks:
 - > 3-month US Treasury Bills for the City's Short-term Operating portfolio.
 - The ICE BofA 1-5 Year U.S. Treasury and Agency Index for the City's Longterm Reserves



Investment Policy Updates

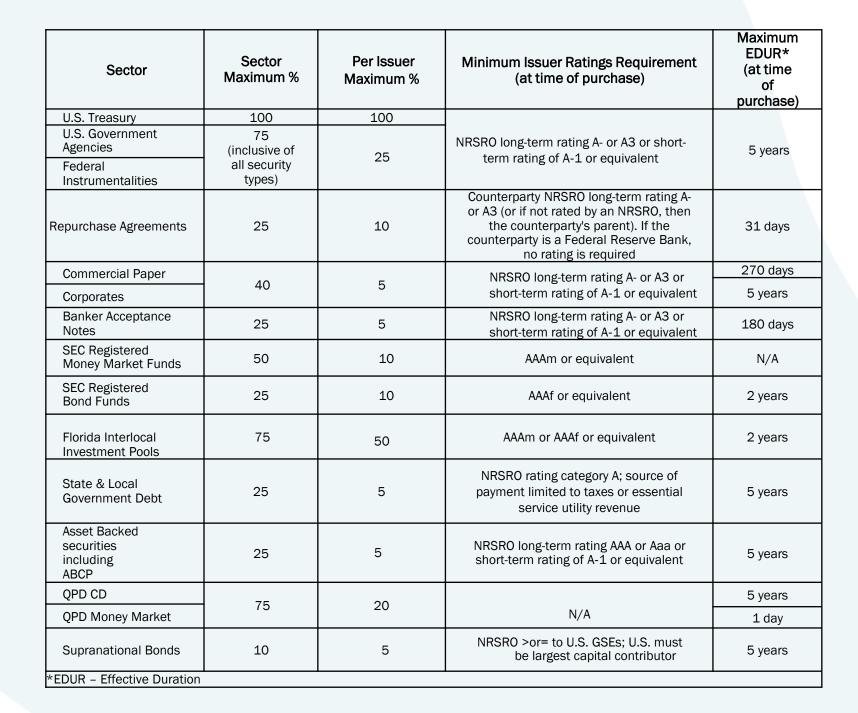
Additional Allowable Investments

- Corporate Debt Securities
- Municipal Obligations (State & Local)
- Asset Backed Securities

Deleted from Original IPS

The Financial Services Director shall have five percent (5%) discretionary prudent expert authority to invest in unlisted vehicles which may, from time to time, become available.

