The effects of the post-COVID inflation and the Federal Reserve's policy tightening response on financial markets

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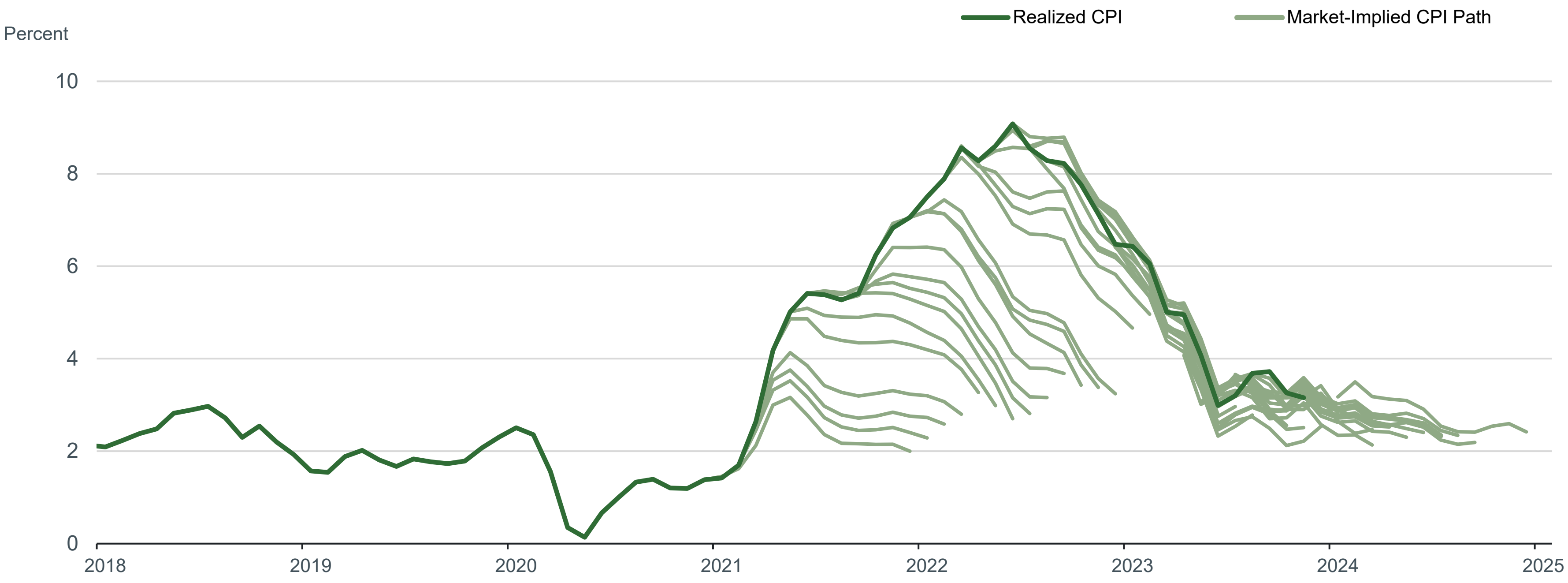
The extent and duration of the recent high inflation notably exceeded market implied expectations and most forecasts

1

Realized vs. Market-Implied Headline CPI
(Year-on-Year)



Note: Market-implied CPI paths calculated from CPI fixings market.
Source: Bloomberg L.P., Bureau of Labor Statistics

The process of moving to a less accommodative stance began with communication and slowing asset purchases

