

Negative Monetary Policy Rates and Systemic Banks' Risk-Taking: Evidence from the Euro Area Administrative Securities Register

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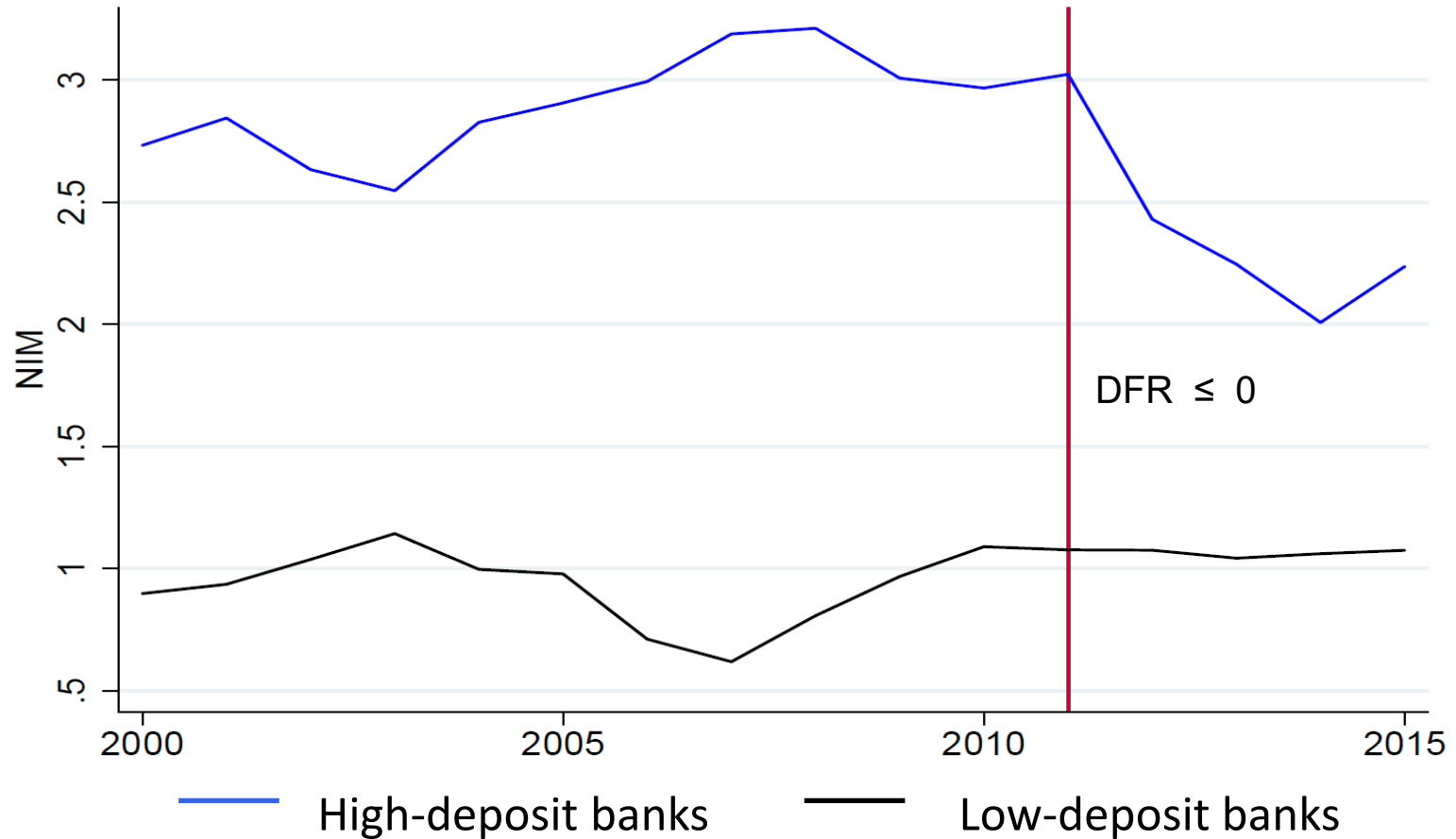
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Introduction

