Discussion of: Life Below Zero: Bank Lending Under Negative Policy Rates

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Big question

- Many central banks turning to negative interest rates for additional stimulus.
- Main concern is effect on financial markets. FT in August:

  European banks could be forced to slash costs, make riskier loans or charge fees for current accounts to offset mounting pressure from negative interest rates, according to a new report from S&P, the credit rating agency. S&P said that interest rates below zero were starting to weigh heavily on banks' profits, especially for lenders with a large amount of customer deposits. Low or negative interest rates squeeze banks' margins by closing the gap between what they can charge on loans and what they must pay for deposits. This pressure could push banks to increase higher-risk activities to boost income.
- HSS make serious attempt to test and quantify this concern.

Overview of comments

1. Internal and external validity.
2. Effects of negative interest rates on bank equity.
3. Is going negative special?

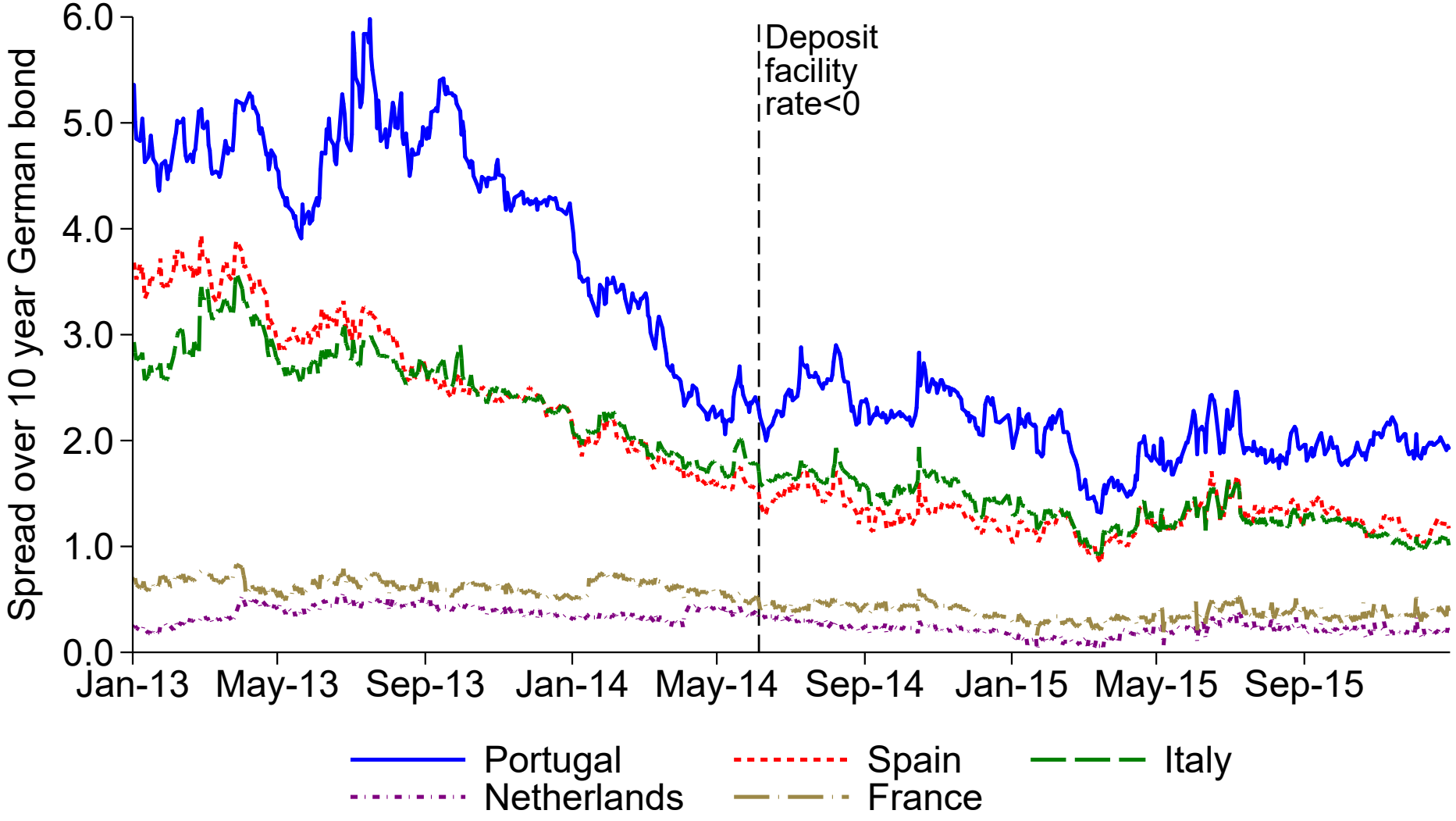
Internal and External Validity

Review

$$\ln \sigma\,(ROA)_{i,j,t} = \beta\, Deposit\ Ratio_j \times [t \geq June\ 2014] + \delta_t + \eta_j + X_{i,t} + \varepsilon_{i,j,t}.$$

