Financial shocks in an uncertain economy

Lessons from recent experiences in macroeconomic forecasting

ECB Forum on Central Banking, Sintra

The views in this paper are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Dallas or the Federal Reserve System. Any errors or omissions are the responsibility of the author.

Federal Reserve Bank of Dallas

Chiara Scotti

June 28, 2023

The past 15 years: Collection of rare events

- The GFC reminded us of the importance of a stable financial system to a well-functioning economy, one with low and stable inflation and maximum employment
  - The recent banking stress made us ponder on this issue again

- The pandemic was a huge shock surrounded by uncertainty, making any reasonable point forecast within traditional models difficult

- More recently, there has been a continuous talk of the risks to the economic outlook (i.e. the war in Ukraine), and the probability of a soft landing versus a deeper recession

This presentation

- I draw some lessons through the lens of a recent paper with Dario Caldara and Molin Zhong
  - To understand the link between macro and financial sides
  - To study the role of uncertainty and tail risk

- I conclude with a couple of take-home messages for policymakers and forecasters

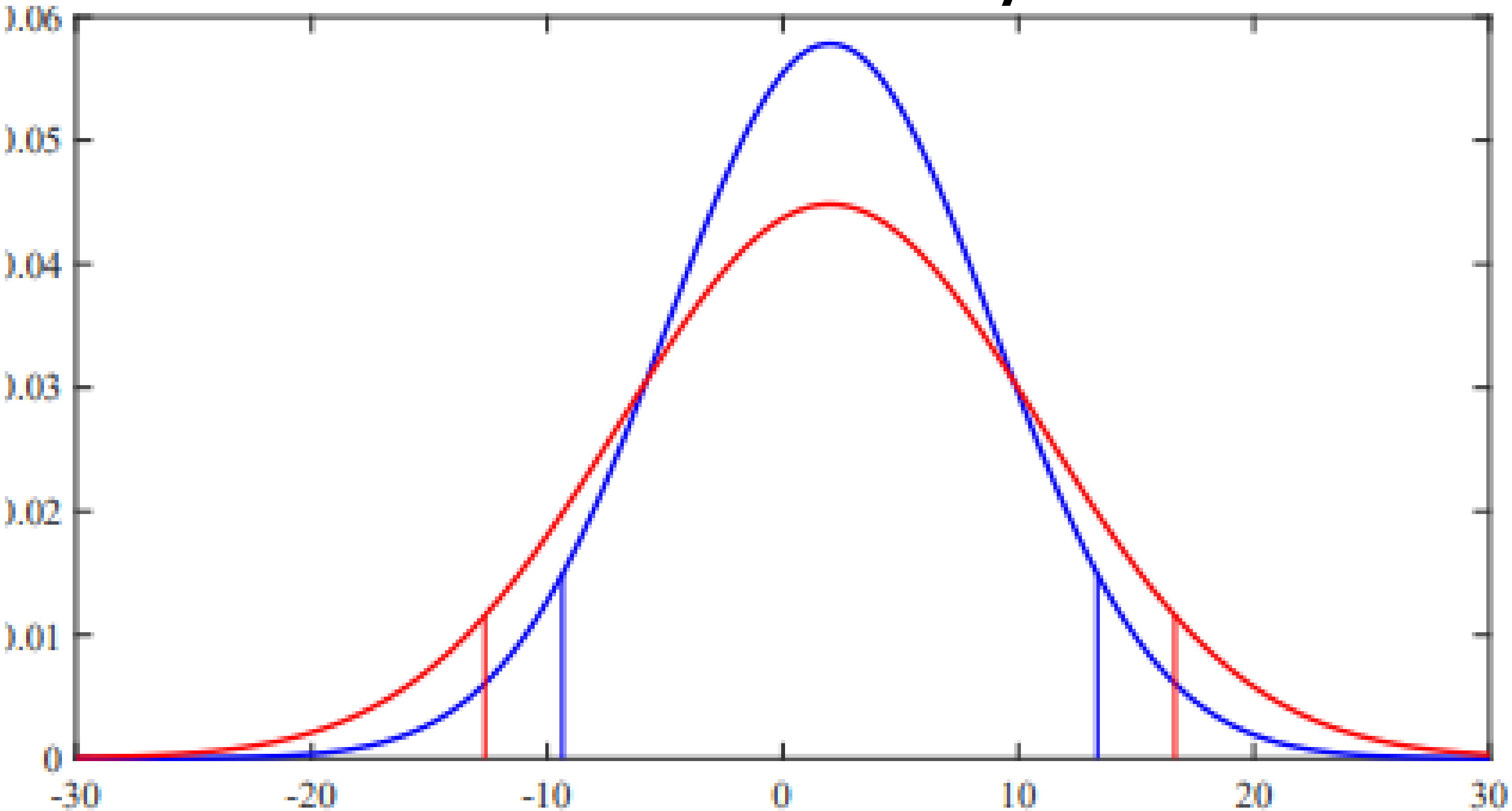
Caldara, Scotti and Zhong 2023

- We use data on GDP (macro side) and corporate credit spreads (financial side) to quantify the evolution over the business cycle of uncertainty and tail risk to the forecasts (through a SV-VAR model)

- We look at U.S. 1960-2020, but methodology can easily be applied to other countries such as EA

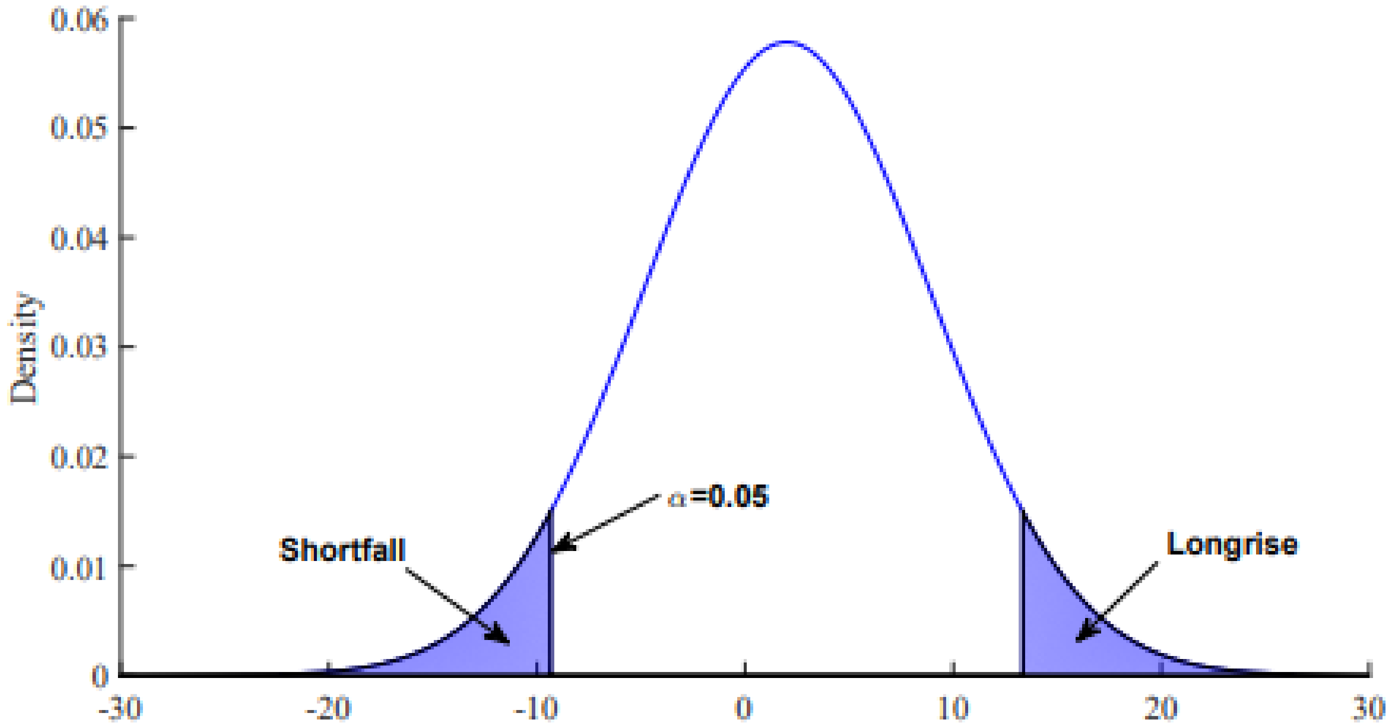
- I will next define what I mean by uncertainty and tail risk