2

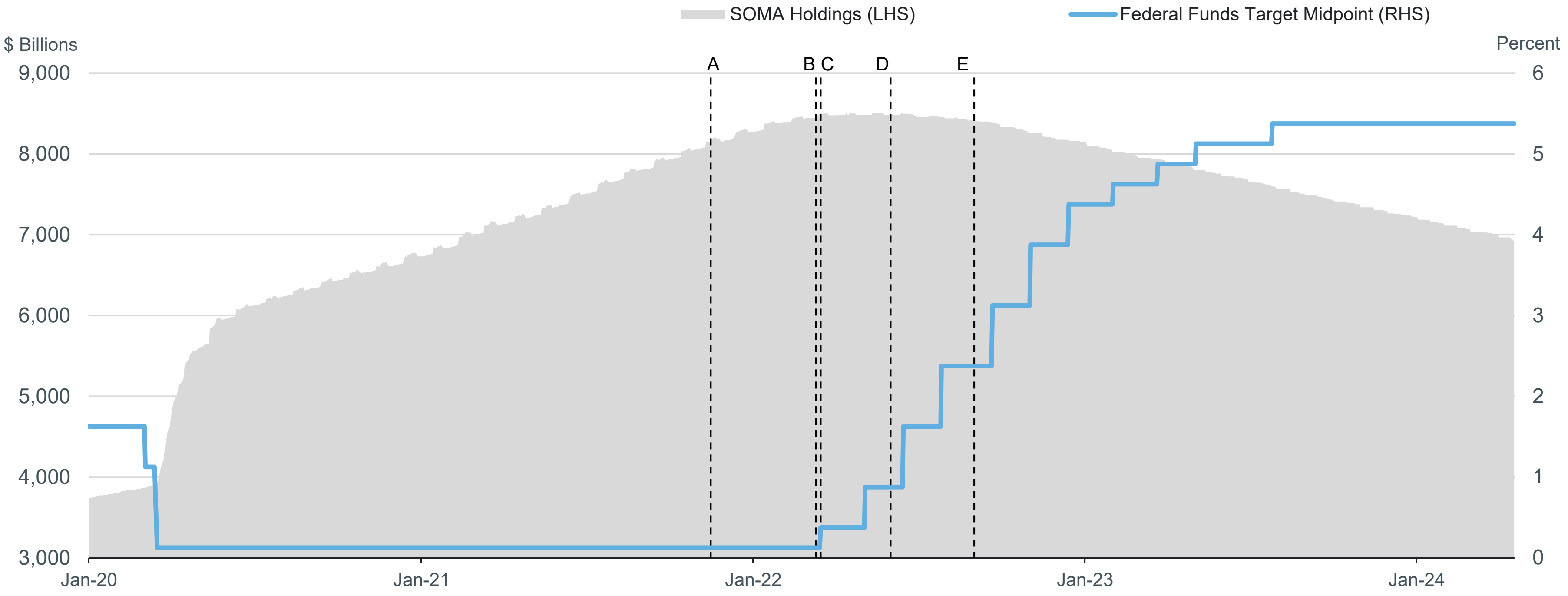
Select Federal Reserve Balance Sheet Communications and Actions

September 22, 2021	Announce moderation in pace of asset purchases may soon be warranted
November 3, 2021	Announce reduction in pace of asset purchases
December 15, 2021	Accelerate reduction in pace of asset purchases, implying end in early March
January 26, 2022	Release "Principles for Reducing the Size of the Federal Reserve's Balance Sheet"; confirm end of asset purchases in early March
March 16, 2022	Begin Policy Rate Tightening
May 4, 2022	Release "Plans for Reducing the Size of the Federal Reserve’s Balance Sheet"; announce balance sheet reduction to begin in June
June 1, 2022	Implement securities redemptions, subject to monthly caps
September 1, 2022	Increase monthly redemption caps

Rate hikes began in March 2022, soon after QE ended. The pace was initially moderate, then accelerated, and later moderated again in response to inflation.

3

SOMA Holdings and Federal Funds Target Midpoint



Note: A: Implementation of Asset Purchase Tapering, B: End of Asset Purchases, C: Policy Rate Liftoff, D: Start of Redemptions, E: Increase of Redemption Caps. Includes inflation compensation on TIPS holdings.
Source: Board of Governors of the Federal Reserve System

The rate hiking cycle that started in March 2022 was the most aggressive in decades

