An Overview of U.S. Monetary Policy

XV Meeting of Monetary Policy Managers: Monetary Policy in EMEs, Current Challenges

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* The views are my own and do not necessarily reflect the views of the Federal Reserve Board or the Federal Reserve System.

Outline

1. A close look at a key component of the policy toolbox at the effective lower bound: Large scale asset purchases
   - Framework and empirical assessment

2. Review of the Federal Reserve's Monetary Policy Framework
   - Severity of the ELB problem and potential solutions

Asset Purchases: Framework

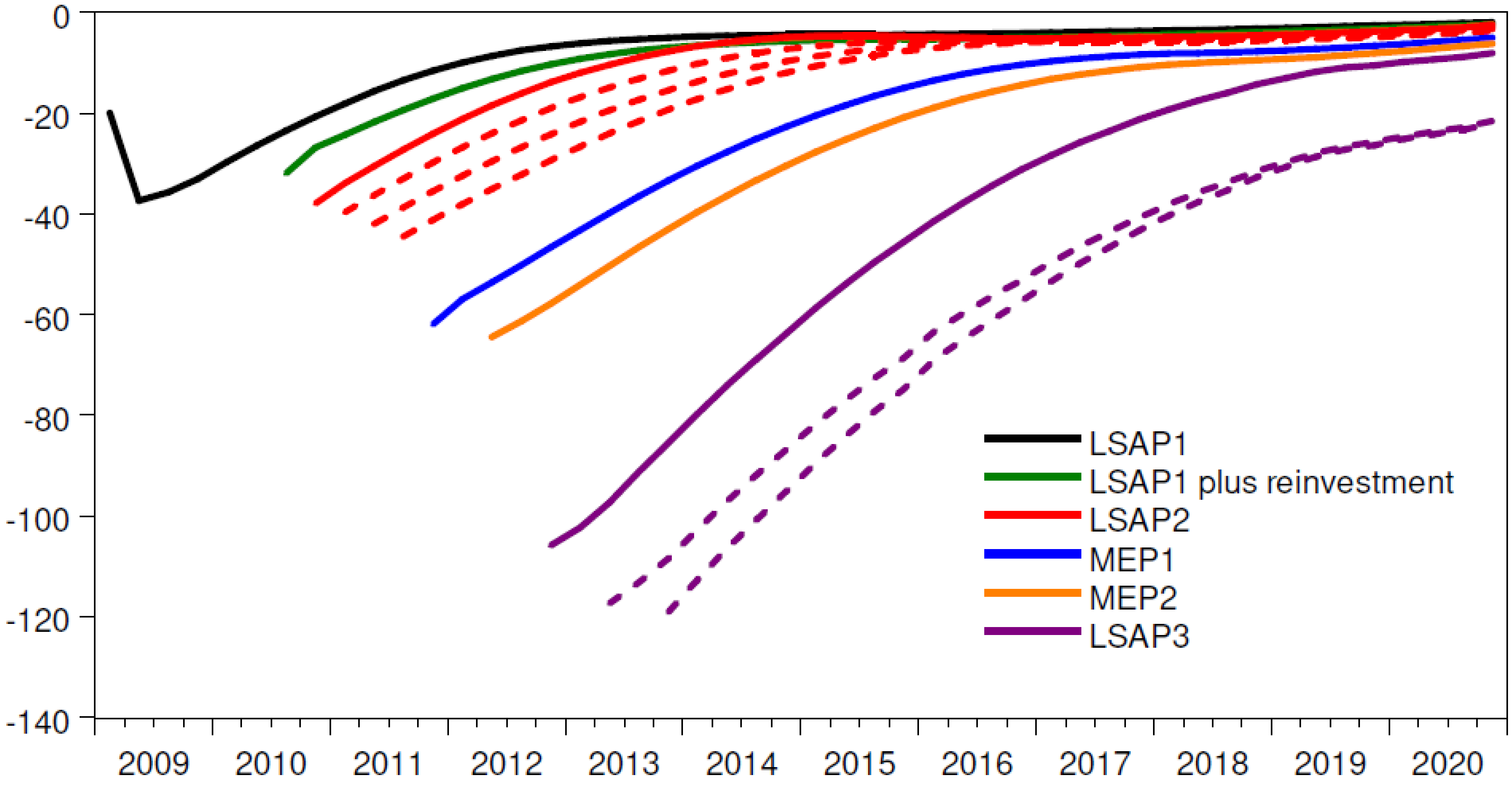
- Long-term interest rate = Expected short rates + Term Premium
  - ➢ Term premium: Compensation for bearing macroeconomic risk
- Staff's preferred-habitat model of the yield curve
  - ➢ Two types of investors: preferred-habitat and arbitrageurs (implementation: Federal Reserve and private investors)
- Real effects through conventional channels by reducing long-term real interest rates