Uncertainty



- Standard deviation of the conditional distribution of future realizations
- Higher uncertainty ➔ more realizations away from the mean

Tail Risk: Shortfall and Longrise



- Size and location of the tails of the distribution
- Higher tail risk/tails more far apart ➔ extreme events more likely

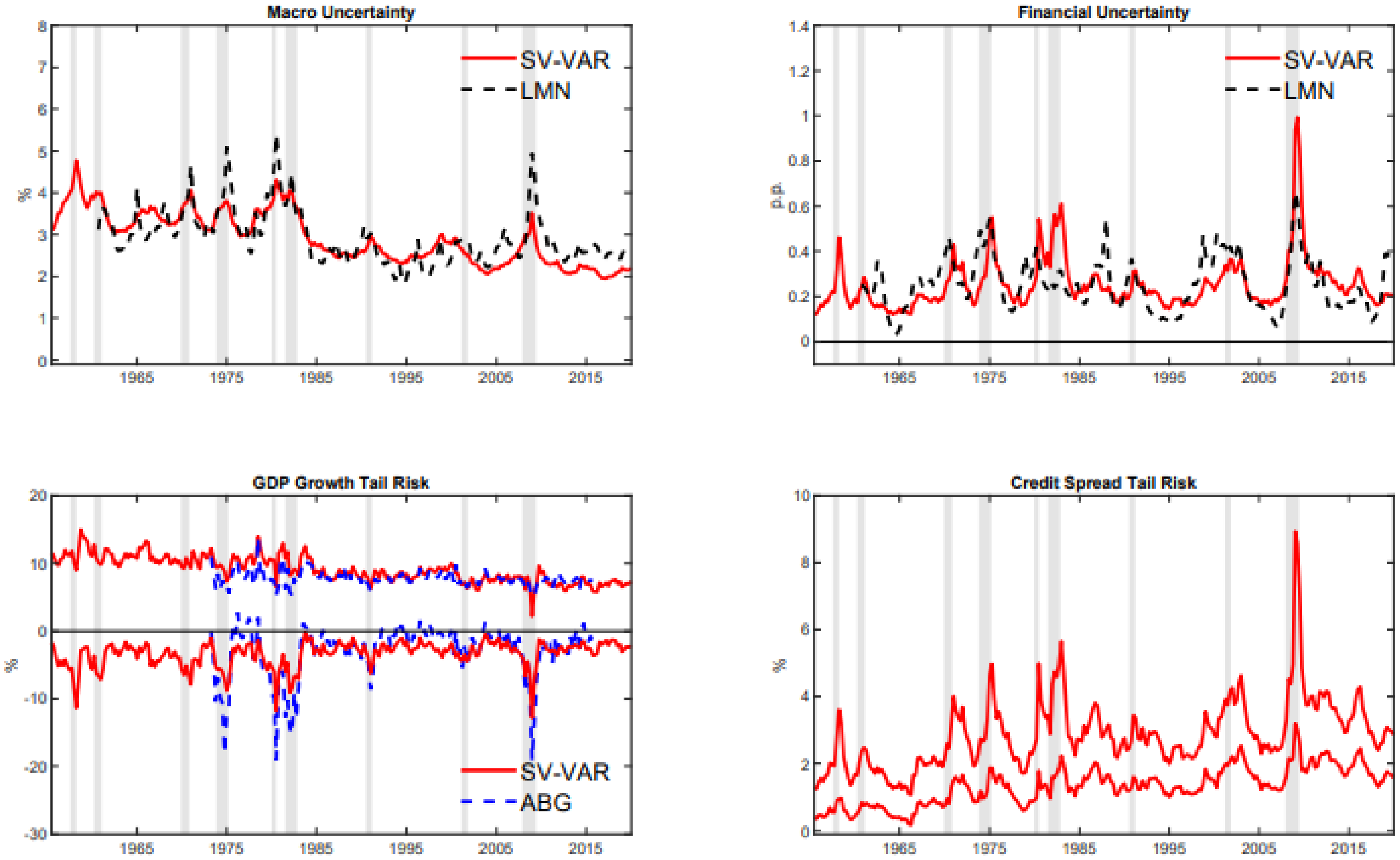
What Lessons?