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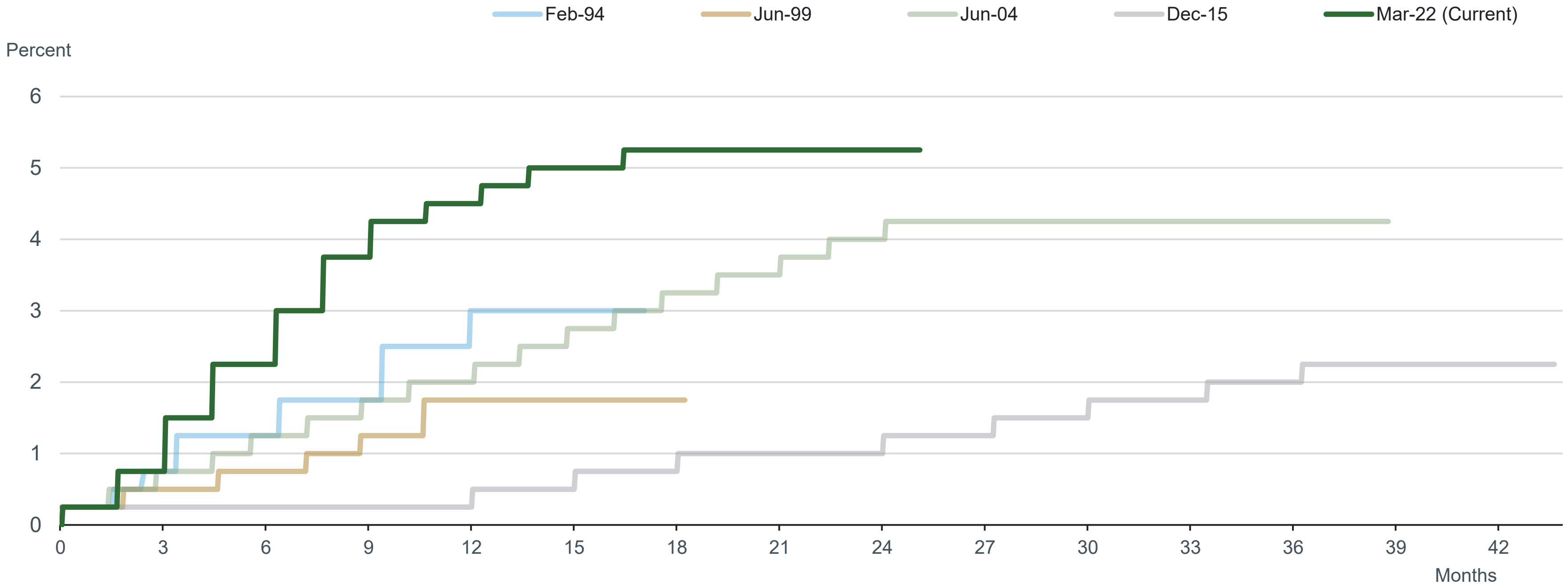
Cumulative Change in Federal Funds Rate During Select Hiking Cycles



Note: For prior cycles, chart shows cumulative change from start of policy rate tightening to first cut.
Source: Board of Governors of the Federal Reserve System

Shorter-dated yields rose in anticipation of tighter policy. Longer-dated yields also rose, but by a lesser amount, and the yield curve inverted significantly.