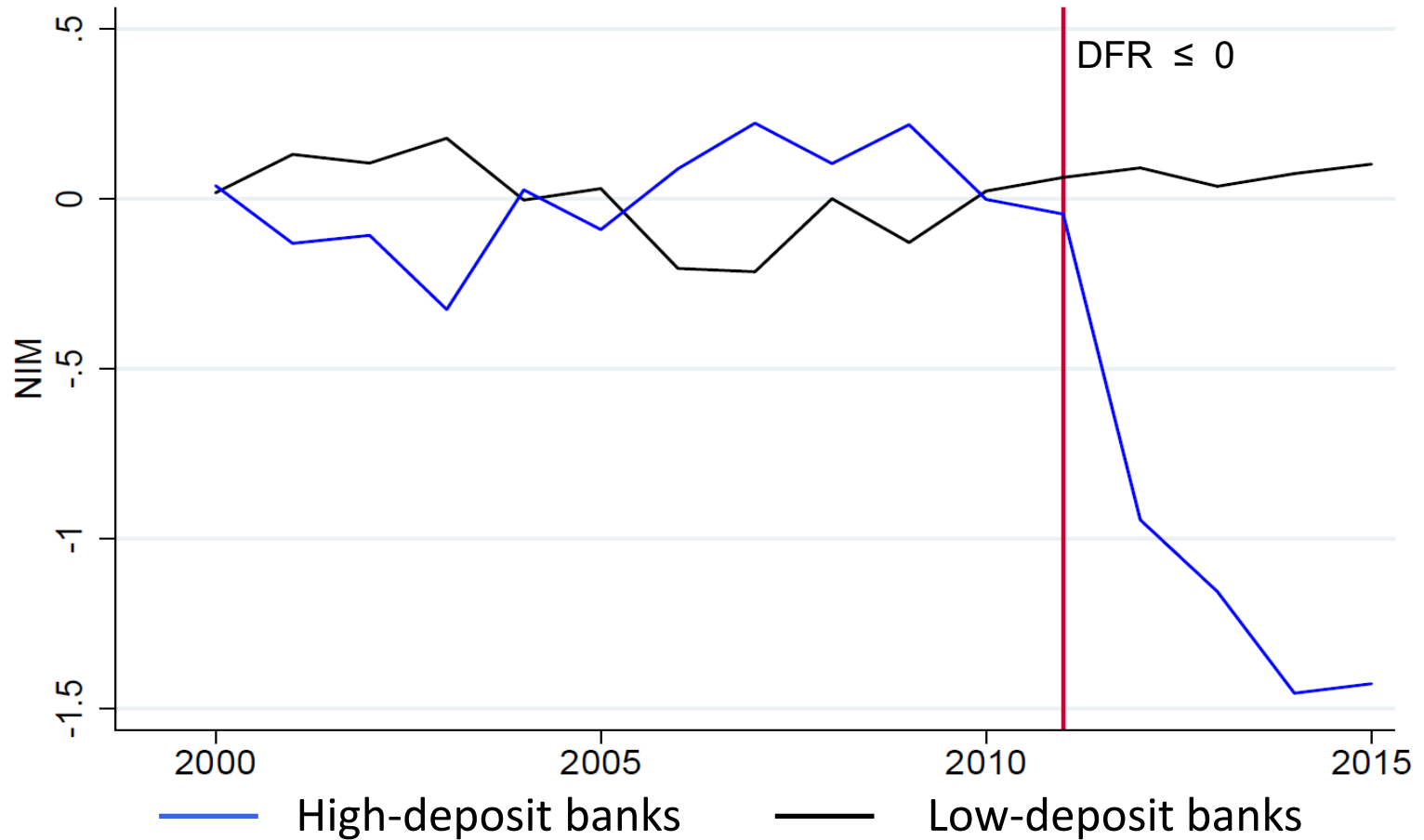
- ECB introduced negative interest rates in June 2014.
 - Deposit facility rate lowered to -0.4% since March 2016.
 - Goal: accommodation to counter persistently low inflation.
- Yet some concerns about the effects of negative rates on banks' financial health and financial stability.
- Banks are very reluctant to charge negative interest rates to depositors.
 - Average rate on deposits have remained positive
 - ... even as interest rates on many bank assets declined, with rates on the safest assets moving into negative territory
 - ... leading to a compression of net-interest margins of banks reliant on retail deposit, which could outweigh capital gains from lower rates.