1. Uncertainty and tail risk have cyclical variation

2. Financial shocks (not just macro shocks) have big downside risk to the macro outlook

3. The effects of shocks are stronger in periods of high volatility

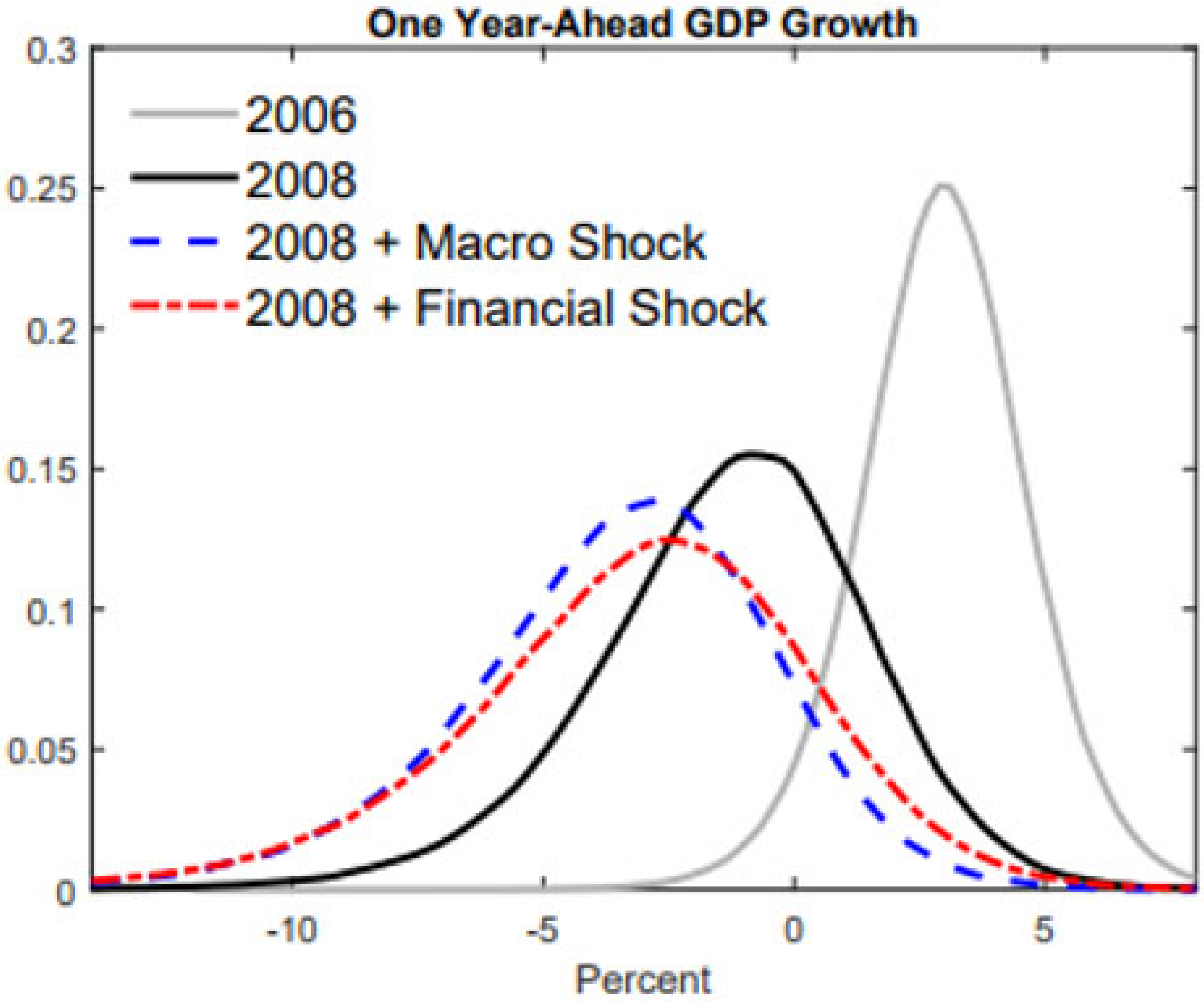
Lesson 1: Uncertainty/tail risk have cyclical variation



