

Rates Go Up, Rates Go Down

Investment Program Management in a Rising Rate Environment

2022 New England States GFOA

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Themes

- ▶ Mixed Economic Conditions
- ▶ Fed Increasing the Overnight Rate
- ▶ Breakeven Analyses help evaluate investment options
- ▶ A holistic investment strategy is developed by using cash flow analyses and permitted investments



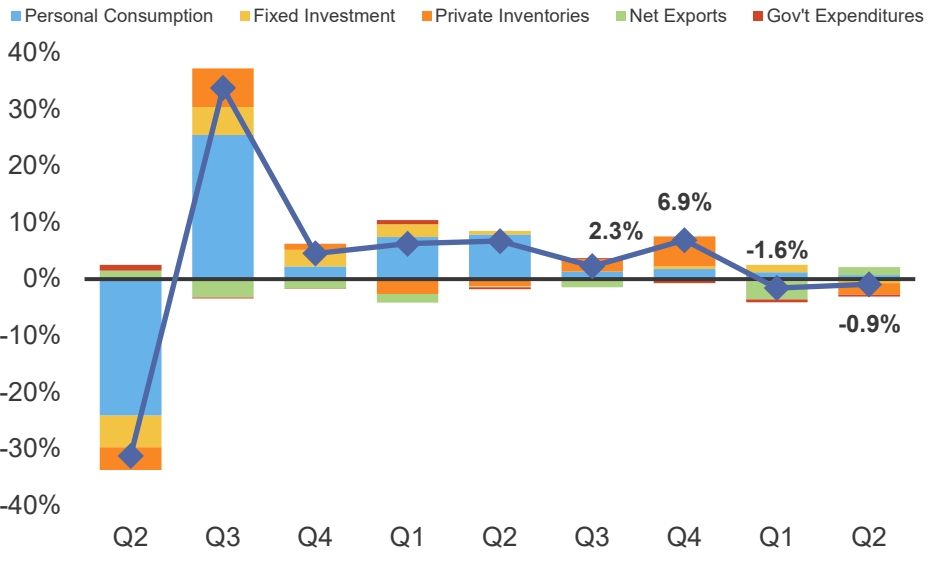
Market Update

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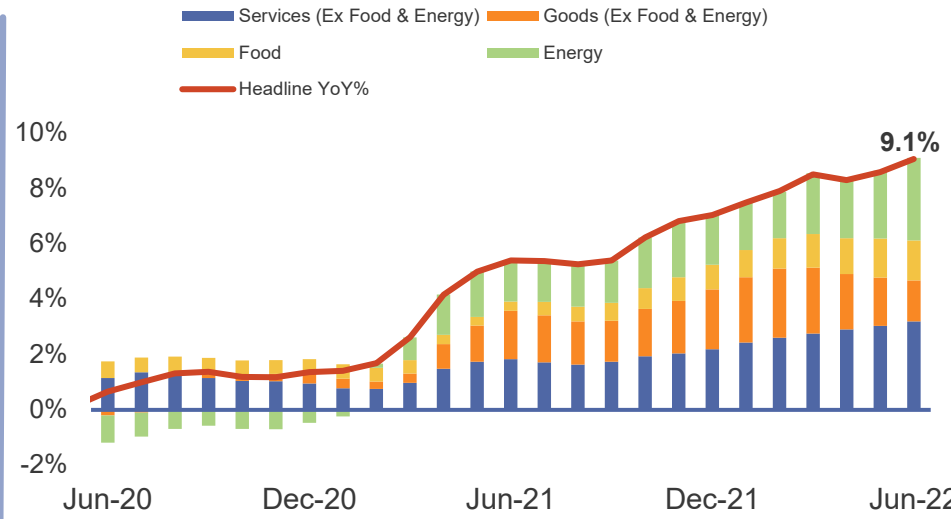


Overview of Current Economic Conditions

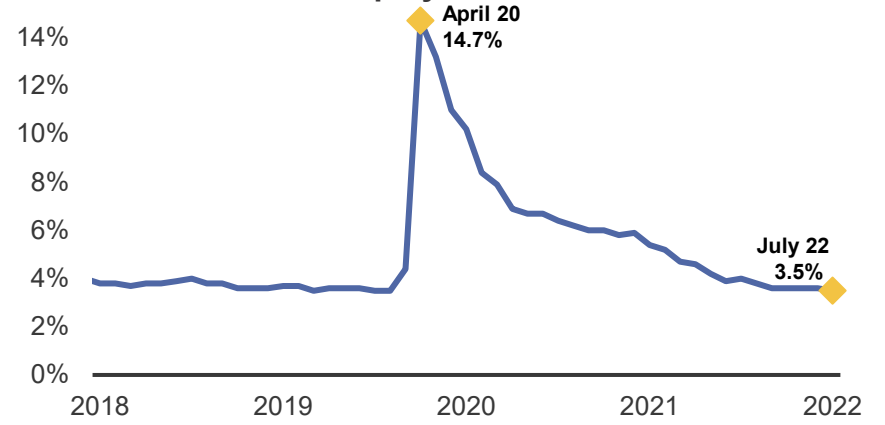
U.S. Real GDP Annualized Rate



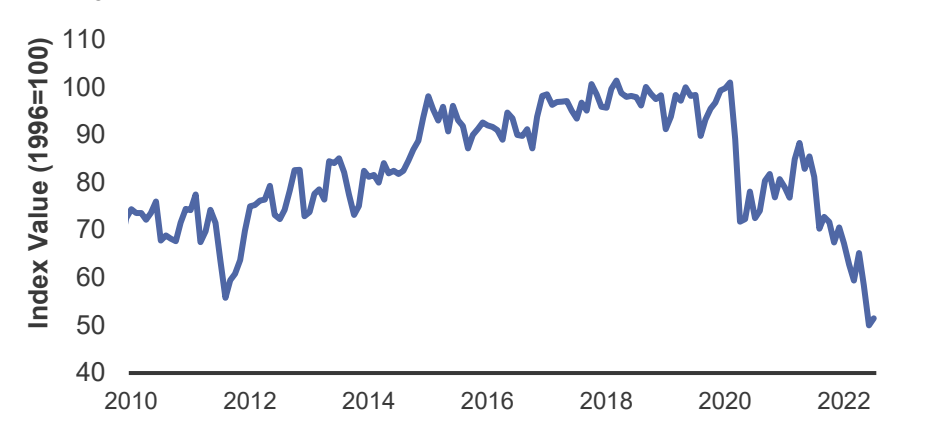
Factors Contributing to the Consumer Price Index (CPI YoY)



Unemployment Rate



Index of Consumer Sentiment



Sources: Bloomberg; University of Michigan Consumer Sentiment and underlying index components, as of July 31, 2022.

