

# A Macroeconomic Perspective on retail CBDC and the digital euro

Dirk Niepelt  
University of Bern & CEPR

[www.niepelt.ch](http://www.niepelt.ch)

Colloquium on CBDCs, Zurich, 9 May 2023

# rCBDC—A Solution in Search of a Problem?

Waller (2021), House of Lords (2022)

Key questions

- What do users gain from CBDC?
- Does this require CBDC?

# rCBDC—A Solution in Search of a Problem?

Waller (2021), House of Lords (2022)

## Key questions

- What do users **including firms** gain from CBDC?
- **What do citizens, taxpayers** gain from CBDC?
- Does this **realistically** require CBDC?

# The Social Costs of Liquidity Provision

Friedman (1969) general equilibrium perspective

Two-tier system vs. CBDC based single-tier architecture

- Direct resource costs: advantage two-tier
- Costs due to fragility, TBTF: advantage single-tier
- Deadweight losses (taxes etc.): advantage single-tier

Analysis in Niepelt ([2020](#); [2022](#))

Efficiency demands unequal, non-zero interest on reserves, CBDC

# Should We Fear “Bank Disintermediation”?

That is, should we fear reduced bank money creation?

No. Central banks can insulate banks, preserve status quo

Analysis in [Brunnermeier and Niepelt \(2019\)](#)

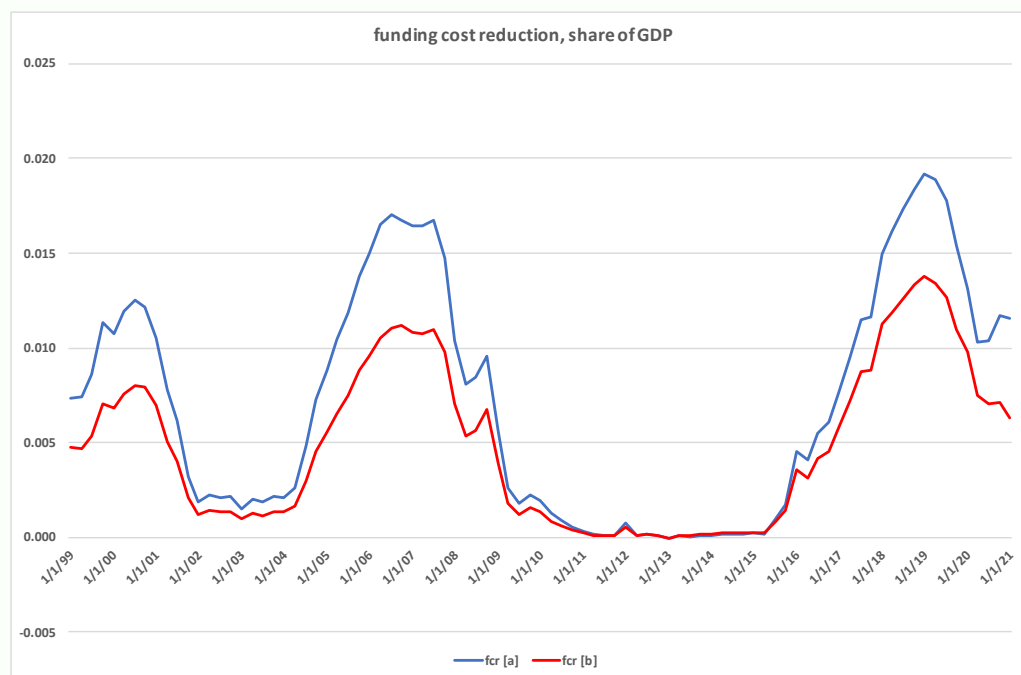
No. Central banks may not be able/willing to insulate banks, but this might improve things

Analysis in [Andolfatto \(2021\)](#), [Chiu et al. \(2019\)](#), Niepelt ([2020](#); [2022](#))

Yes. Central bank balance sheets lengthen; political rather than macroeconomic risks

# Should Banks Fear “Bank Disintermediation”?

Yes, if central banks were to choose (be forced) to not insulate banks



Niepelt (2020)

# Digital Euro Plans

## Motivations

- Preserve public money as anchor of payment system
- Contribute to “Europe’s” strategic autonomy

# Digital Euro Plans, ctd

## Issues

- Lack of in-depth analysis of “no harms” principle
- Unclear sequencing of design choices
- Privacy? Access, interest rates, fees, merchant requirements?
- Incentive compatibility of public-private partnership?
- Management of ECB balance sheet?
- Political interference
- ECB’s mandate?