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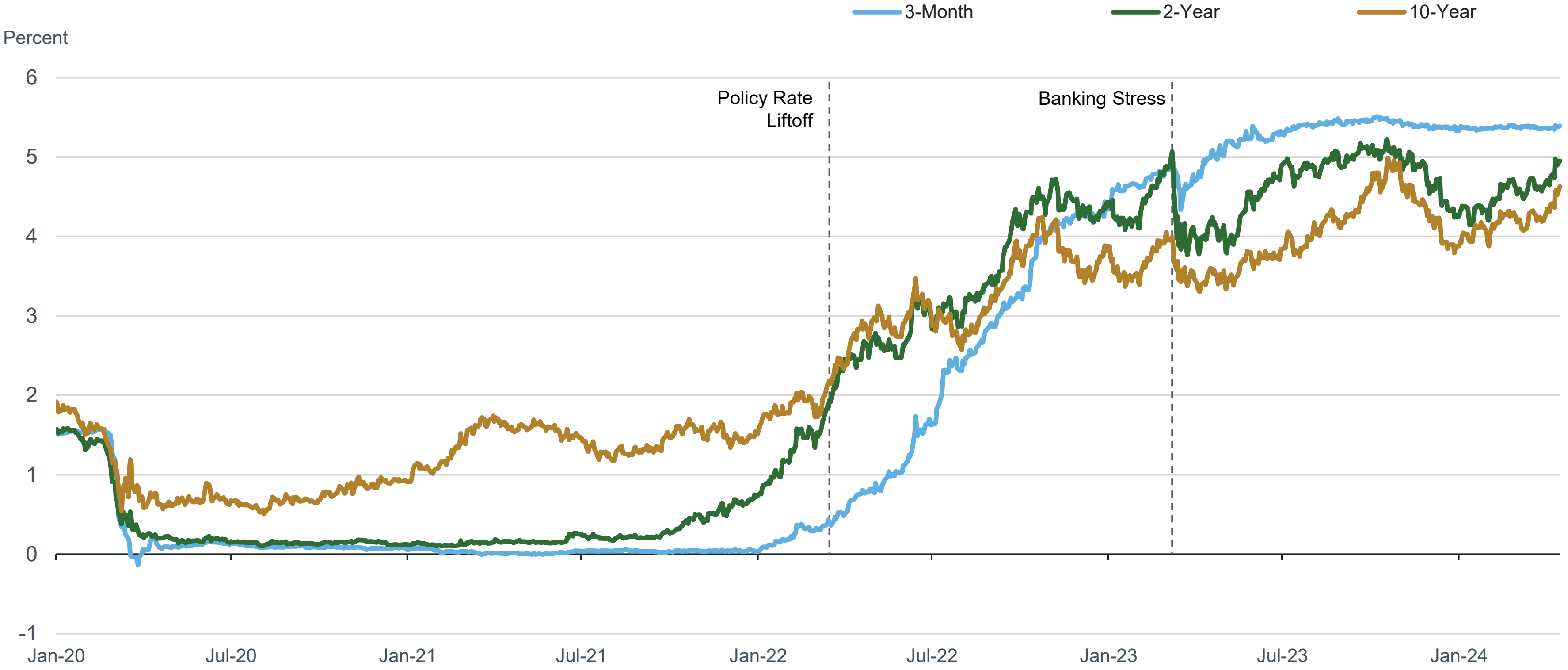
Nominal U.S. Treasury Yields



Source: Bloomberg L.P.

Near-dated inflation compensation was volatile, largely tracking changes in actual inflation. Forward measures remained consistent with the Fed's target.

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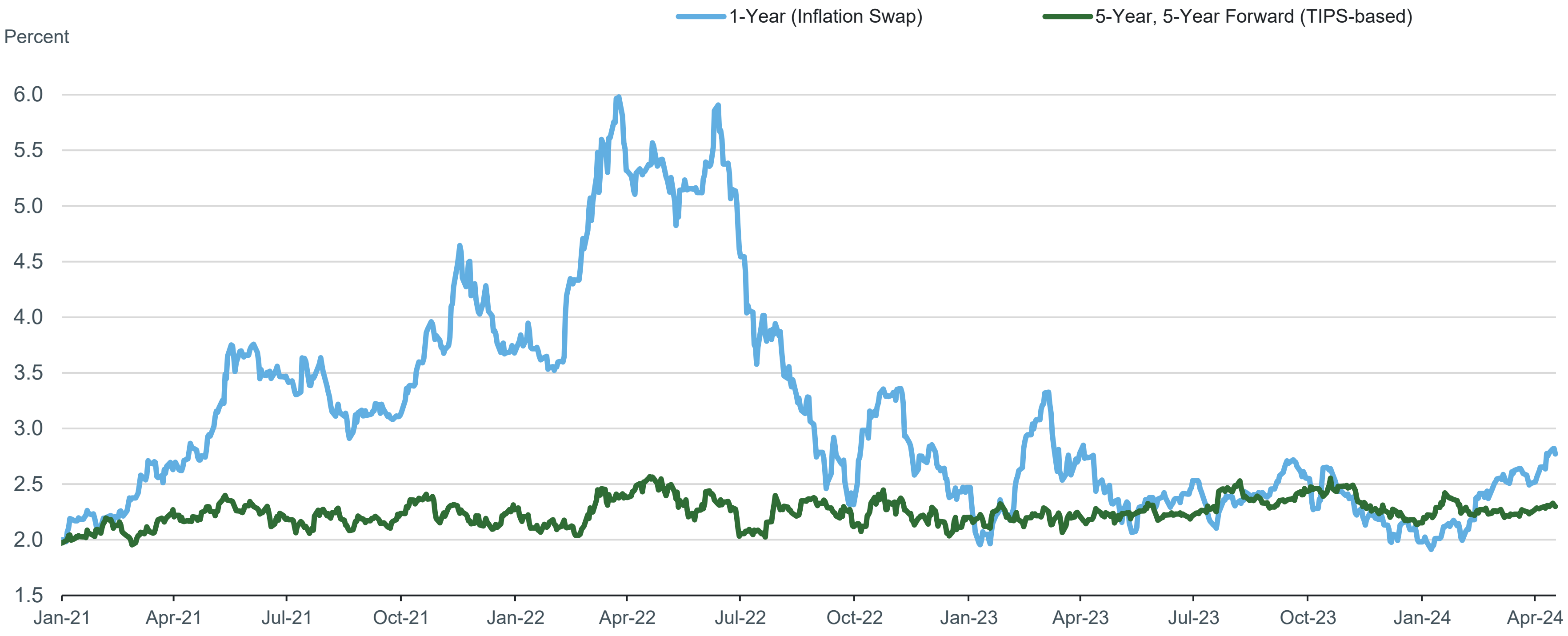
Inflation Compensation