Estimated Effects of LSAPs on Yields

LSAP Policies	Estimated Decline in 10-Year Treasury Yield (basis points) at onset of the program	Other Studies
LSAP 1	34	91 - (Event Studies); 36 to 82 (Regressions) - Gagnon et al. (2011) 100 - Krishnamurthy and Vissing-Jørgensen (2011) 20 to 30 - (Treasury security purchases only) - D'Amico and King (2013) 35 - (Treasury security purchases only) - D'Amico et al. (2012)
LSAP 2	12	25 - Krishnamurthy and Vissing-Jørgensen (2011) 55 – D'Amico et al. (2012) 21 – Meaning and Zhu (2011) 15 – Swanson (2011)
MEP	28	22 - Hamilton and Wu (2012) 17 – Meaning and Zhu (2012)
LSAP 3	31	60 - Engen, Laubach, and Reifschneider (2015)[1]

Source: Bonis, Ihrig and Wei (2017)

Cumulative Term Premium Effects of LSAPs



Based on Li and Wei (2013), Ihrig et al. (2012)

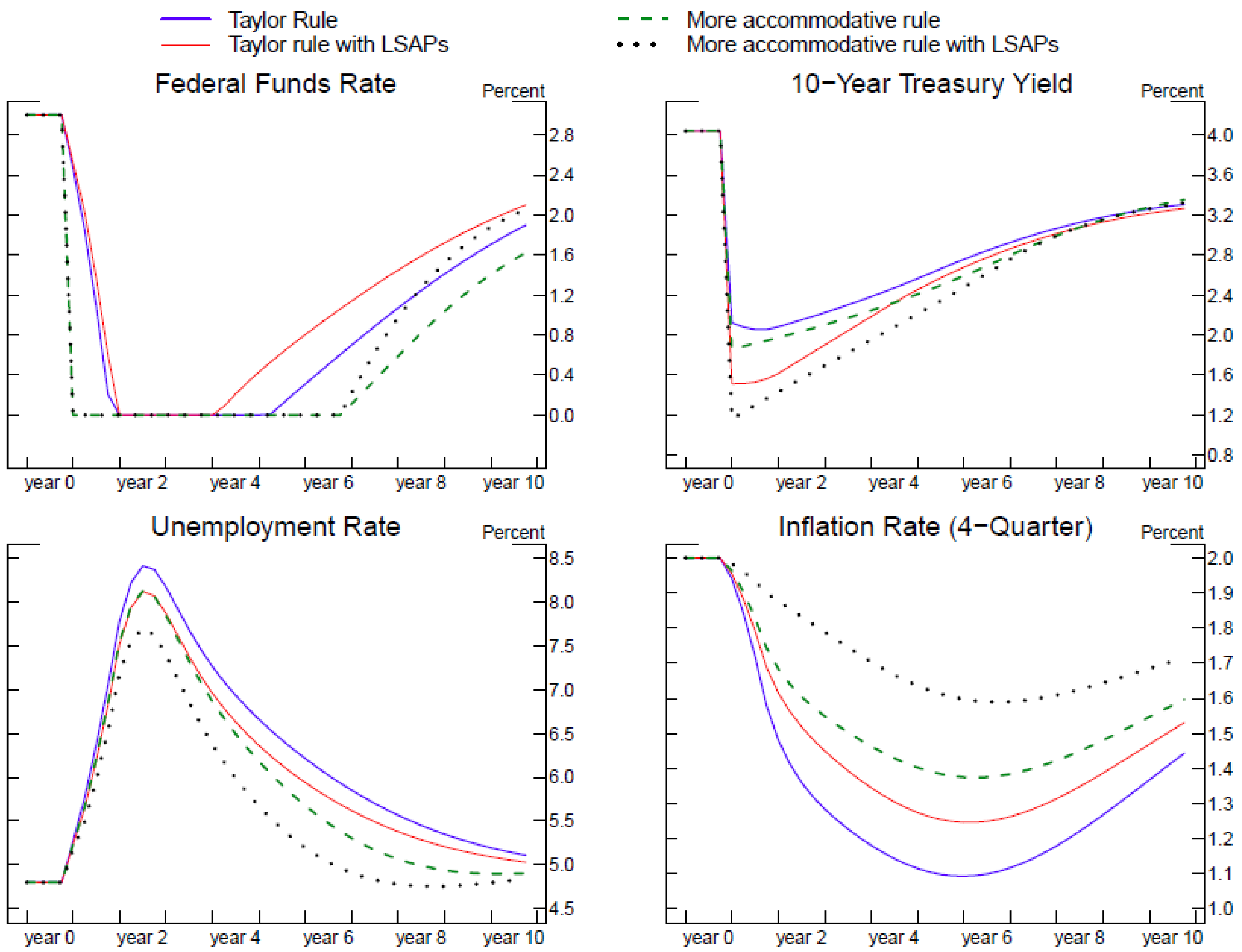
Real effects of LSAPs

- Baseline result: $500 billion in longer-term Treasuries reduced 10-year term premium and unemployment rate after 2 years by 20 bps each.
  - Start with TP effect and assume other asset price changes based on event studies
  - Use FRB/US model to estimate effects on macroeconomic outcomes
  - Assume exogenous funds rate path
- Cumulative effect on unemployment rate: close to 1 percentage point

Caveats to Baseline Estimates

- Uncertainty surrounding effects on term premium estimates and accompanying changes in other asset prices
  - ➢ MBS yields, mortgage rates, corporate spreads, stock prices, exchange value of the dollar
  - ➢ Market reaction state-dependent (level of risk premia, stress episodes)
- Potential interactions with interest rate path
  - ➢ Substitutability
  - ➢ Signaling effects

LSAP Effects Under Different Interest Rate Rules



Based on Reifschneider (2016)

