Contemporary Issues in Business, Management and Economics Engineering

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Banks and negative interest rate policy

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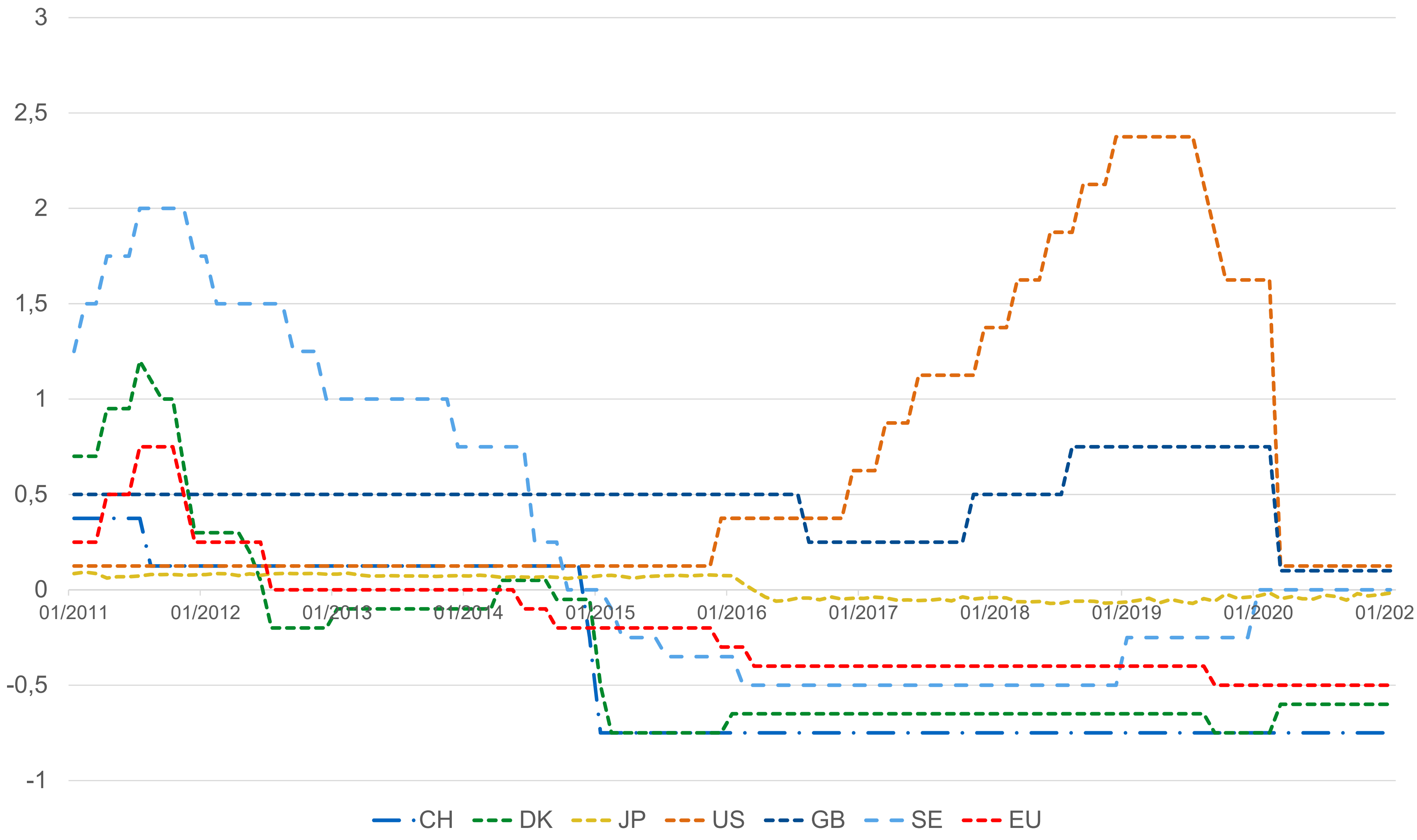
Background

- After the Global Financial Crisis many central banks have experienced a wide range of unconventional monetary policies (UMPs)

- From 2012 several economies have taken UMPs a step further by introducing Negative Interest Rate Policy (NIRP) in order to stabilize inflation expectations and support economic growth. Effects on:
  - Bond yields
  - Cost of borrowing
  - Cost of holding excess reserves

- As for other UMPs, NIRP has fueled debate on its efficacy in stimulating economic growth and on the potential drawbacks in terms of bank stability and risk

Background



Source: BIS (CH, DK, US, GB, SE policy rates), ECB (deposit facility rate), BoJ (Uncollateralized Overnight rate)

Risk-taking channel

- Borio and Zhu (2012) theorized the existence of the so-called "risk-taking channel" to define the relation that could bind expansionary monetary policies and bank risk-taking

- This channel operates in (at least) two ways:
  1. Lower interest rates compress net interest margins motivating banks to keep up profitability by investing in high-yield-high-risk assets to meet the nominal return of their liabilities
  2. Cuts on policy rate can boost bank profits through valuation gains on securities and increasing asset prices, this can alter bank risk-tolerance and risk-perception

Portfolio rebalancing towards illiquid higher-yield assets

Missing links?

- Reversal interest rate hypothesis (Brunnermaier and Koby, 2018): rate below which further cuts will have a contractionary effect for lending
  - Excessive pressure on banks’ profitability
  - Reduction in banks’ net worth, increase capital constraints

- Limited pass-through to deposits: low (or zero) effect on banks’ cost of funding (Eggertson et al., 2019)

- Interaction with other unconventional monetary policies

Contraction in lending supply

NIRP, bank lending and profitability

- **No clear consensus on the effect of negative interest rates** on bank lending and profitability:

- Expansionary effect:
  - Growth of credit supply and reduction of lending rates after the adoption of NIRP (Bottero et al., 2019). Stronger effect for banks with more excessive reserves (Demiralp et al., 2021) and more reliant on deposits (Grandi and Guille, 2020).
  - Interest rate pass-through to corporate depositors stimulates investments (Altavilla et al., 2020)
  - Little or no effect on bank profitability (Altavilla et al., 2018, Lopez et al., 2020)

NIRP, bank lending and profitability

- Contradictory effect:
  - Reduction of lending after the adoption of NIRP especially for more exposed and less diversified banks (Heider et al. 2019; Molyneax et al., 2020).
  - Increase in lending rates (Basten and Mariathasan 2018, Eggertsson et al. 2019).
  - Reduction of bank profitability (Molyneaux et al., 2019) and net worth (Ulate, 2020)
  - Incentive to deleverage by buying safer and liquid assets to bolster regulatory capital positions (Bongiovanni et al., 2019)
  - In the long run, contradictory effect on lending volume and rates for more exposed banks (Arce et al., 2018)

  - **Possible erosion of future capital bases? (Arteta et al., 2016)**

Concluding remarks

- So far, **mixed evidence** on the net effect of NIRP on bank lending and profitability

- As other UMPs, NIRP tends diminishing effectiveness and may have long term side effect: excessive risk-taking, capital base erosions, resource misallocation, (Borio 2020)

- Open questions:
  - If any, what can explain the different pass-through in the Euro Area?
  - The role of bank-specific and country-specific characteristics
  - Do negative interest rates affect the concentration of banking systems?

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