Source: Bloomberg L.P.

Implied interest rate volatility rose notably. Treasury market liquidity was challenged but overall was consistent with the elevated levels of volatility.

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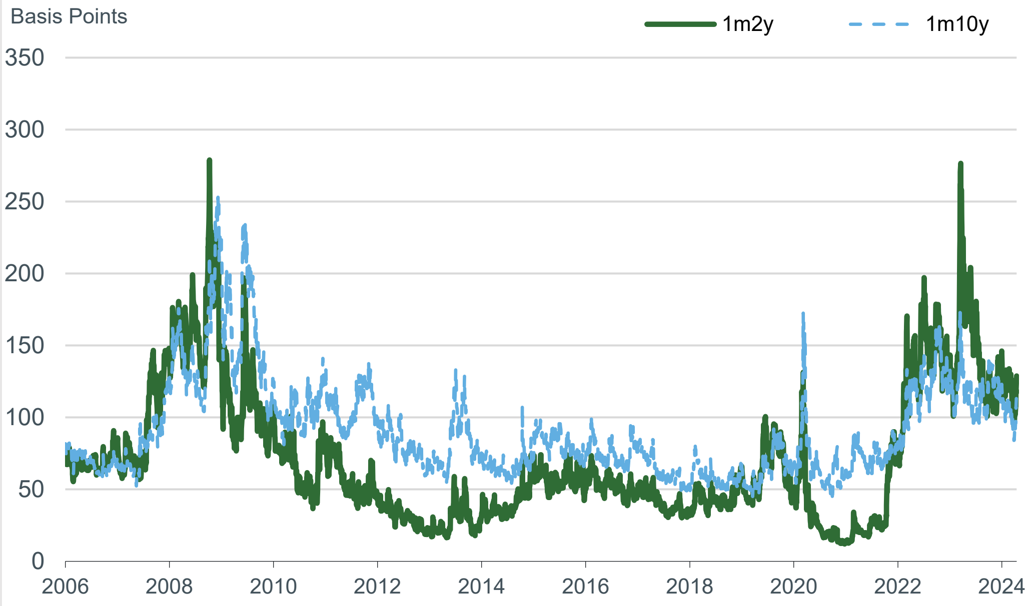
Swaption-Implied Interest Rate Volatility