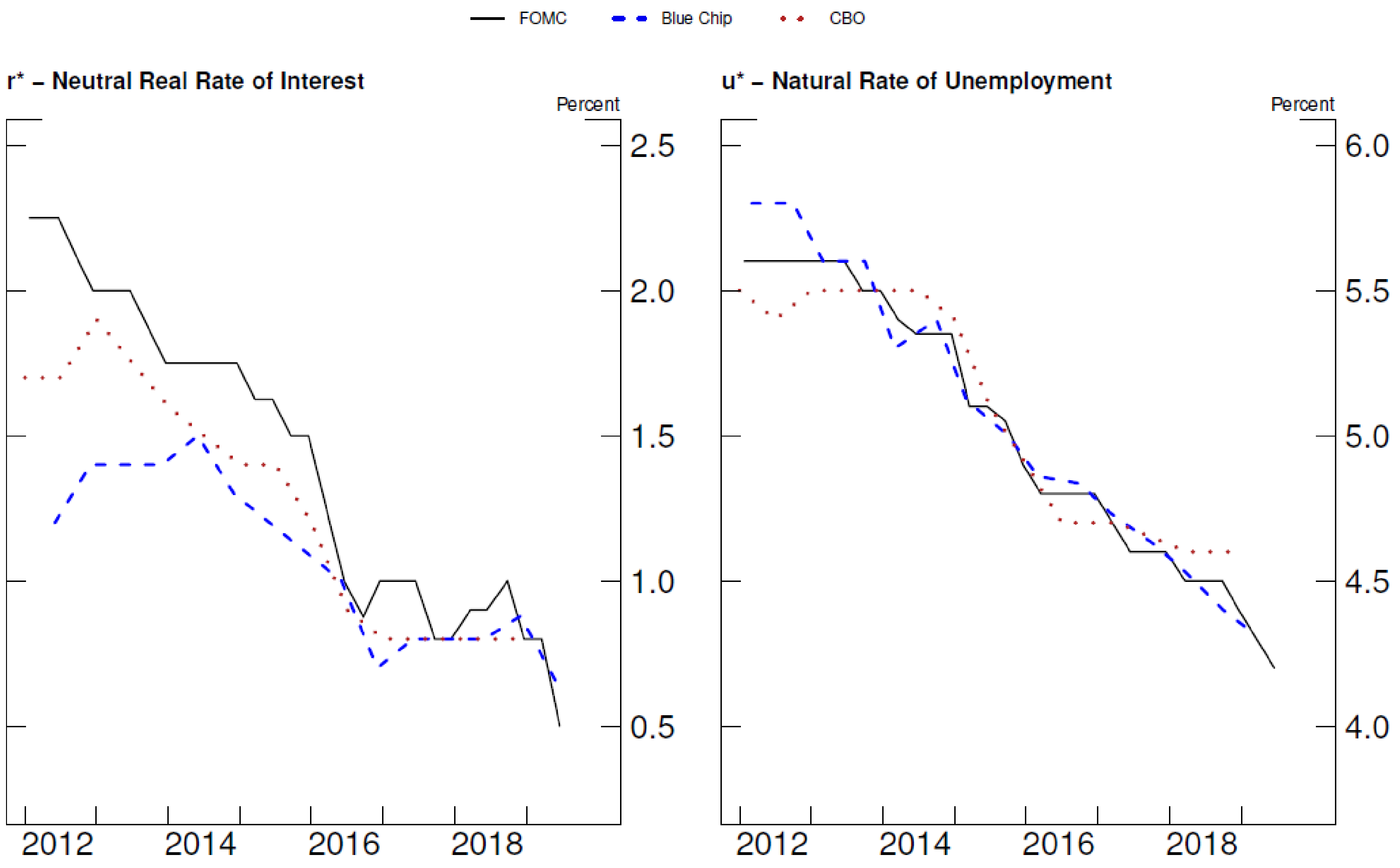
Federal Reserve’s Current Framework

- Summarized in FOMC Statement on Longer-Run Goals and Monetary Policy Strategy, first adopted in January 2012.
- Current framework shares many elements with “flexible inflation targeting.”
- Fed's mandate is more explicit about the role of employment than that of most flexible inflation-targeting central banks.
- Consensus statement reflects this by stating that when the two sides of the mandate are in conflict, neither one takes precedent over the other.

How well has the current framework performed?

- Labor market healing took many years, but now conditions are very strong, with benefits accruing to marginalized groups.
- Inflation has on average run below target, but by less so than in many other major economies.
- Questions about current framework:
  - Are framework and tools sufficient?
  - Have the existing tools been used sufficiently?
  - Was the magnitude of the challenge only gradually recognized?

Changes in r* and u*



- Changes only gradually recognized
- Overestimation of provided accommodation

Source: Powell (2019)