Uncertainty spikes during recessions…

…and GDP shortfall (negative outcomes) moves more than longrise (positive outcomes)

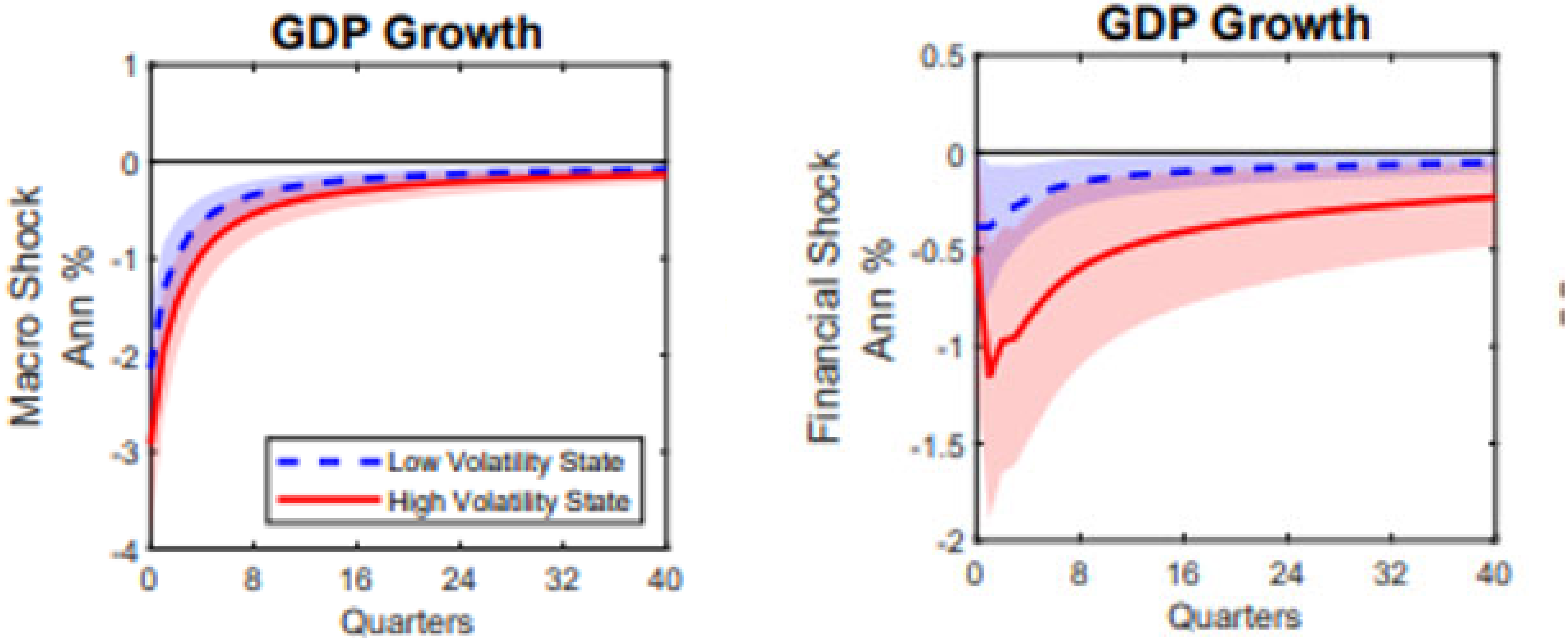
Lesson 2: Financial shocks have big downside risk to economy