Source: Bloomberg L.P., J.P. Morgan

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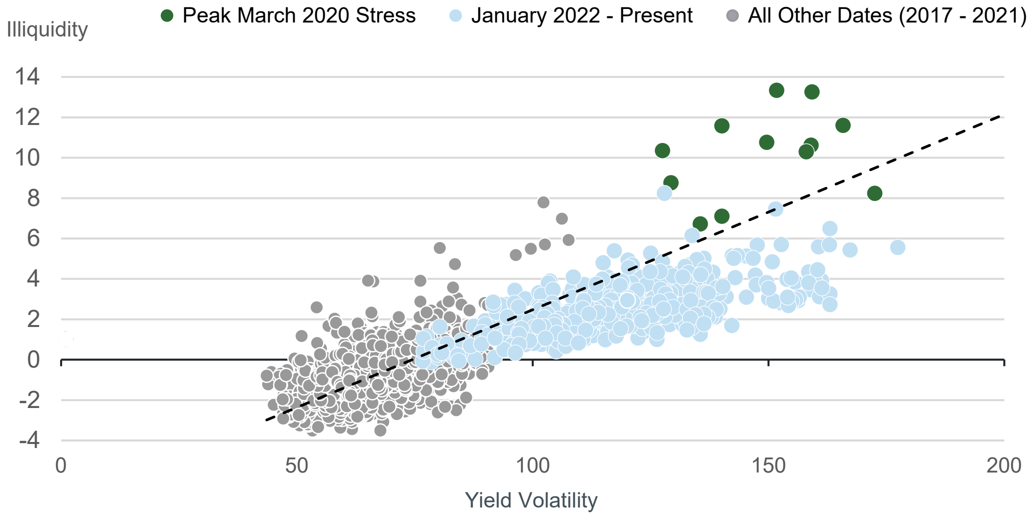
10-Year Treasury Illiquidity versus Volatility: 2017 to Present



Note: The illiquidity index for the 10-year Treasury note is constructed using principal component analysis using a variety of liquidity metrics calculated from BrokerTec data. The index itself is the first component (PC1). SOFR-based implied 1M10Y volatility is used for data from 8/6/2021 onwards; LIBOR-based implied volatility is used earlier.
Source: Bloomberg L.P., CME Group Inc. (BrokerTec), FRBNY Staff Calculations

Overall financial conditions tightened at a rapid pace. Still, the transmission of tighter policy varied across markets and economic sectors.