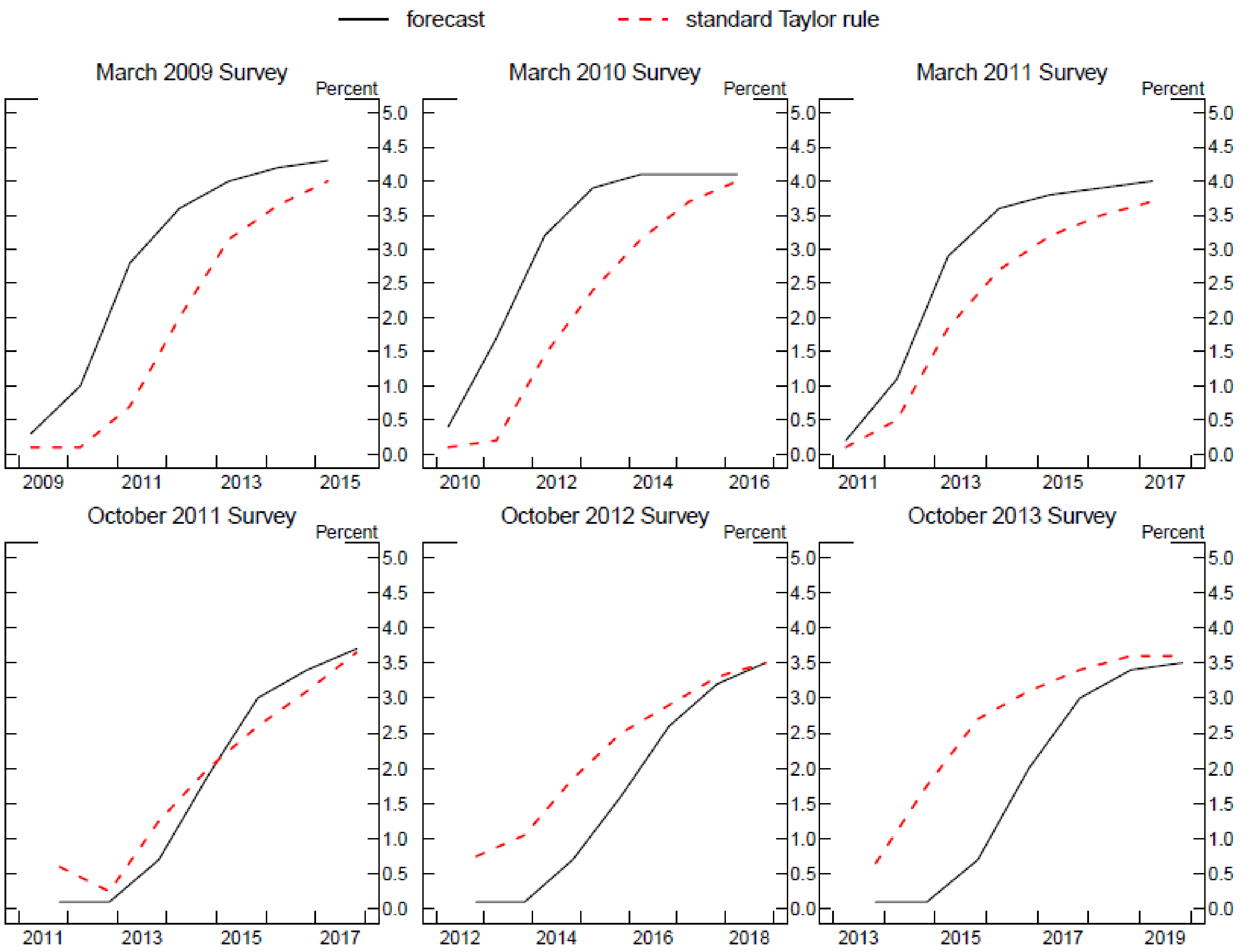
Low r*: How severe is the ELB problem?

- Likely determinants of r* (especially demographics) suggest low r* will persist
- ELB probabilities depend on r*, policy strategy, and model/baseline outlook.
- Recent studies suggest ELB will bind ¼ of the time or more (Kiley and Roberts, 2017; Bernanke et al., 2019; Chung et al., 2019)

How Effective were Forward Guidance and LSAPs?

