Monetary Tightening, Quantitative Easing, and Financial Stability

Ivan Shchapov[†]

[†] *Institut Polytechnique de Paris*
Centre for Research in Economics and Statistics

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Motivation

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- Little known on QE implications on financial stability over business cycle
  - Riskier behaviour of financial intermediaries?
- QE recently repurposed as financial stabilisation tool
  - In 2022, substantial interest rate hikes
  - Subsequent financial turmoils in US, UK, Switzerland
  - Temporary balance sheet expansions

SVB crash, March 2023

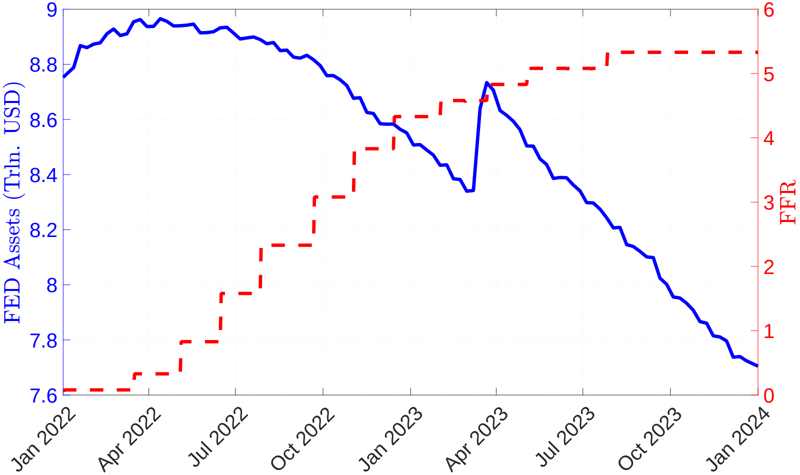

Figure FED balance sheet (Trln. USD), Policy rate (pp.)

This paper

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  - on financial stability **over business cycle**?
  - on price and financial stability in **tightening cycle**?

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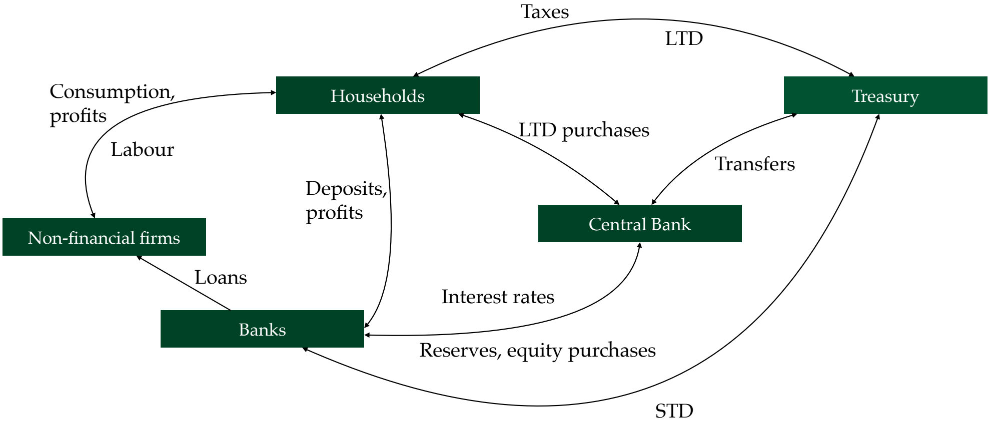
  - on financial stability **over business cycle**?
  - on price and financial stability in **tightening cycle**?
- QE implies:
  - More **frequent and longer-lasting** financial stress episodes
  - Significant **costs to price stability** in tightening cycle

Today

- Model
- QE, stabilisation, & financial stress frequency
- QE in tightening cycle

Model overview



Banks

- Agency problem as in Gertler and Kiyotaki (2010)
  - Balance sheet:

Assets	**Liabilities**
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- **Moral hazard**: can divert fraction of assets
  - Non-absconding in equilibrium (leverage constraint):

$$\text{Net Worth PDV} \geq \text{Divertible Assets} \tag{1}$$

  - Safe Assets $\uparrow \implies \downarrow$ Divertible Assets

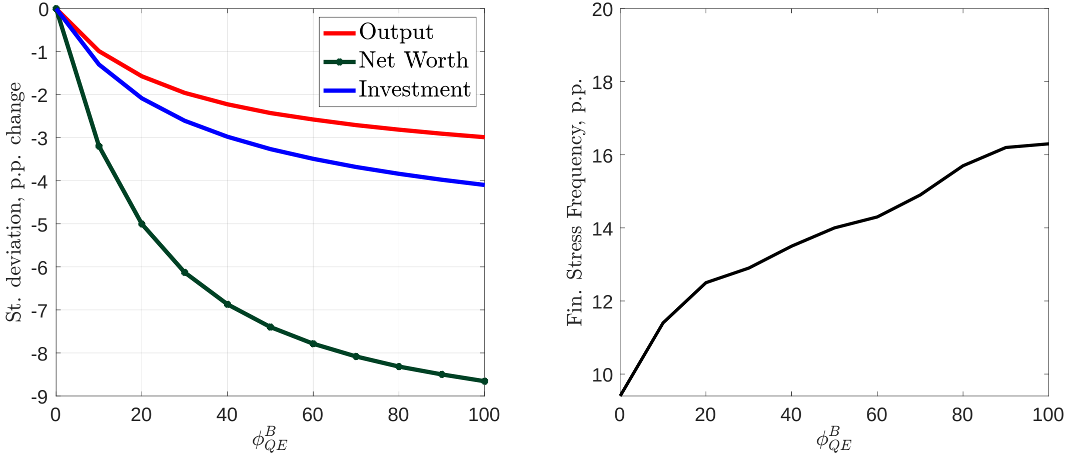
Quantitative Easing

- **Role of QE**: inject safe assets, stabilise asset prices
- QE targets financial stability

$$\text{Asset acquisition} = (\text{Credit Spread})^{\phi^i_{QE}} \tag{2}$$

QE: macro stability and financial stress

Figure St. dev. change (left) and stress frequency (right)



Why longer stress under QE?

- **Risk channel:** Bank precautionary behaviour
  - Banks dislike net-worth variance
  - Pick lower leverage to avoid hitting constraint
  - Under QE, **net-worth variance lower** $\Longrightarrow$ smaller precautionary motive

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- **Recapitalisation channel:** Slower recapitalisation during stress