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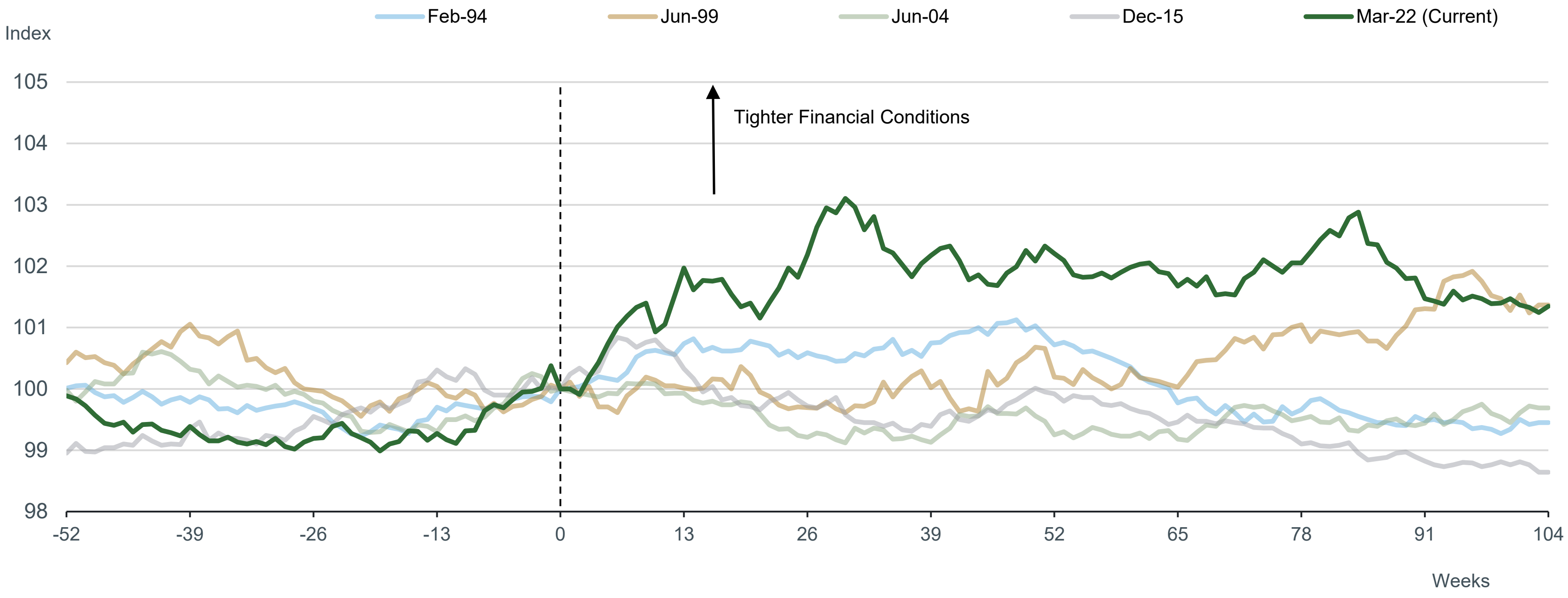
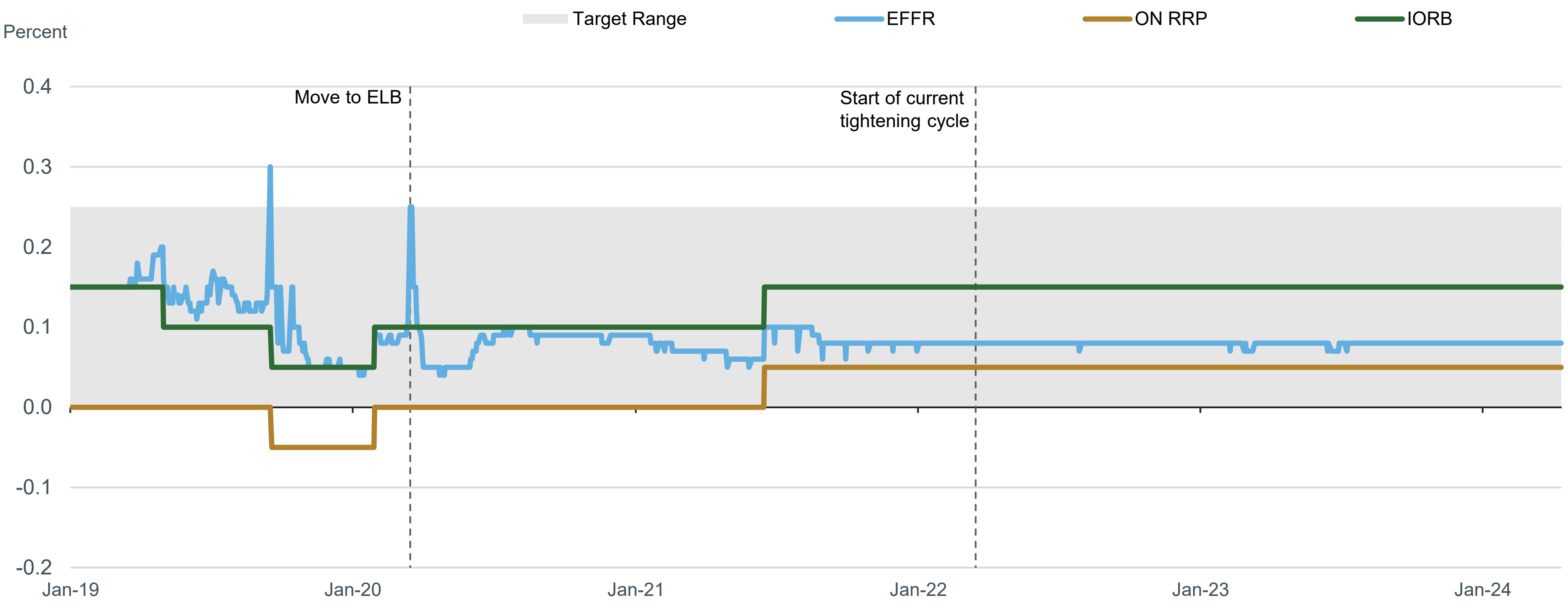
Goldman Sachs FCI During Select Hiking Cycles



Note: Zero indicates the week of the first rate hike in each tightening cycle. FCI re-indexed to 100 at start of each cycle.
Source: Goldman Sachs

The Fed's policy implementation framework worked well. Rate control remained very strong, with the fed funds rate always within the target range.

Administered and Overnight Rates (Spread to Bottom of Target Range)



Source: Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York