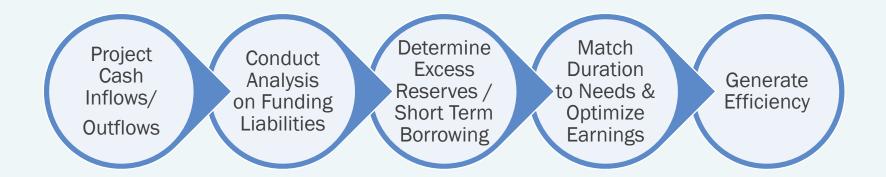






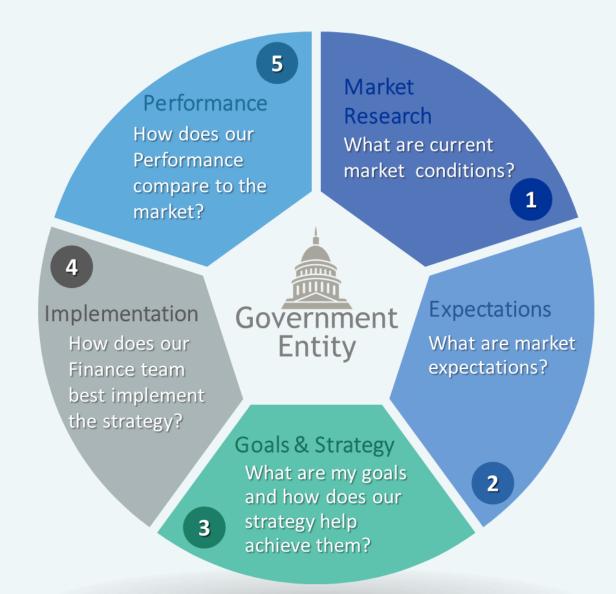
Cash Flow Forecasting

- Next Steps
 - Maximize Investment Policy
- Generate efficiency in process





Investment Process



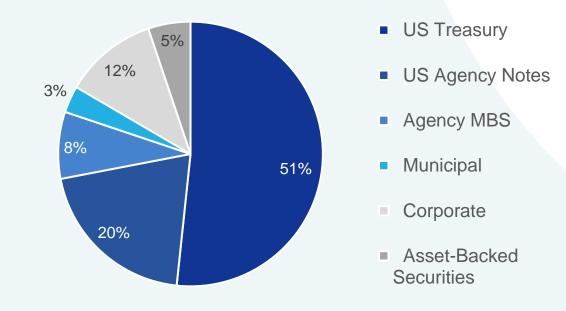




Long-Term Portfolio Investment Goals and Allocation

INITIAL GOALS / OBJECTIVES

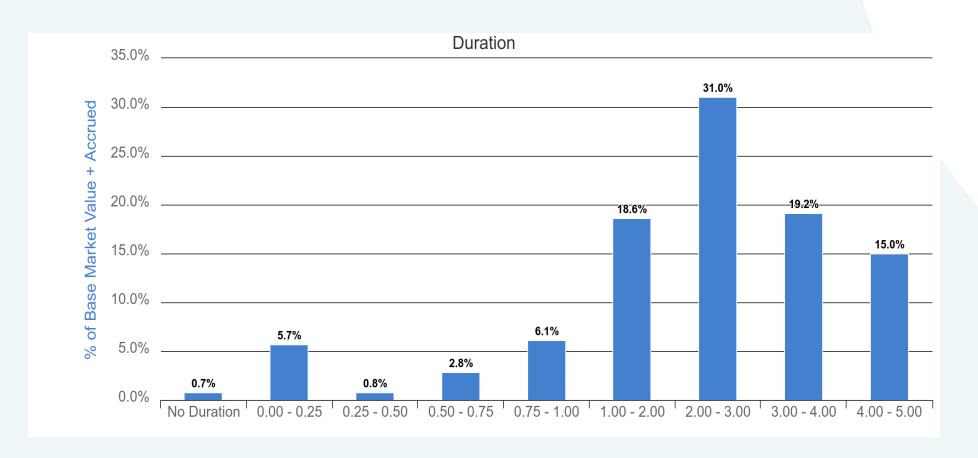
- Establish benchmark of ICE BofA1-5 Year US Treasury Index
- Invest in high-quality, highly liquid market sectors
- Maintain strong diversification by issue, issuer, sector and maturity
- Align duration with benchmark
- Increase yield and potential returns
- Actively manage portfolio to meetCity needs







Long-Term Portfolio Diversification by Maturity / Duration





Polling Question #5

What risk does duration measure?

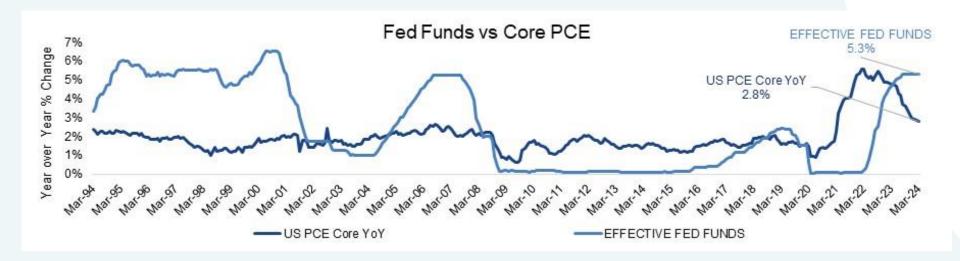
- 1. Credit risk
- 2. Headline risk
- 3. Liquidity risk
- 4. Interest rate risk