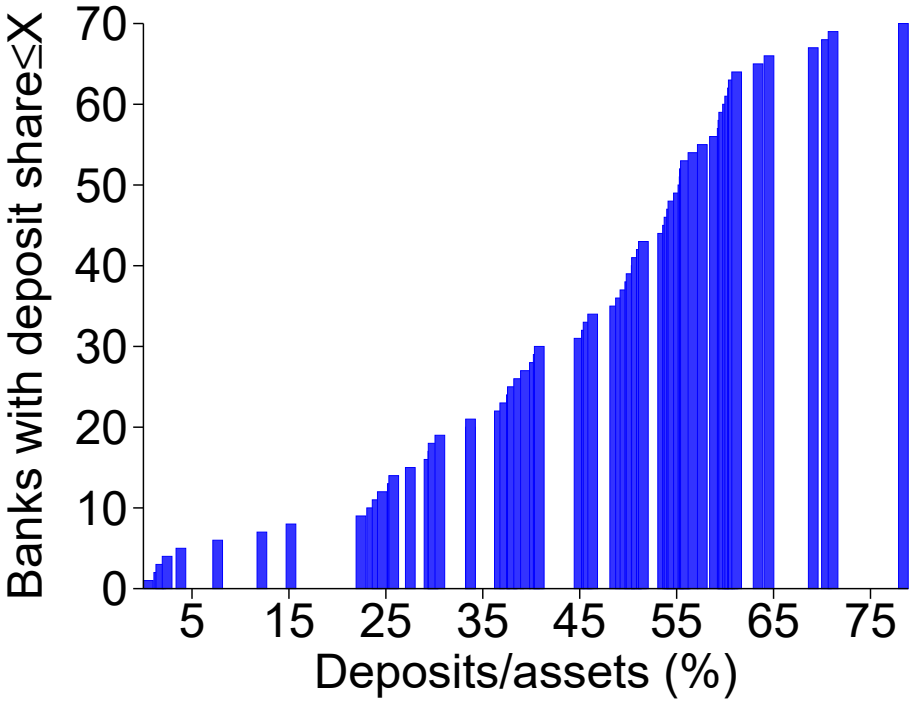
- Main specification $X_{i,t}$: country-year and industry-year FE.
- Result: $\beta = 0.02 \Rightarrow$ 1 s.d. increase in $Deposit\ Ratio_j$ increases $\sigma(ROA)$ by 18.9%.
- At mean, $\sigma(ROA)$ rises from 0.041 to 0.049, or by 0.17 s.d.
- Threat: is deposit ratio correlated with something else which would affect bank lending after June 2014?

HSS MAIN SAMPLE PERIOD



- Banks in HSS sample by country: Spain (17), Germany (14), Italy (10), Netherlands (6), Portugal (5), France (5), Austria (4), Belgium (3), Greece (2), Ireland (2), Finland (1), Luxembourg (1).