Takeaways

- ▶ Economic growth in 2022 has slowed from elevated 2021 levels.
- ▶ Forward looking projections for Real GDP in Q3 is growth of 1.7%.
- ▶ The U.S. labor market remains a strong focal point of the economy.
- ▶ Inflation is at a 40-year high.

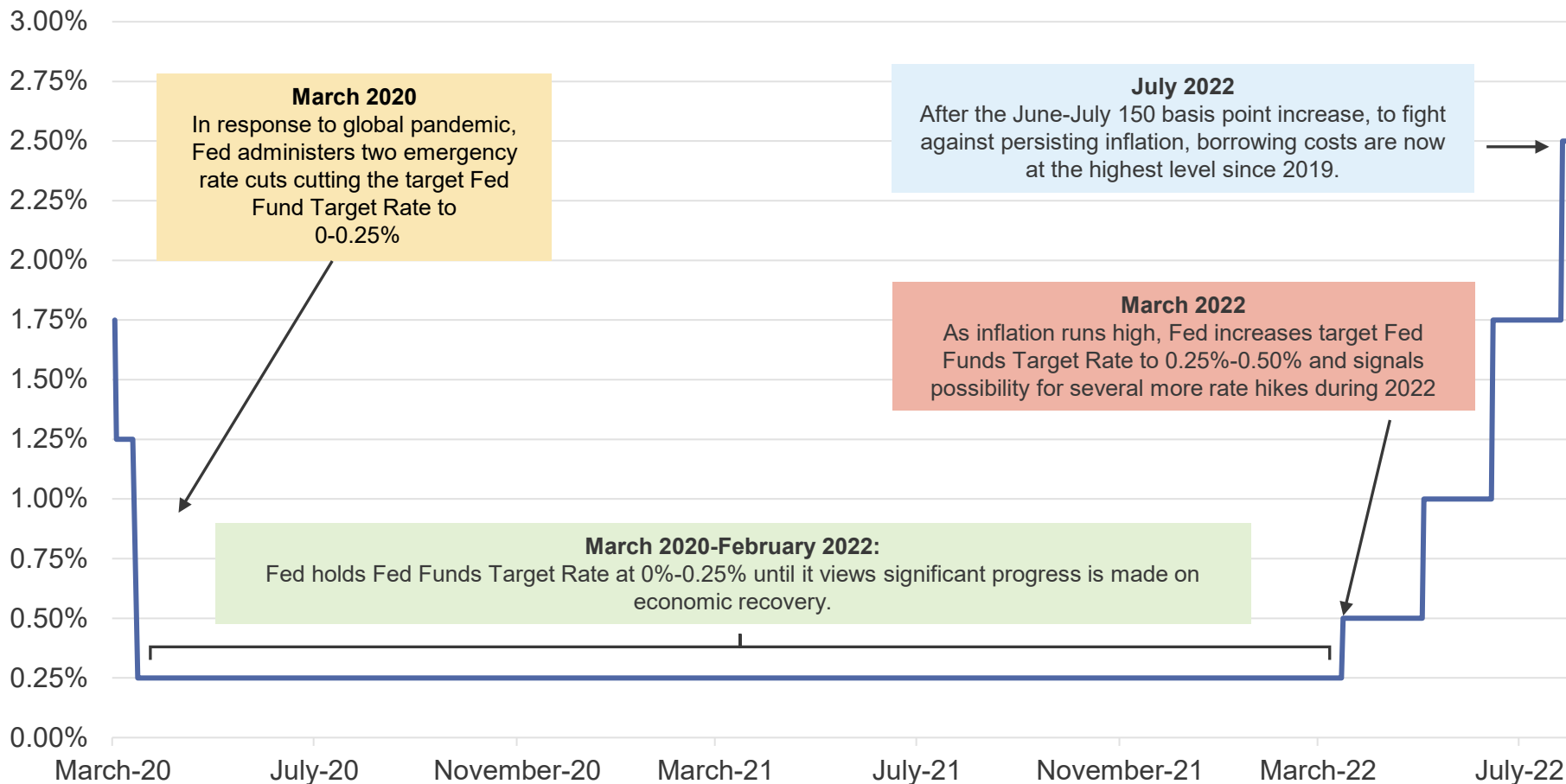
What is going on with interest rates?

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A Step Back...How Did We Get Here?

Fed Funds Target Rate (upper limit)