Market Update



Inflation Continues Decline but Moderates

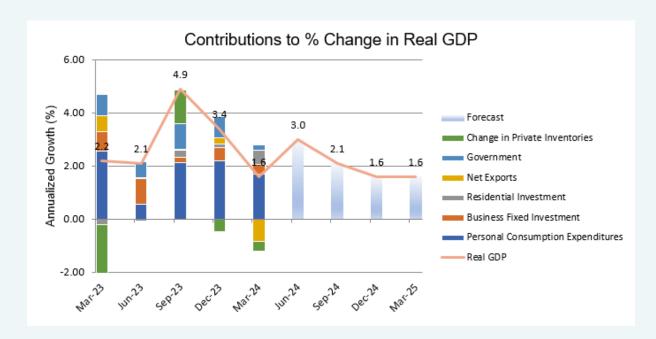


- Current Fed Funds rate increasingly above inflation levels
- Core CPI continuing to slowly decline, aided by a decline in wage growth

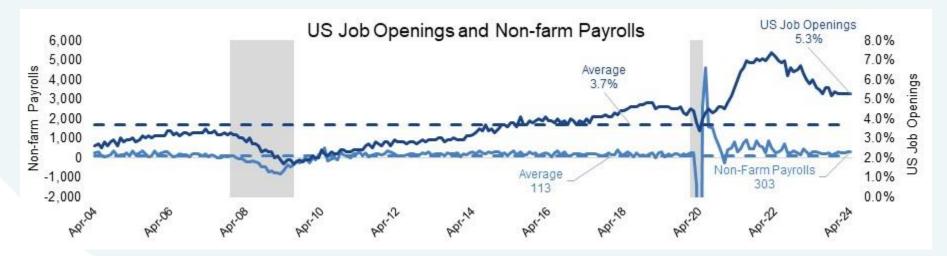




Growth and Employment

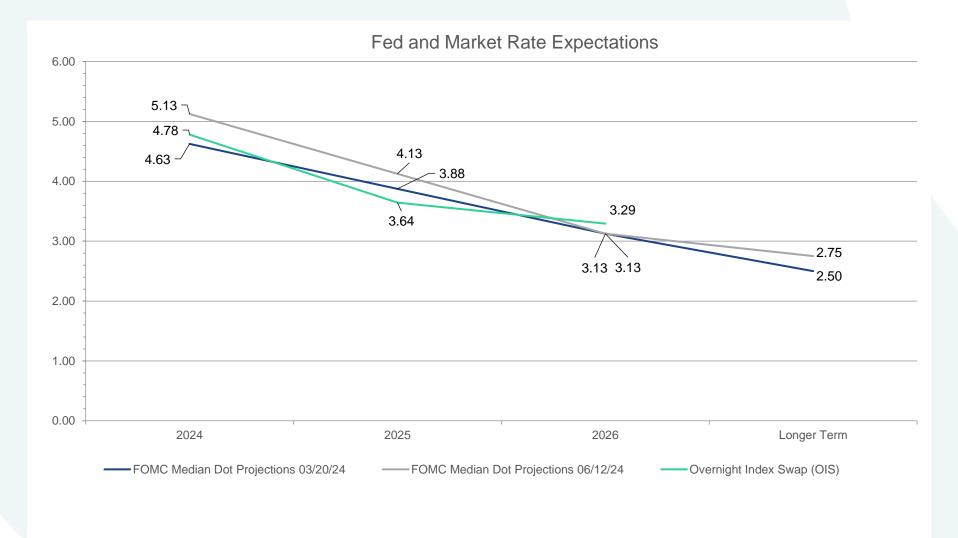


- Higher than
 expected growth in
 2023 with positive
 future forecasts
- Employment picture moves from hot to simply strong