Net interest margins



Source: Ampudia and Van den Heuvel (2019)

Adjusted net interest margins



Source: Ampudia and Van den Heuvel (2019)

Introduction

- Negative rates appear to hurt NIMs, bank profitability
 - Borio, Gambacorta, Hofmann, 2015; Claessens, Coleman, Donnelly, 2016; Eisenschmidt and Smets, 2018.
- Possibility of a ‘**reversal rate**’ – the interest rate below which further rate cuts become contractionary (Brunnermeier and Koby, 2019).
 - Compressed NIMs → Bank capital ↓ → Lending ↓ → Growth ↓
- The nexus of **deposit reliance** and negative rates:
 - Heider, Saidi, and Schepens, forthcoming: effect on ***lending***
 - High-deposit banks lend *less* but to *riskier* borrowers after rates become negative.
 - Ampudia and Van den Heuvel, 2019: effect on ***bank equity values***
 - Effect of interest rate cuts on bank equity values – normally positive – has become negative since DFR reached zero and below.
 - This ‘reversal’ was concentrated among high-deposit banks.
 - Bubeck, Maddaloni, and Peydró, 2019: effect on ***securities holdings***

Bubeck, Maddaloni, and Peydró

- Examining securities holdings is highly relevant because it is easy to adjust their size and to take on more/less risk.
- Securities-level data on the holdings of 26 banking groups
- Difference-in-difference(-in-difference) analysis:
 - Before and After June 2014 - the advent of negative rates
 - Deposit ratio (DR = customer deposits/assets) – ‘intensity of treatment’
 - Adjusted Current Yield (ACY) – indicator of riskiness
- Variable of interest: $\ln(\text{holdings of security } i, \text{ by bank } j, \text{ at time } t)$
- Fixed Effects:
 - Bank + Security;
 - Bank + Time; or
 - Bank + Maturity*Rating*Time

BMP: Key Results

1. Overall, securities holdings decline modestly post-negative rates.
 - Considerable declines occur for private debt (bank and non-bank).
 - Some increase in public debt.
 - Larger declines for higher-yielding securities.
2. Banks with high deposit ratios “retained assets yielding higher returns compared to the other banks.”
 - Pos. & sign. effect of the triple interaction, Post*DR*ACY.
 - Especially pronounced for private and USD-denominated assets.
 - The shift to *riskier* portfolio composition of more affected banks echoes result of Heider et al. for syndicated loans.