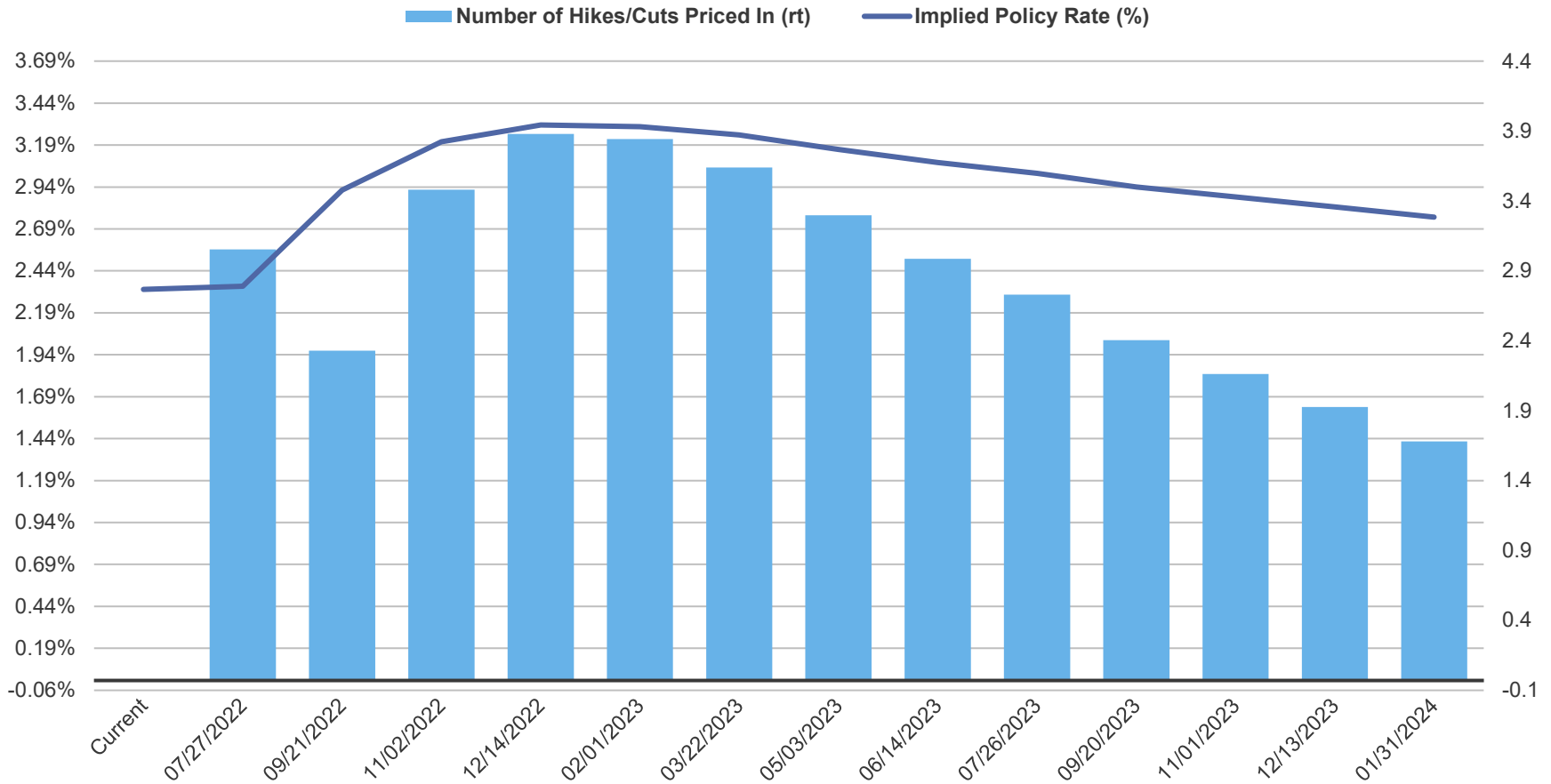


Source: Federal Reserve, March 2020—July 31, 2022.

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Market Is Pricing in 4 more Rate Hikes in 2022

Implied Federal Funds Rate



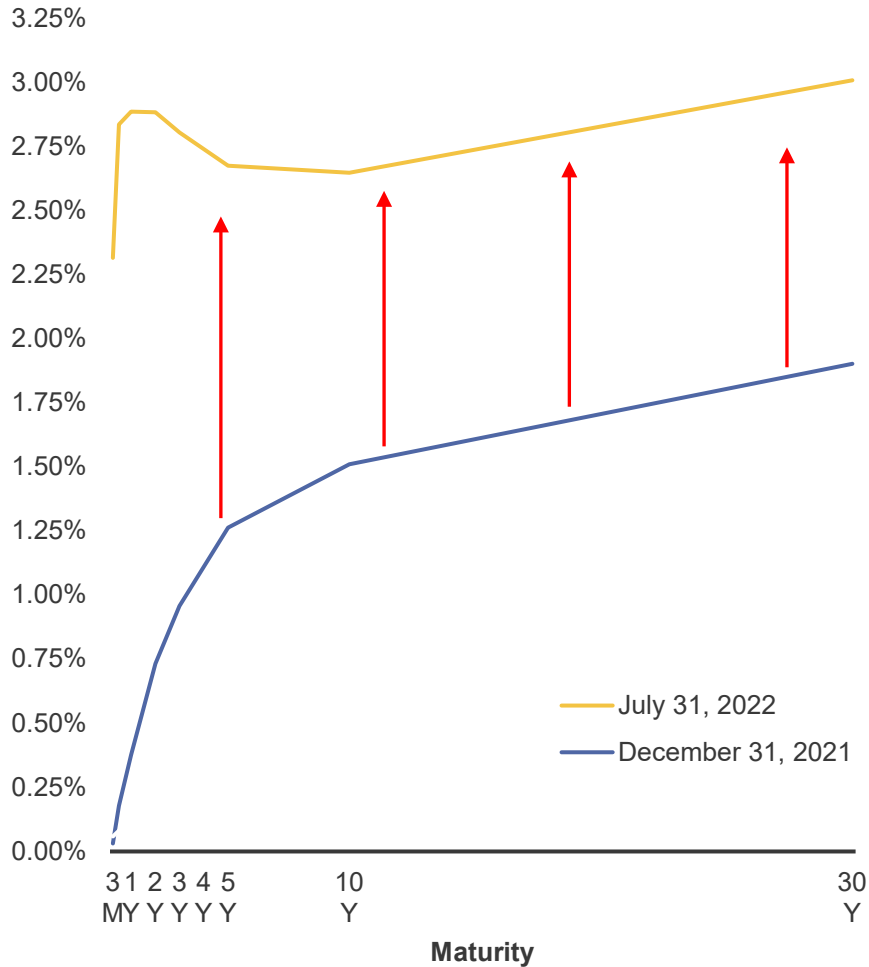
Source: Bloomberg, WIRP as of July 31, 2022.

1 rate hike equals to a 25 basis points increase in the upper limit of the federal funds target range.

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Higher Yields and a Flattening U.S. Treasury Yield Curve

U.S. Treasury Yield Curve



Maturity	12/31/2021	7/31/2022	Change
3-Mo.	0.03%	2.32%	2.29%
6-Mo.	0.18%	2.91%	2.73%
1-Yr.	0.38%	2.89%	2.51%
2-Yr.	0.73%	2.88%	2.15%
5-Yr.	1.26%	2.68%	1.42%
10-Yr.	1.51%	2.65%	1.14%
30-Yr.	1.90%	3.01%	1.11%

Source: Bloomberg, as of July 31, 2022.