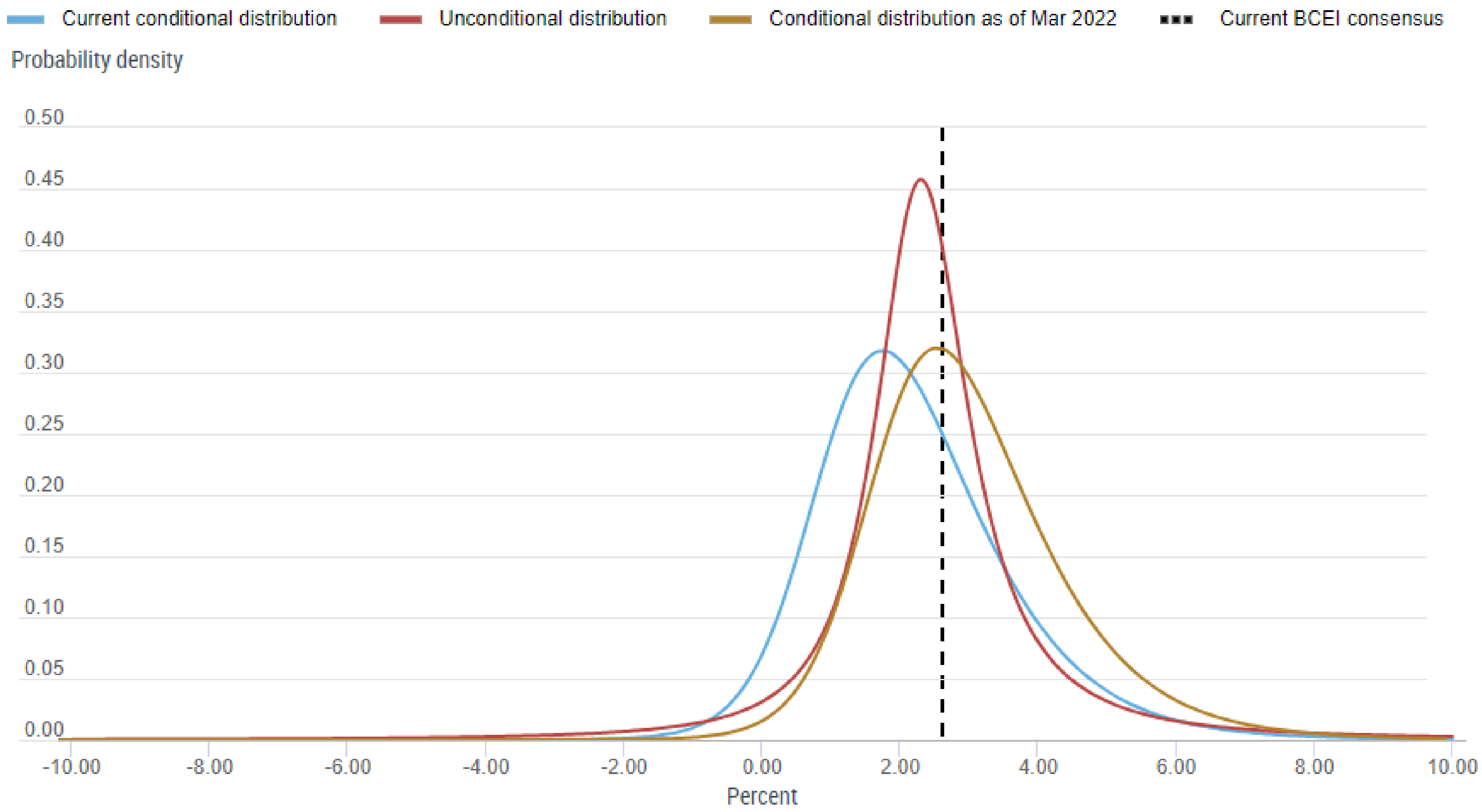
- Adverse financial shocks (not just macro shocks) move future GDP growth

- Financial shocks create increased uncertainty and downside risk, but a small reduction in upside risk

Lesson 3: Stronger effects when vol is high



Quick Digression: CPI Inflation at risk



Sources: Wolters Kluwer's Blue Chip Economic Indicators, Bureau of Labor Statistics, European Central Bank, authors' calculations.
Outlook at Risk, Federal Reserve Bank of New York

Lessons for policymakers and forecasters?