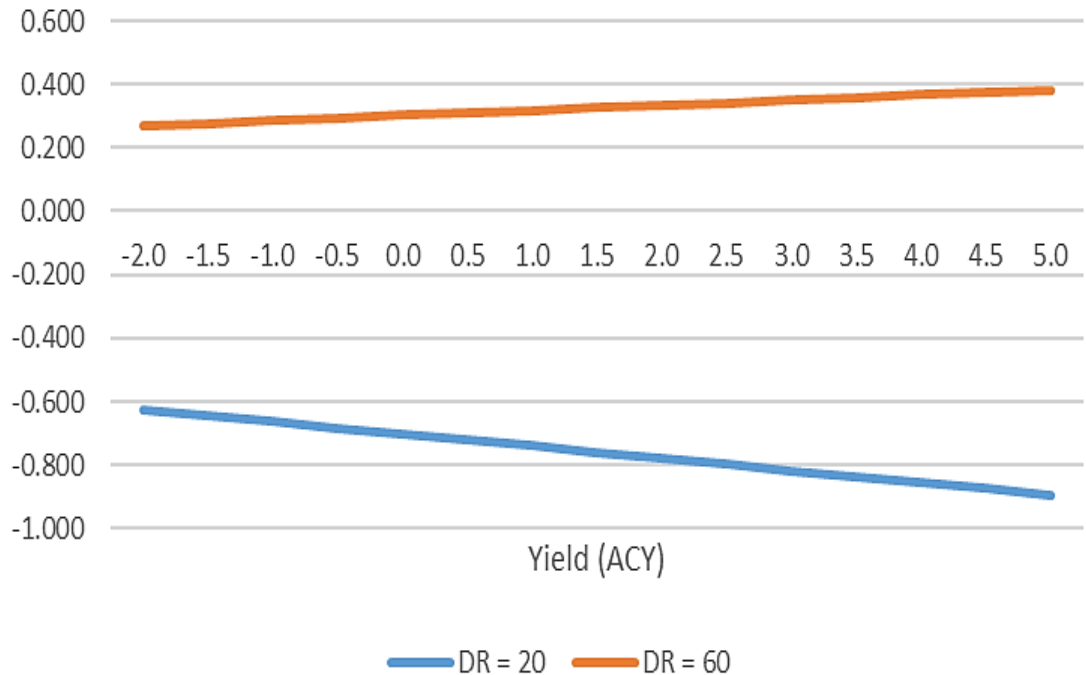
Comment 1: Wait, there's more...

A fascinating, barely hidden result:

High-deposit banks *increase* their securities holdings post-negative rates; low-deposit banks shrink holdings.

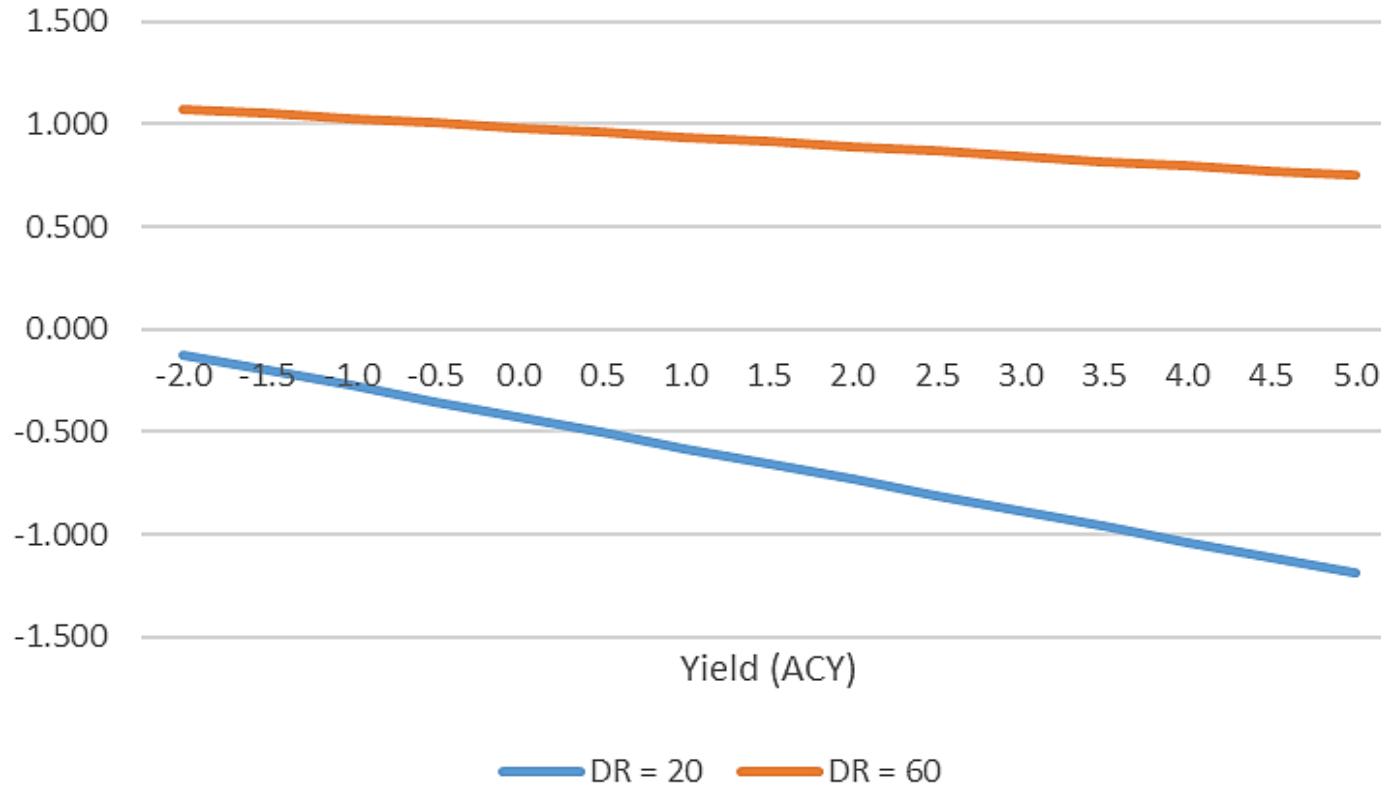
- Larger influence of DR than of ACY.