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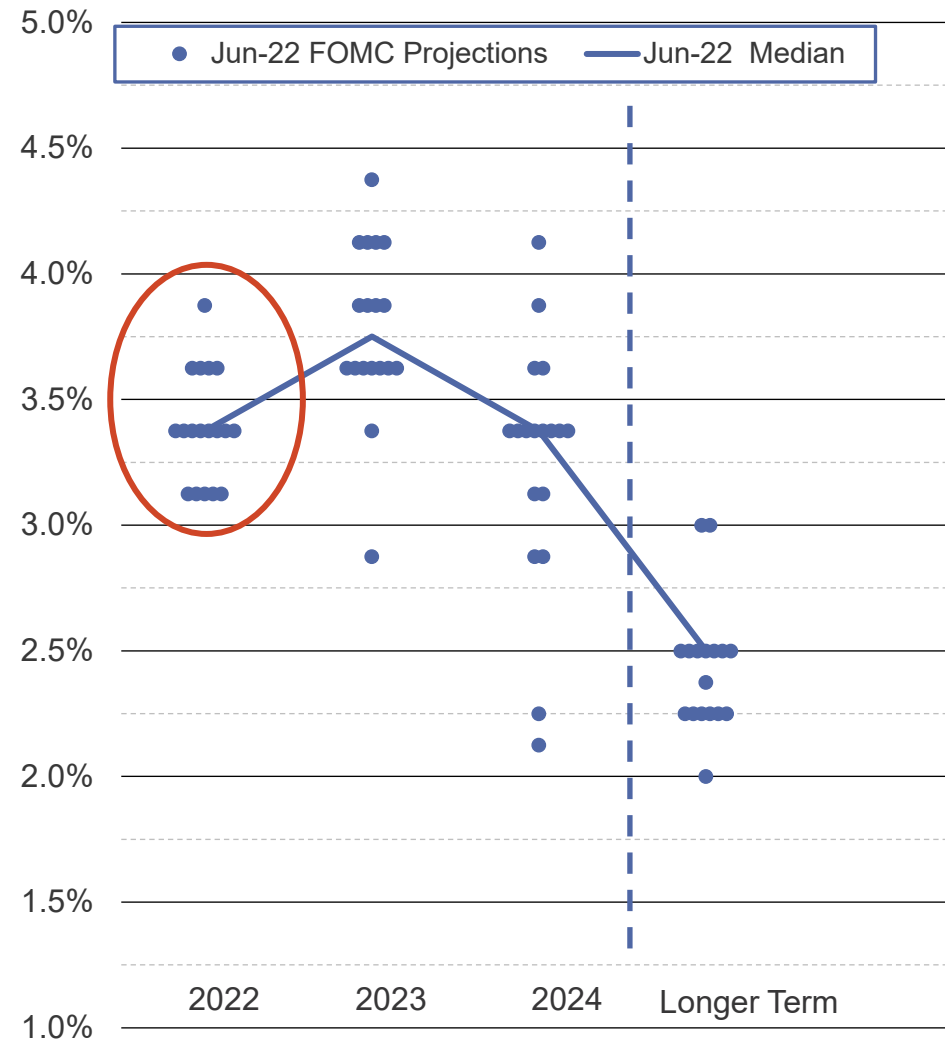
What The Fed is Telling Us

Federal Reserve's Changing Stance on Inflation and Monetary Policy

- ▶ **June 2021:** Widening dispersion between Fed participants' views on monetary policy as economy improves; more officials indicate rate lift-off is expected by end of 2023
- ▶ **September 2021:** Signals tapering of asset purchases could begin later in the year, but rates will remain near zero
- ▶ **November 2021:** Retires the term "transitory," announces tapering of bond purchases; signals 2-3 rate hikes in 2022
- ▶ **December 2021:** Announces accelerated tapering; sees three rate hikes in 2022
- ▶ **March 2022:** Expected completion of tapering; likely first rate hike
- ▶ **June 2022:** Raised the federal funds rate by 75 basis points, and continued reducing its holdings of treasuries, agency debt and agency mortgage-backed securities as inflation persists higher
- ▶ **July 2022:** Continues raising rates, hiked by 75 basis points in July, coupled with balance sheet reduction, the Fed reduced forward guidance role, and anticipates ongoing increases to the target range to be appropriate

Federal Reserve Officials Project at Least 4 Rate Hikes in 2022

Fed Participants' Assessments of 'Appropriate' Monetary Policy



Source: Federal Reserve and Bloomberg. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the federal funds rate at each year-end.

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Takeaways

- ▶ In March 2020, the Federal Reserve cut the fed funds target rate to 0%-0.25% to help the economy withstand the impacts of the coronavirus.
- ▶ Interest rates on securities with maturities under five years followed suit and sank to historically low levels.
- ▶ As the economy recovered from the COVID-19 induced recession, helped by unprecedented monetary and fiscal stimulus, it brought the U.S. economy to full employment coupled with inflationary pressures that are now moving rates higher.
- ▶ In July, the Federal Reserve raised interest rates 75 bps to the 2.25%-2.50% range in response to continued inflationary pressures impacting the economy.
- ▶ The market is now pricing in 4 more rate hikes in 2022, with the new dot plot projections pointing to a terminal rate of 3.40%.

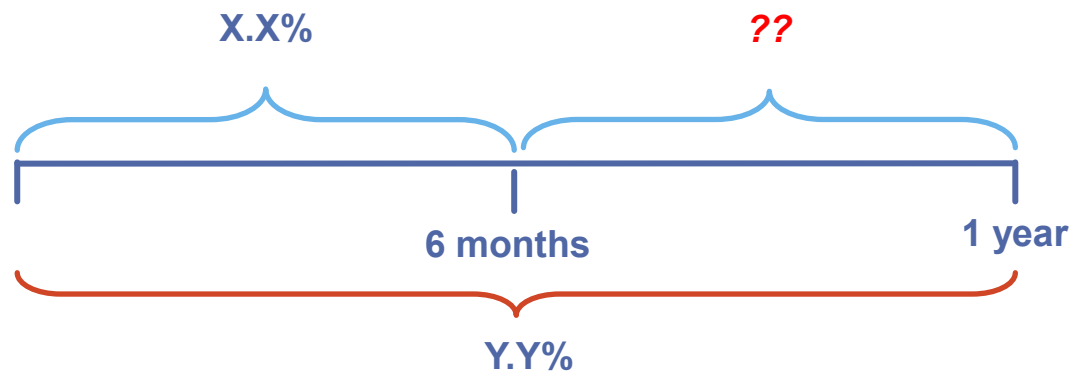
Investment Considerations in this Market Environment

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Introduction to Breakeven Analysis

- ▶ A breakeven analysis allows an investor to evaluate and compare two different maturity options
- ▶ This analysis shows how much short-term rates would have to move to “breakeven” with yields currently offered on longer-tenor investments.



What rate would you have to earn in the next 6 months to generate the same income as a 1 year investment today?