QE: financial stress decomposition

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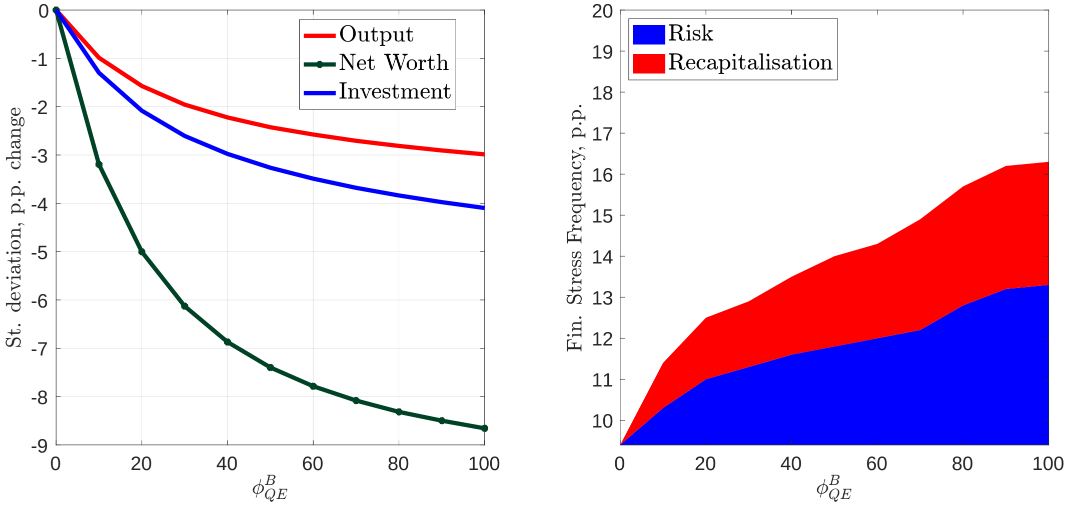
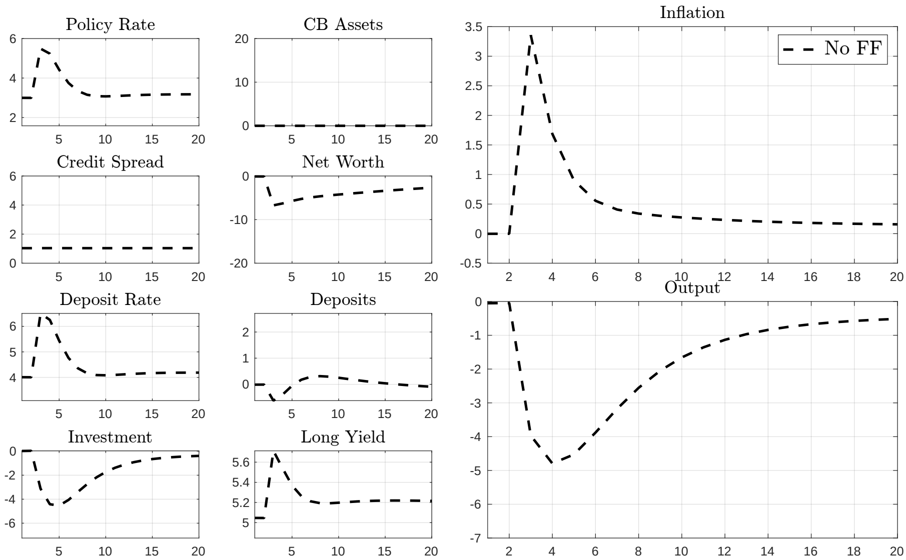


QE in a tightening cycle

- Implications of QE on price and fin. stability in tightening cycle?
  - Simulate large markup shock
  - Counterfactuals w/out fin. frictions and with QE

QE in a tightening cycle



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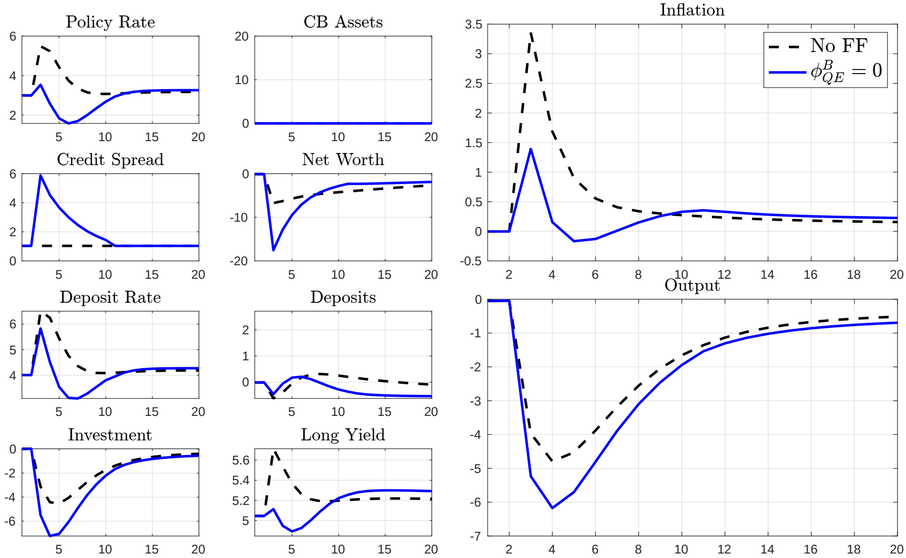