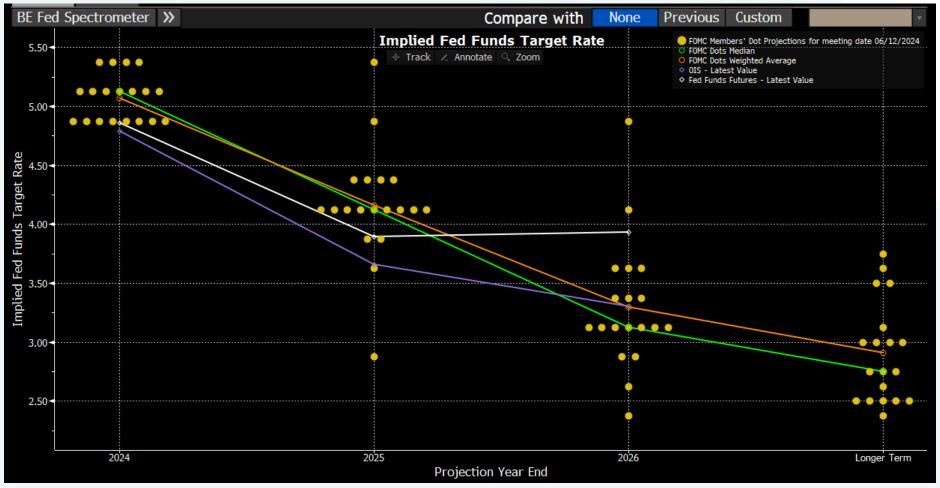


Rate Cuts and Higher for Longer





Fed Funds Rate Projections





Source: Bloomberg

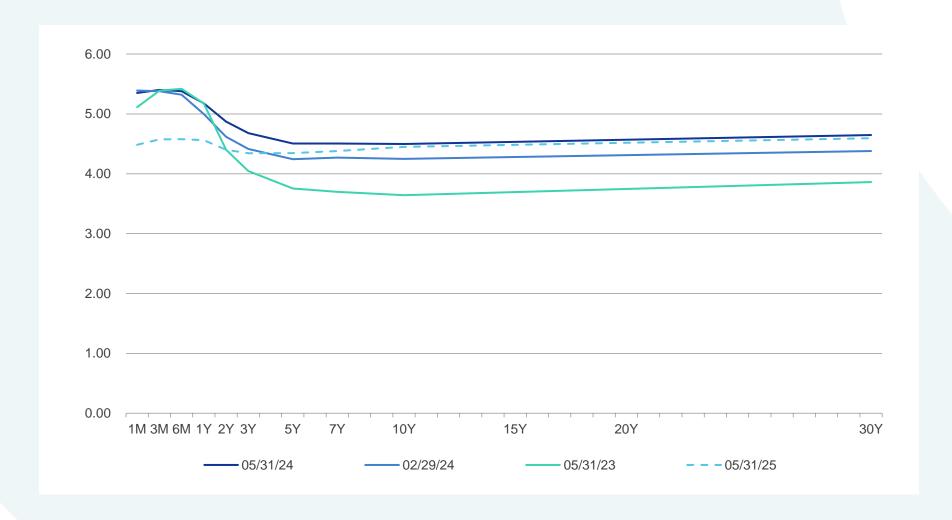
Fed Funds Rate Projections

Region: United States » Target Rate 5.50 Effective Rate 5.33		Instrument: Fed Funds Futures Pricing Date Cur. Imp. 0/N Rate		
Meeting	#Hikes/Cuts	%Hike/Cut	Imp. Rate ∆	Implied Rate
07/31/2024	-0.100	-10.0%	-0.025	5.302
09/18/2024	-0.700	-60.0%	-0.175	5.153
11/07/2024	-1.065	-36.5%	-0.266	5.061
12/18/2024	-1.865	-80.0%	-0.466	4.861
01/29/2025	-2.420	-55.5%	-0.605	4.722

Source: Bloomberg



U.S. Treasury Yield Curve Remains Inverted





PMA Market Outlook

- ▶ The Fed's Next Move is Expected to be a Rate Cut
- ► Lagging Impacts of Tighter Monetary Policy Create Growth Headwinds
- ► Market Volatility Continues on Economic and Policy Uncertainty
- ▶ Domestic and International Geopolitical Risks in Focus
- ▶ Corporate Balance Sheets Supportive, Signs of Consumer Stress
- ▶ Outlook for Solid Returns Across Asset Classes in 2024



Polling Question #6

How many rate cuts will there be by the end of the year?

- 1. 1 cut
- 2. 2 cuts
- 3. 3 cuts
- 4. No cuts



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