Breakeven Analysis – 12 Month Horizon

Investment	Treasury Yields		9-Month Change in 3 Months
3-Mo Treasury + 9-Mo Treasury	2.80%	3.45%	+0.29%
1-Yr Treasury	3.29%		

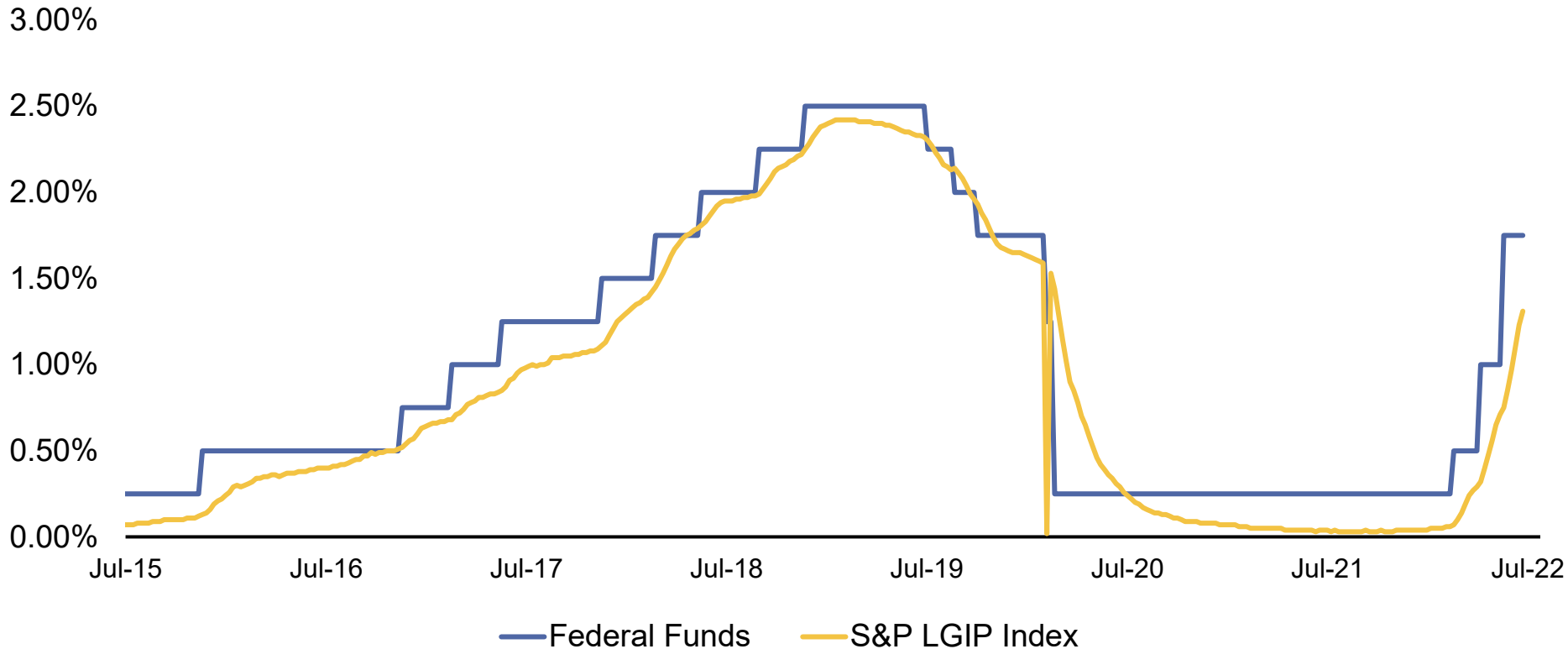
Investment	Treasury Yields		6-Month Change in 6 Months
6-Mo Treasury + 6-Mo Treasury	3.21%	3.37%	+0.16%
1-Yr Treasury	3.29%		

Investment	Treasury Yields		3-Month Change in 9 Months
9-Mo Treasury + 3-Mo Treasury	3.16%	3.68%	+0.88%
1-Yr Treasury	3.29%		

Case Study: Fed Funds Rates vs LGIP Yields During the Last Rate Hike Cycle

- ▶ Local Government Investment Pool (LGIP) yields follow the upward movement of the federal funds rate, but on a lagged basis. From March 2022 to May 2022, the Fed increased the federal funds rate two times and over that time, it took an average of **60 days** (about two months) before the full effect of the federal funds increase was reflected in the yield of the S&P LGIP Index.

Federal Funds vs. S&P LGIP Index



Source: Bloomberg, as of July 22, 2022, comparison based on the upper bound of the federal funds rate.

Takeaways

- ▶ Realized interest earnings will increase over time as new investments are added at higher interest rates.
- ▶ Overnight rates have historically taken longer to adjust to Fed rate hikes.
- ▶ The current steep nature of the 0–1 year section of the yield curve has created high breakeven rates required to match the current yields offered by longer-tenor securities.



Program Considerations

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Considerations for Governments in Investing Idle Funds