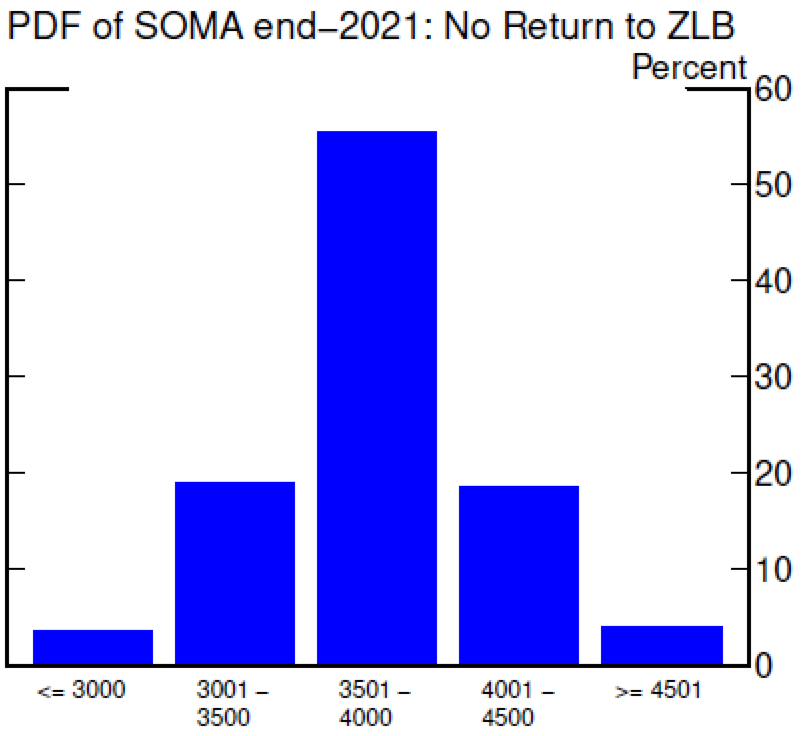
- Eberly et al. (2019): Forward guidance and LSAPs led to faster recovery and higher inflation. In hindsight, could have been used more aggressively.
- Engen et al. (2015): Effects of unconventional policies in 2008-13 were limited by the fact that they came as surprise, initially not well understood
- We can expect stronger automatic stabilizers through *anticipation* effects next time.

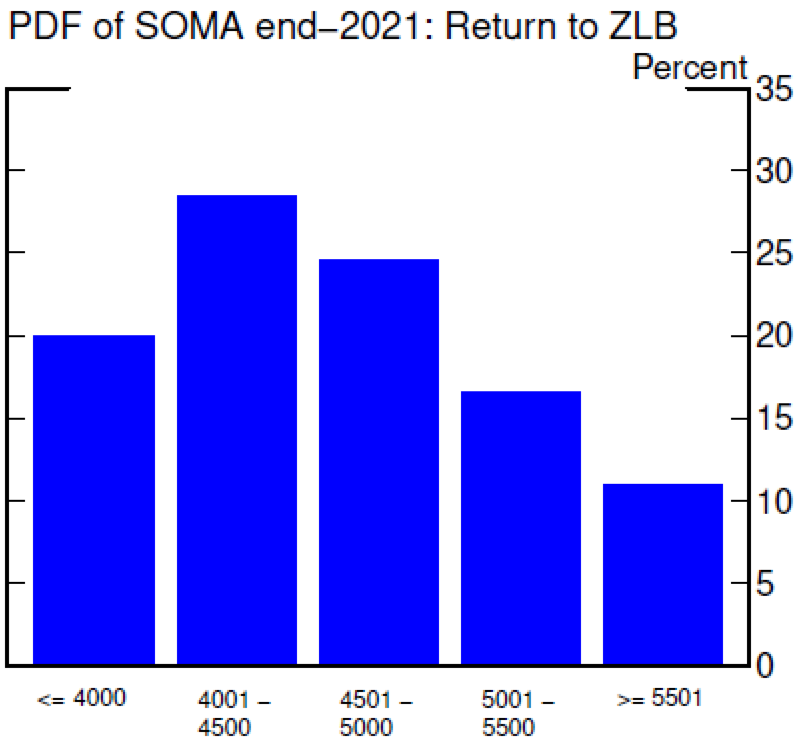
Shift in the Perceived Reaction Function



Source: Engen et al. (2015)

