

Discussion:
***Monetary Policy, State-Dependent Bank Capital
Requirements and the role of Non-Bank Financial
Intermediaries***
by Manuel Gloria, and Chiara Punzo

Frantisek Masek

National Bank of Slovakia*

*The views expressed here are the author's and do not necessarily reflect those of the National Bank of Slovakia or the Eurosystem.

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Overview

What the paper does

- ★ DSGE with two intermediaries: banks (regulated) and NBFIs.
- ★ Banks face **capital requirements** macroprudential policy.
- ★ NBFIs face an **incentive-compatibility constraint**.
- ★ The effect of monetary policy stronger due to NBFIs.

Key results

- ★ Monetary policy affects intermediaries heterogeneously.
- ★ NBFIs **amplify** downturns through their bond valuation channel.
- ★ MP tightening affects NBFI balance sheet, their net worth deteriorates, which amplifies the MP effect.
- ★ However, the **welfare effect of NBFIs is positive!**

Contributions

- **Methodological:**

- ★ The paper builds upon Gebauer and Mazelis (2023).
- ★ Banks are modeled as in Gerali et al. (2010), NBFIs follow Sims and Wu (2021) (Gertler-Kiyotaki/Gertler-Karadi spirit).
- ★ This paper uses an **asymmetric quadratic adjustment costs to model capital requirements** and ties the **incentive-compatibility constraint of NBFIs to long-term bonds** (as in Sims and Wu, 2021)

- **Monetary policy implications:**

- ★ **NBFIs amplify the contractionary effects of monetary policy** through the asset price channel.
- ★ This goes against the lending competition channel shown in Gebauer and Mazelis (2023).

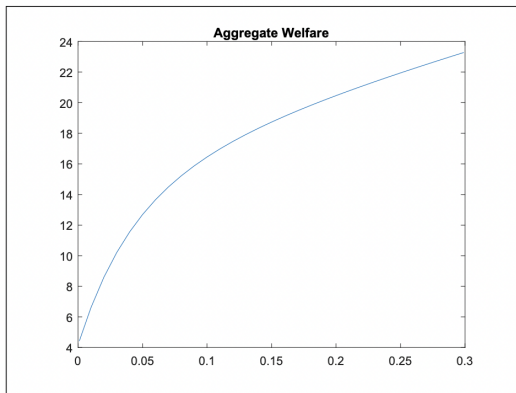
- **Welfare implications:**

- ★ NBFIs generate **welfare benefits**.
- ★ Unregulated intermediaries free resources from adjustment costs.

Other relevant papers

- **State-dependent financial frictions:**
 - ★ Karadi and Nakov (2020), Harding and Wouters (2022), Dou et al. (2020), Gertler, Kiyotaki, Prestipino (2020)
- **State-dependent monetary policy due to banks:**
 - ★ Eichenbaum et al. (2025), Greenwald et al. (2023)

Welfare and NBFIs



- **Is it monotonically increasing up to 1?**

- ★ The welfare analysis deserves more intuition.
- ★ The plot shows pretty bold statement, yet the econ intuition could be cleaner.

Welfare Gains as a Modelling Artifact?

- **Asymmetric treatment of intermediaries**

- ★ In the welfare analysis, the authors treat regulatory costs as smooth and do not incorporate their state-dependent nature.
- ★ Banks are subject to a regulatory cost term that enters the resource constraint.
- ★ NBFIs face an IC constraint, but it generates no resource loss.

Consequences

- ★ Welfare gains from shifting intermediation to NBFIs stem mechanically from **assigning all resource costs to banks**.
- ★ This asymmetry is a modelling choice, but is there really any evidence that **NBFIs are intrinsically more efficient?**

Do NBFIs Really Create Less "Waste"?

Missing sources of NBFi inefficiency

- ★ NBFIs may generate pecuniary and systemic externalities through default, liquidity runs, fire sales, etc Acharya et al. (2023).
- ★ These can spill over to the banking sector and amplify systemic risk.
- ★ None of these channels appear in the model's resource constraint.

Implication for welfare

- ★ The **positive welfare effect** is conditional on assuming **NBFIs create no deadweight losses** while the macroprudential regulation does.
- ★ Introducing more nuanced NBFi exposition could easily overturn the welfare comparison.

Interaction of Two Intermediaries

- **Current structure**

- ★ Banks and NBFIs both lend to entrepreneurs.
- ★ NBFIs are always constrained (IC binds), banks only in sufficiently bad states. Interconnection through GE effects.
- ★ No direct balance-sheet spillovers across intermediaries.

Implications

- ★ NBFIs amplify all shocks; banks amplify only the severe ones.
- ★ Missing channels: **fire-sale feedback**, wholesale funding interactions, or **valuation effects transmitting NBFi stress into bank capital**.
- ★ Of course, the role of **default** in all this may be huge.

Incentive-Compatibility Constraint Amplification

- **Not one NBFI, but many**

- ★ The effect of NBFIs on monetary policy varies across types.
- ★ Hedge funds, bond mutual funds and other leveraged funds amplify, money market funds and non-bank lenders dampen (Gelos, 2025).

- **Key dimensions of heterogeneity**

- ★ **Leverage** (hedge funds) versus low leverage (insurers).
- ★ **Maturity and liquidity mismatch** on the asset and liability side (bond funds vs money market style or floating rate credit).
- ★ **Liability stability and redemption risk** (open end funds with daily redemptions vs stable insurance or pension liabilities).

Cautionary interpretation

- ★ The net dampening or amplification of monetary policy depends on the **composition** of the NBFI sector along these dimensions. A single representative NBFI in DSGE should be read as one specific corner of this heterogeneous universe, not as “NBFIs” in general.

Appendix: Asymmetric Adjustment Cost - Interpretation

- **Intended narrative**

- ★ The paper claims an asymmetric cost that activates when the capital ratio falls below the requirements + buffer threshold $\bar{k} = v^C + \Delta$.
- ★ Hence, the penalty should be zero at \bar{k} and increase as the ratio approaches the regulatory minimum v^C .

- **What is actually implemented**

- ★ The quadratic penalty is written as $\left(\frac{k}{\ell} - v^C\right)^2$, i.e. centered on the requirement, not on the buffer.
- ★ It functions well when $\frac{k}{\ell} < v^C$, but what if $\bar{k} > \frac{k}{\ell} > v^C$?
- ★ This implies the penalty is largest at \bar{k} and smallest at v^C , which is the opposite of the stated narrative.

Consistent threshold?

- ★ The implemented adjustment cost seems to me **inconsistent** with the narrative; should not it be $\left(\frac{k}{\ell} - \bar{k}\right)^2$ instead?