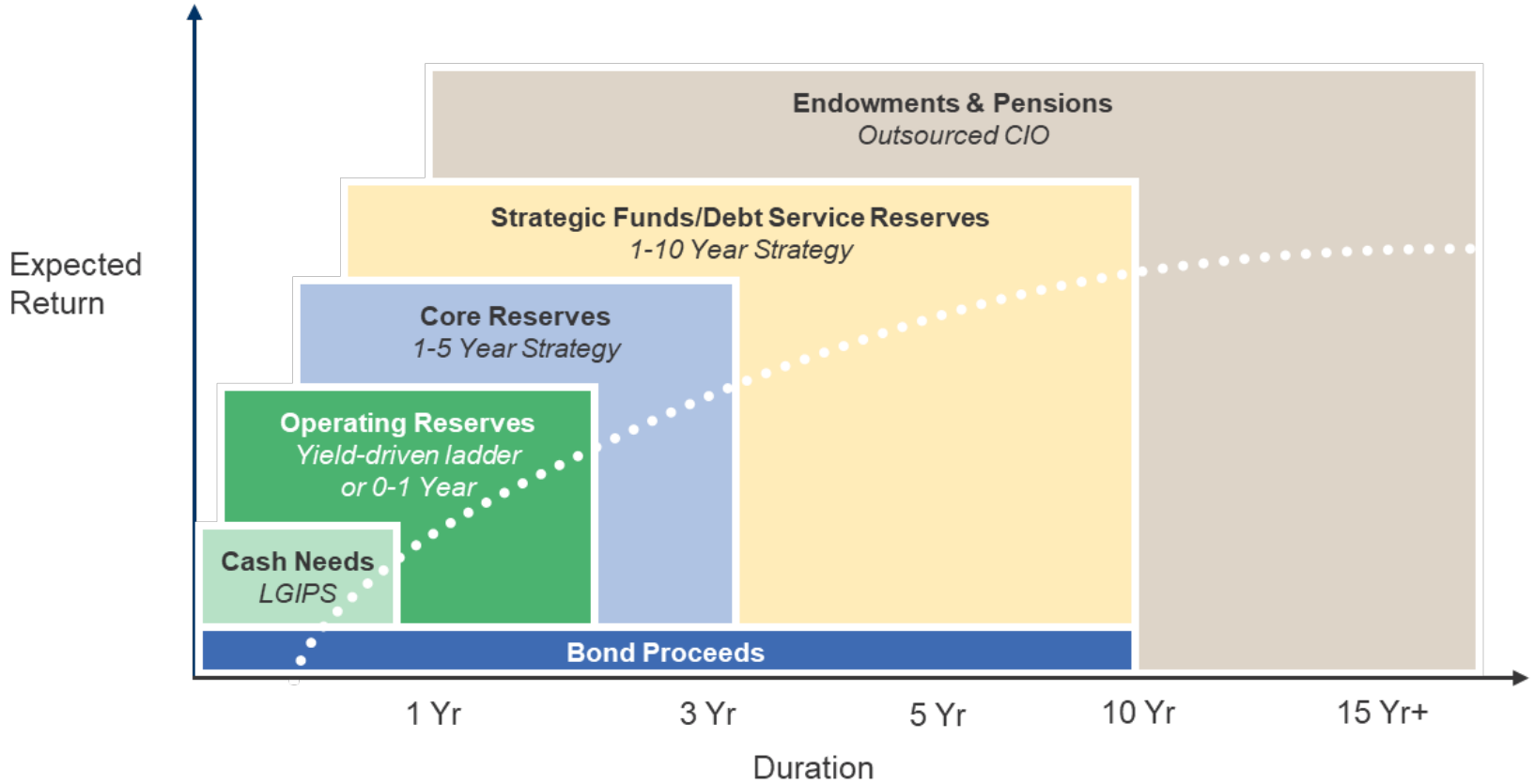
Components of a Strong Investment Policy

- Investment Objectives
- Standard of Prudence
- Delegation of Authority
- Ethics and Conflicts of Interest
- Authorized Investments
- Credit Rating Requirements
- Portfolio Diversification
- Maturity Guidelines
- Security Downgrades
- Collateralization of Bank Deposits
- Safekeeping and Custody
- Selection of Broker/Dealers
- Engagement of Investment Managers
- Competitive Selection of Investments
- Performance Standards and Reporting



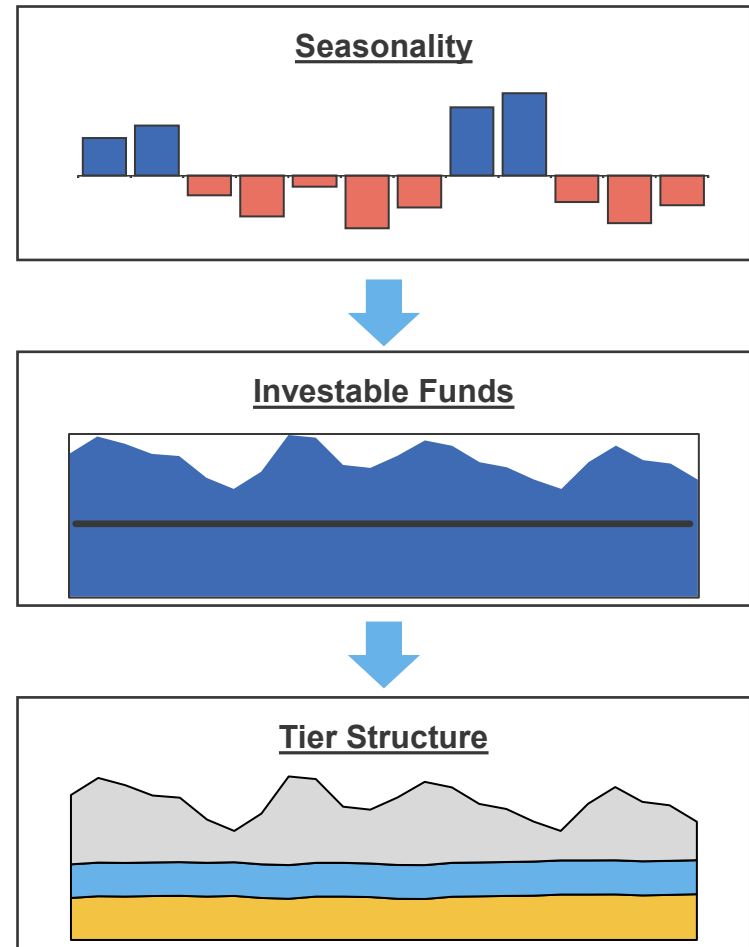
Different Investment Horizons for Different Funds

Typical Investment Time Horizons



Cash Flow Analysis Helps to Define Strategy

- ▶ Seeks to provide confidence in liquidity position
 - ▶ How much can be invested, how much needs to remain liquid
 - ▶ When and where are your stress points
- ▶ Assists with investment strategy development
- ▶ Potentially increase investment income while managing risk



Illustrative Cash Flow Analysis: Identifying Investable Funds

Liquidity

- Manage liquidity needs
- Lower-risk investment strategy
- Lower expected earnings
- Cash and equivalents (0-1 year)