Perceived LSAP Reaction Function



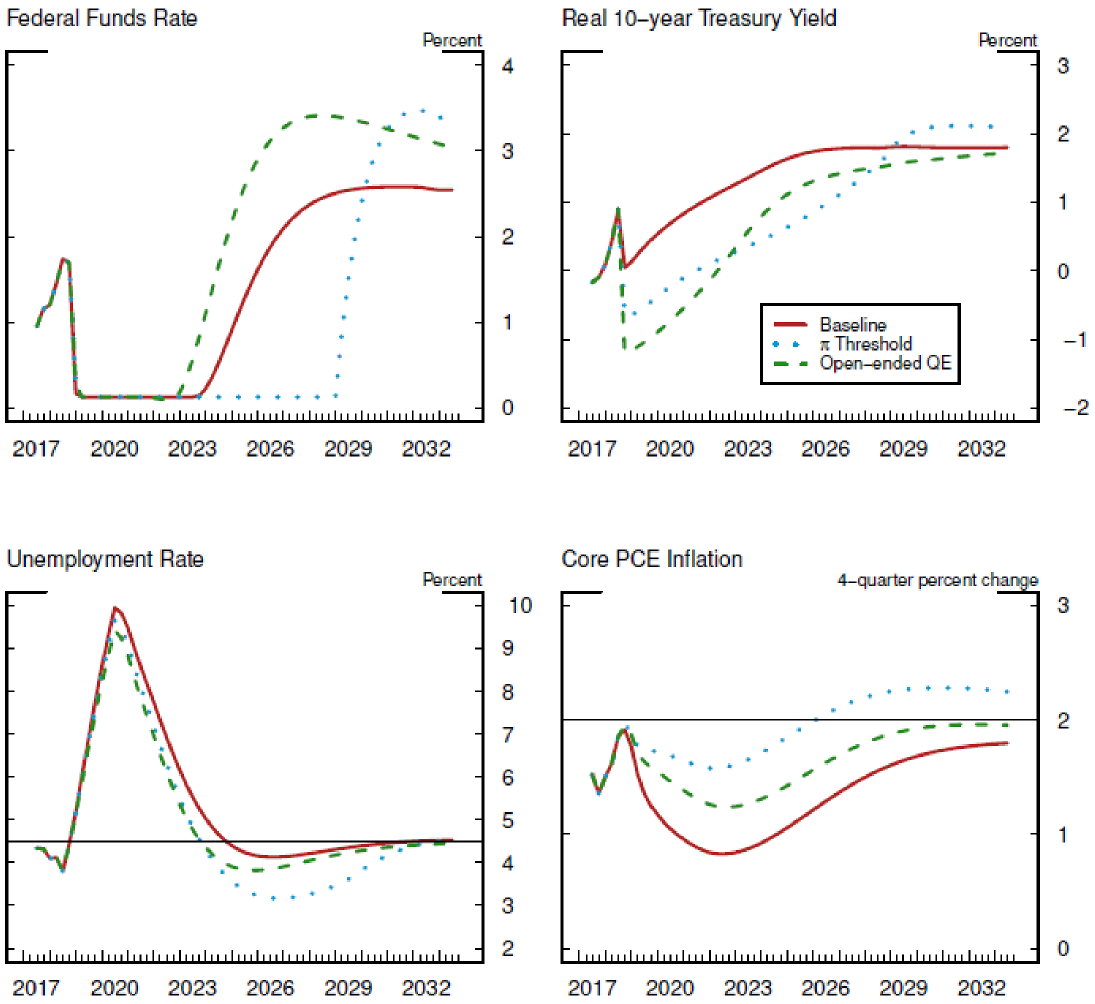


Note: Values are an average of SMP and SPD results.
Source: FRBNY Desk surveys, May 2019.

Forward Guidance and LSAPs in a Recession

- Consider two alternative strategies:
  - ➢ Forward guidance with an inflation threshold of 2.25 percent
  - ➢ Open-ended QE that continues until policy rate lifts or unemployment drops below 5.5 percent, or inflation rises above 1.75 percent.
- FRB/US simulations featuring full anticipation of effects of unconventional policies by agents

Forward Guidance and LSAPS in a Recession (cont'd)



Based on Chung et al. (2019)

Thank you!

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