# Digital Euro Plans, ctd

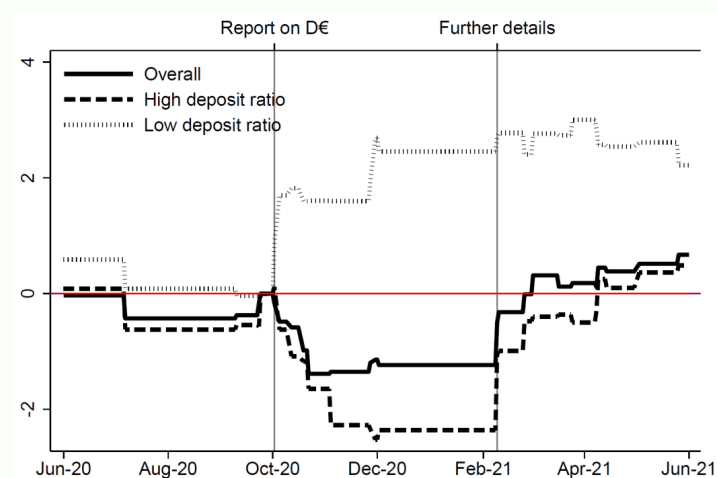
Holding limits, other precautions

- Unnecessary?
- Will consumers bother?
- Industry 4.0?
- Uniformity of money?

# Do European Banks Fear the Digital Euro?

Not any more

Figure 1: Stock market reactions to CBDC news by euro area banks (percentage points)



Notes: The figure reports the results of the estimation of model (1). Each horizontal segment reports the cumulated abnormal returns up to the latest key event, relative to the level on 1 October 2020. The solid line reports the average across all banks in the sample. The dashed and dotted lines report the average within two groups of banks, those with deposit ratio above or below the median, respectively. The two grey vertical lines indicate the publication of the ECB report on a digital euro on 2 October 2020 and the interview on 9 February 2021.

[Burlon et al. \(2022\)](#)

# Conclusion

## Macroeconomic perspective

While the focus of debate so far has been on the costs of this disruption, largely in the form of disintermediation of existing agents, there are significant potential benefits to be had too.

... This radically different topology, while not costless, would reduce at source the fragilities in the banking model that have been causing financial crises for over 800 years.

Haldane (2021)

## For governments not central banks to decide

\*

## References

- Andolfatto, D. (2021). Assessing the impact of central bank digital currency on private banks, *Economic Journal* **131**(634): 525–540.
- Brunnermeier, M. K. and Niepelt, D. (2019). On the equivalence of private and public money, *Journal of Monetary Economics* **106**: 27–41.
- Burlon, L., Montes-Galdón, C., Muñoz, M. A. and Smets, F. (2022). The optimal quantity of CBDC in a bank-based economy, *Discussion Paper 16995*, CEPR, London.

Chiu, J., Davoodalhosseini, M., Jiang, J. and Zhu, Y. (2019). Bank market power and central bank digital currency: Theory and quantitative assessment, *Staff Working Paper 2019-20*, Bank of Canada, Ottawa.

Friedman, M. (1969). The optimum quantity of money, in M. Friedman (ed.), *The Optimum Quantity of Money and Other Essays*, Aldine, Chicago, chapter 1, pp. 1–50.

Niepelt, D. (2020). Monetary policy with reserves and CBDC: Optimality, equivalence, and politics, *Discussion Paper 15457*, CEPR.

Niepelt, D. (2022). Money and banking with reserves and CBDC, *Discussion Paper 22-12*, University of Bern.