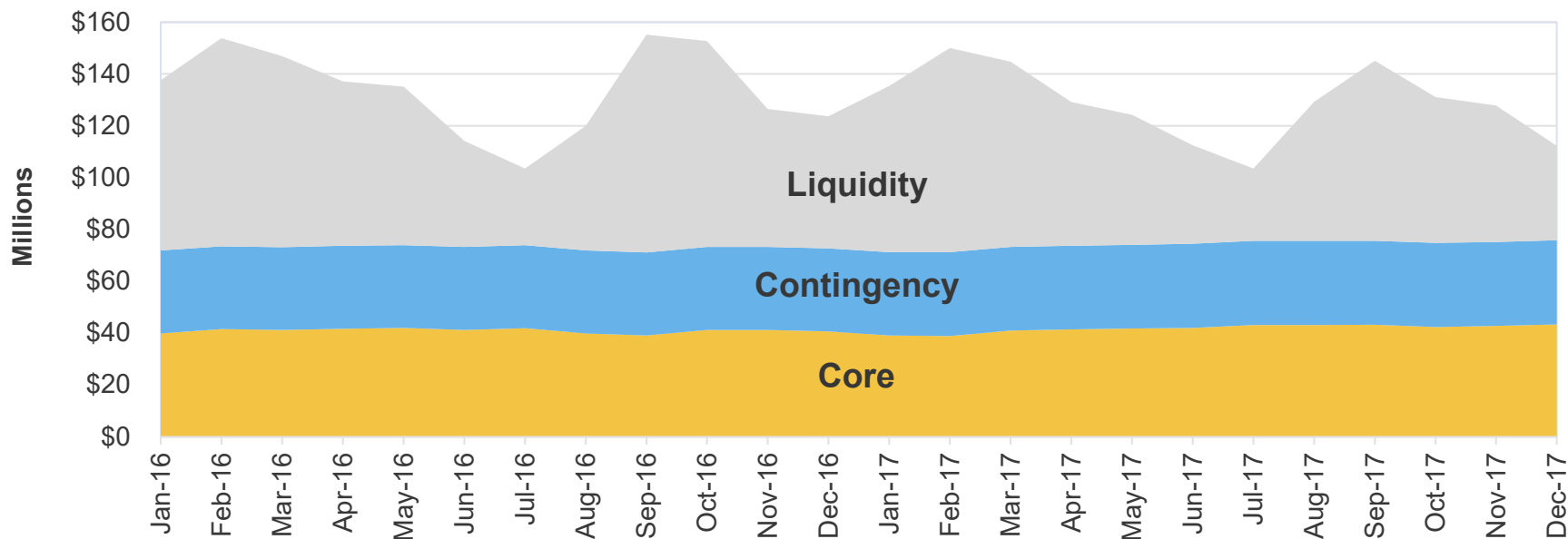
Contingency

- Supplement to Liquidity funds
- Highly liquid
- Potentially matched with liabilities
- High quality fixed income (enhanced cash strategy)

Core

- Reserve funds not expected to be spent for the foreseeable future
- More volatile
- Long-term fixed income

Sample Cashflow Analysis



Understanding Your Options

Sectors	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont
U.S. Treasuries	✓	✓	✓	✓	✓	✓
Federal Agency	✓	✓	✓	✓	✓	✓
State and/or Local Government	✓	✓	✓	✓	✓	✓
Supranationals	✓	✓	Not Permitted	✓	Not Permitted	✓
Repurchase Agreements	✓	✓	Not Permitted	✓	✓	✓
Bankers' Acceptance	Not Permitted	✓	Not Permitted	✓	Not Permitted	✓
Certificates of Deposit	Not Permitted	✓	Not Permitted	✓	✓	✓
Commercial Paper	Not Permitted	✓	✓	✓	Not Permitted	✓
Corporate Notes	Not Permitted	✓	✓	✓	Not Permitted	✓
Securitized Bonds	Not Permitted	Not Permitted	Not Permitted	✓	Not Permitted	Not Permitted
Local Government Investment Pools	✓	✓	✓	✓	✓	✓
Money Market Fund	✓	✓	✓	✓	✓	✓

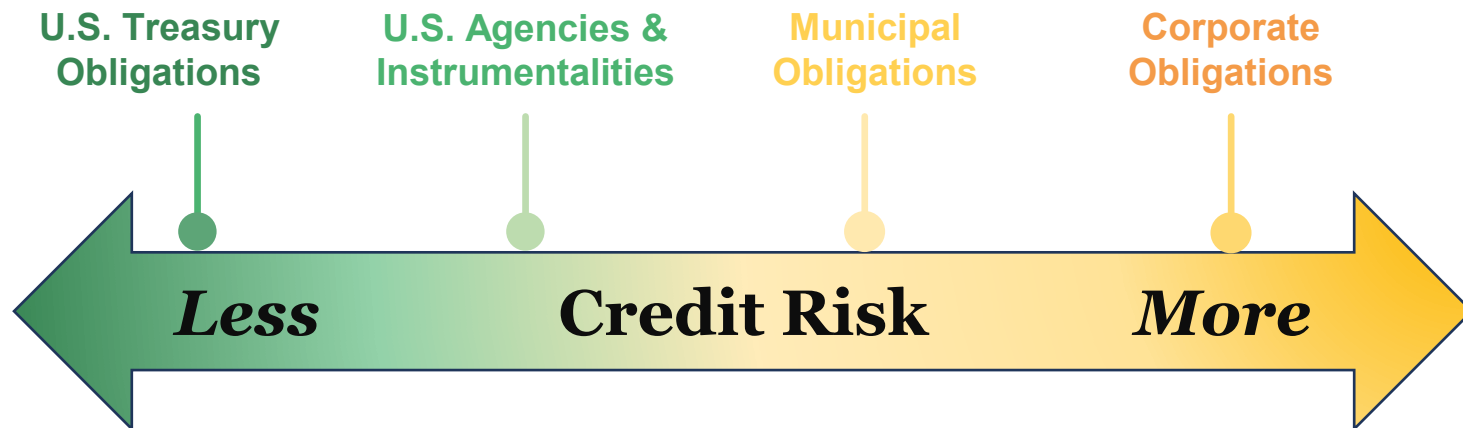
Risk Management

- ▶ Evaluate risk exposure – credit, liquidity, and interest rate risk
- ▶ Determine the appropriate risk/return balance based on the fund's investment objectives
- ▶ Diversify investments by type and by maturity



Risk of default or decline in security value due to conditions outside investor's control