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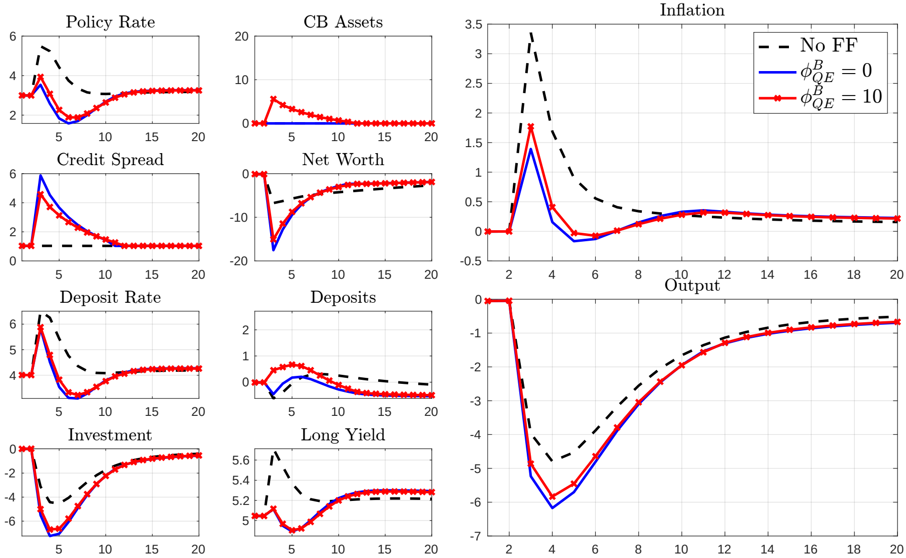

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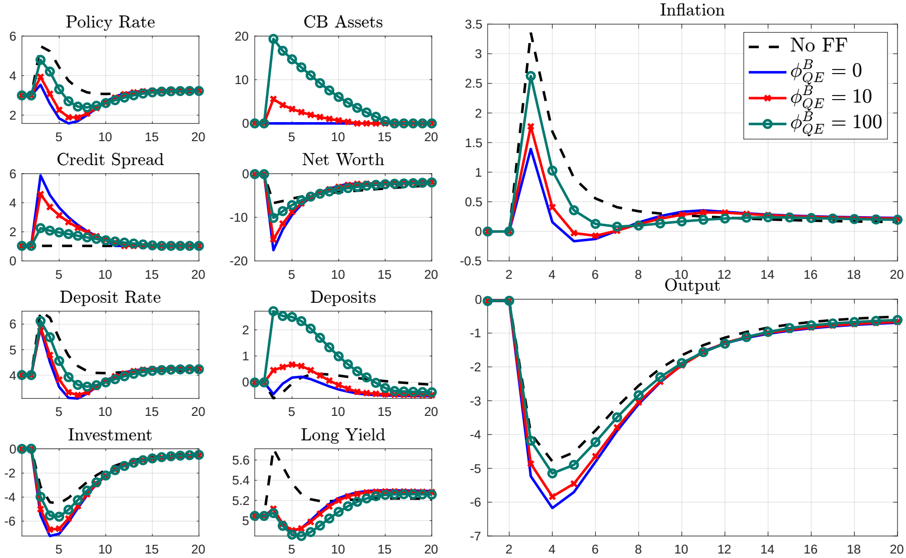

Conclusion

- **Key policy takeaway:** QE **effective short term** $\implies$ more **frequent** and **longer-lasting financial stress** long term;
  - Bank risk taking
  - QE real distortions $\implies$ slower recapitalisation