Change in securities holdings after negative rates by yield and deposit ratio



Calculations based on BMP, table 3, column 3: Bank and Securities Fixed Effects

Change in holdings after negative rates (relative to mean-DR bank and mean-ACY security)



Calculations based on BMP, table 3, column 4: Bank and Maturity*Rating*Time Fixed Effects

Comment 1: Wait, there's more...

What could be driving this behavior?

- Deposit inflows continue and these funds have to be invested somewhere?
 - For customers, deposit rates become more attractive relative to negative market rates.
 - Low-deposit banks can arguably adjust their liabilities more easily.
 - Moreover, lending of high-deposit banks declines (Heider et al.), so there could also be substitution on the asset side.
- Or further evidence of risk-taking by high-deposit banks?
- Or are there reasons to discount this result?

Comment 2: Interpretation of risk-taking

- With negative rates, high-deposit banks shift to riskier portfolios, compared to low-deposit banks.
- Is that surprising or what we should have expected?
 - Paper's approach is mainly empirical.
 - It discusses the possibility of risk shifting, ultimately dismissing it.
 - I think the answer is plausibly Yes ...

Comment 2: Interpretation of risk-taking

With positive rates, effect of rate cuts is theoretically ambiguous (Dell'Ariccia and Marquez; Dell'Ariccia, Laeven, Suarez):

- Portfolio reallocation effect: Safe asset less attractive → **More** risk-taking
- Risk-shifting effect: More franchise value → **Less** risk-taking
 - Net effect depends on (1) ability to pass through to lending rates and (2) ability to change capital structure.

However, in a low/negative rate territory, the effect of rate cuts should change for high-deposit banks:

- Portfolio reallocation: Safe asset less attractive → **More** risk-taking
- Risk-shifting: **Less** franchise value of high-deposit banks → **More** risk-taking
- Unambiguously predicts more risk taking, consistent with findings.

Technical Comments

- Observations with zero holdings of a security are excluded. This may be an issue if a bank completely divests from a security, or buys it for the first time, following negative rates.
 - How common is this? Can you include these cases, perhaps by using Holdings/Assets or Holdings/(Total securities)?
- Argument against risk-shifting based on the LeverageRatio*Post*ACY interaction not clear – need to calculate the *overall* effect of LeverageRatio *conditional on high DR*: e.g. $\text{LeverageRatio} * \text{Post} * \text{ACY} + 60 * \text{LeverageRatio} * \text{DR} * \text{Post} * \text{ACY}$
- Report the effect of the (non-interacted) Deposit Ratio in Tables 3, 4, and 5 to facilitate interpretation.