- ▶ Bankruptcy, Rating Agency downgrades, Regulatory changes

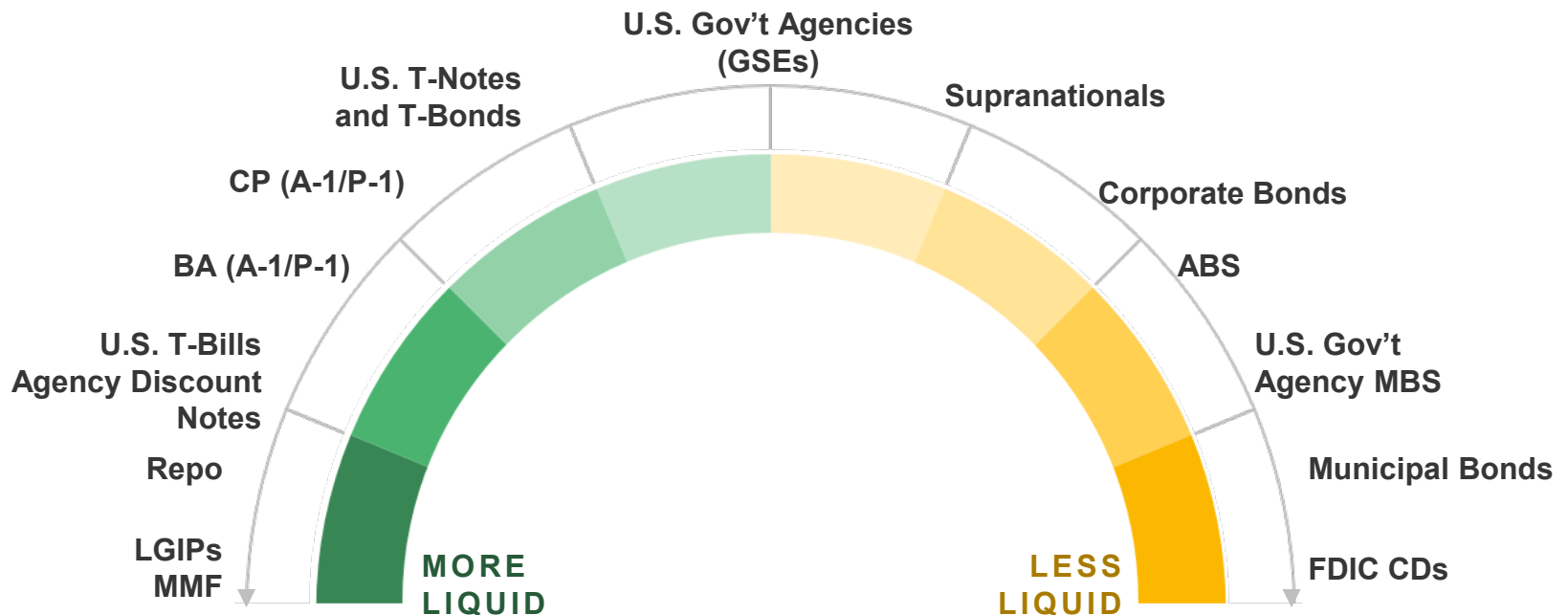


- ▶ Nationally Recognized Statistical Rating Organizations (“NRSRO”)
 - ▶ Designated by the SEC
- ▶ Largest and most active NRSROs: *Moody’s, S&P Global Ratings, Fitch Ratings*

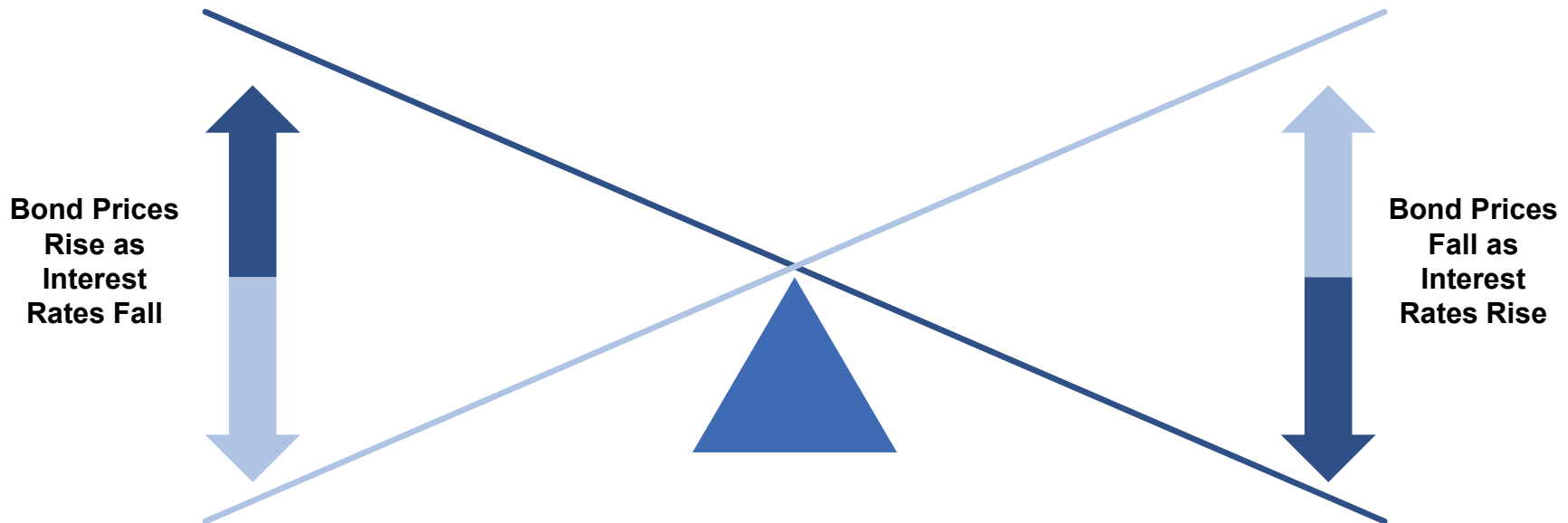
S&P/Fitch	Moody’s	Explanation
AAA	Aaa	High quality. Smallest degree of investment risk
AA	Aa	High quality. Differs only slightly from highest-rated issues.
<hr style="border-top: 1px dashed black;"/>		
A	A	Adequate capacity to pay interest and repay principal.
BBB	Baa	More susceptible to adverse effects of changes in economic conditions.
BB	Ba	Has speculative elements; future not considered to be well-assured.
B	B	Generally lack characteristics of desirable investment.
CCC	Caa	Poor standing. Vulnerability to default.
C	C	Extremely poor prospects.
D	D	In default

The risk that portfolio holdings lack marketability and cannot be bought or sold quickly

- ▶ Substantial penalty for earlier withdrawal
- ▶ Capital losses if interest rates have gone up



- Prices and interest rates are related
- Market values and rate movements are inversely related (normally)
- Longer maturity = Greater risk



Estimated Price Change = Inverse of Yield Movement times Duration

Takeaways

- ▶ Governments should consider risk tolerance, budgetary constraints, liquidity, and the full-range of permitted investments in developing an impactful investment program.
- ▶ Identifying seasonal cash flow patterns can assist investors in determining “core balances” that can be invested further out the yield curve.
- ▶ Fixed-rate, fixed-term investments can be matched to expected liquidity needs to help maximize an investor’s returns.



Thank You!

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