1. Policymakers and forecasters need to be mindful of the impact financial shocks could have on the economy

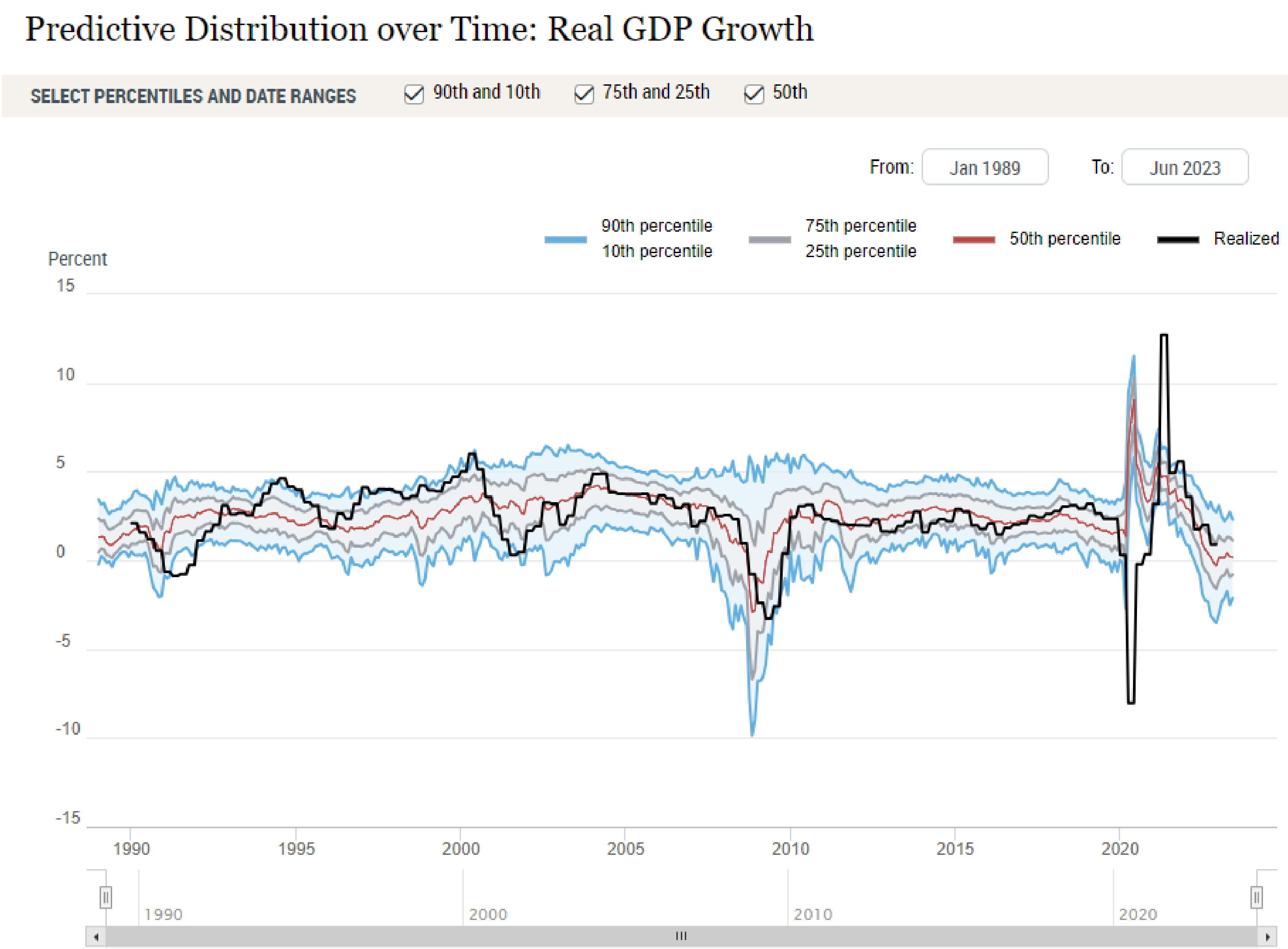
- Stubbornly high inflation and recent failures of banks in US and Europe have increased uncertainty for the outlook
- So far, disconnect between credit tightening and corporate risk premia
    - Normally, increase in lending standards index associated with higher risk premia and deterioration in macro outcomes
    - First link has been much more muted recently calling into question the strength of the second link

2. Monetary policy and financial stability tools are not in conflict

- Shocks that generate on one side can propagate and amplify risks on the other side.
- Effects of both macro and financial shocks higher in periods of high volatility
- Important to think of ways to limit financial market volatility
  - Macropru tools and liquidity tools for risks related to financial sector

APPENDIX

Latest Release: 10:00 a.m. ET June 21, 2023



Sources: Wolters Kluwer's Blue Chip Economic Indicators; Federal Reserve Bank of Philadelphia; European Central Bank; authors' calculations.

Outlook-at risk, Federal Reserve Bank of New York