Banks in sample



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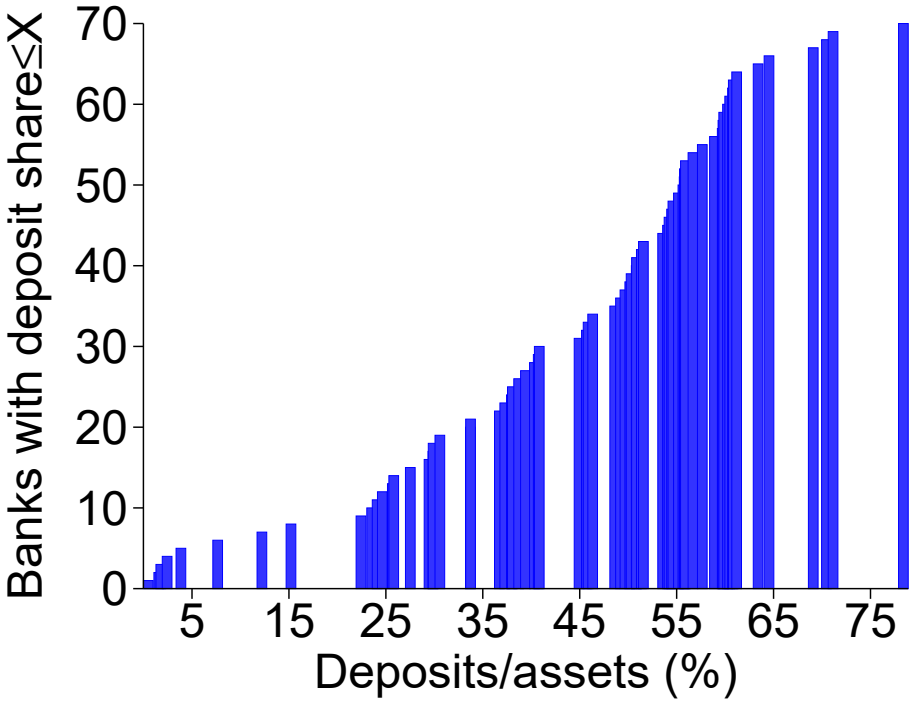
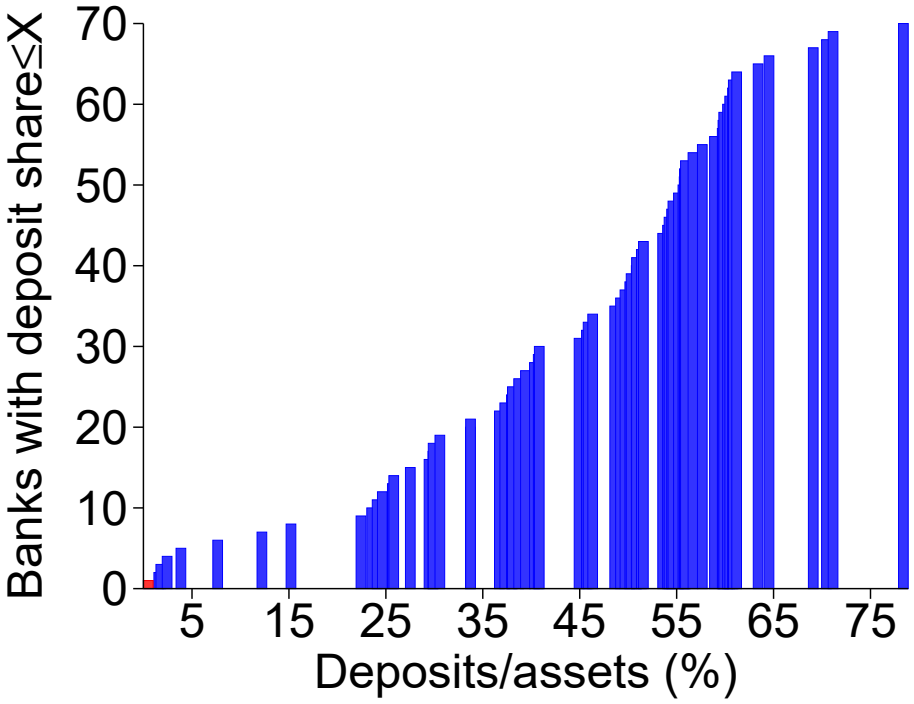


Banks with deposit share<15:

Banks in sample



Banks with deposit share<15:

- European Investment Bank.

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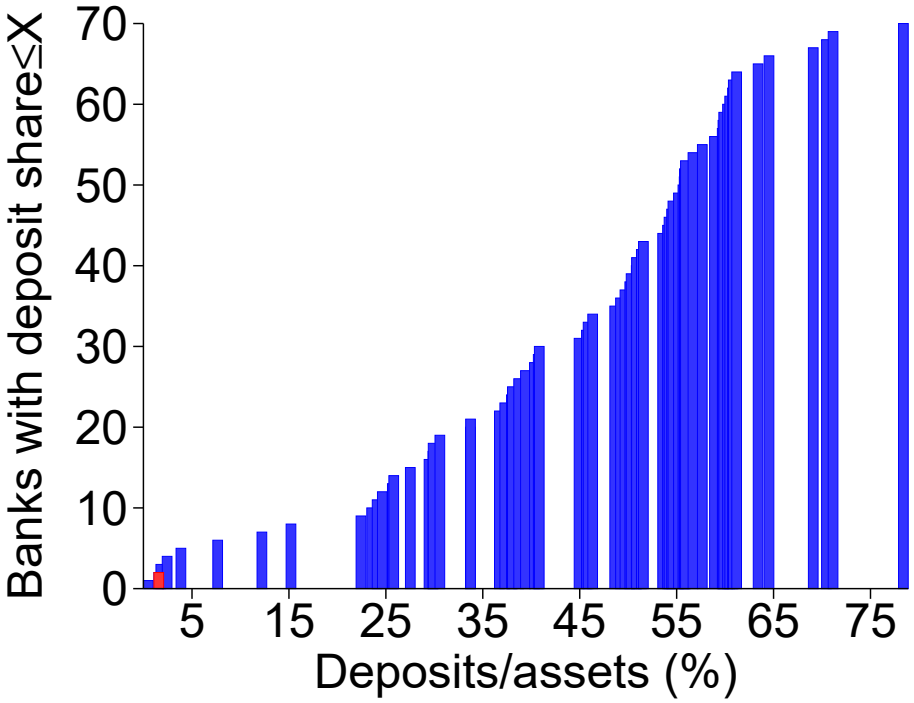

Banks with deposit share<15:

- European Investment Bank.
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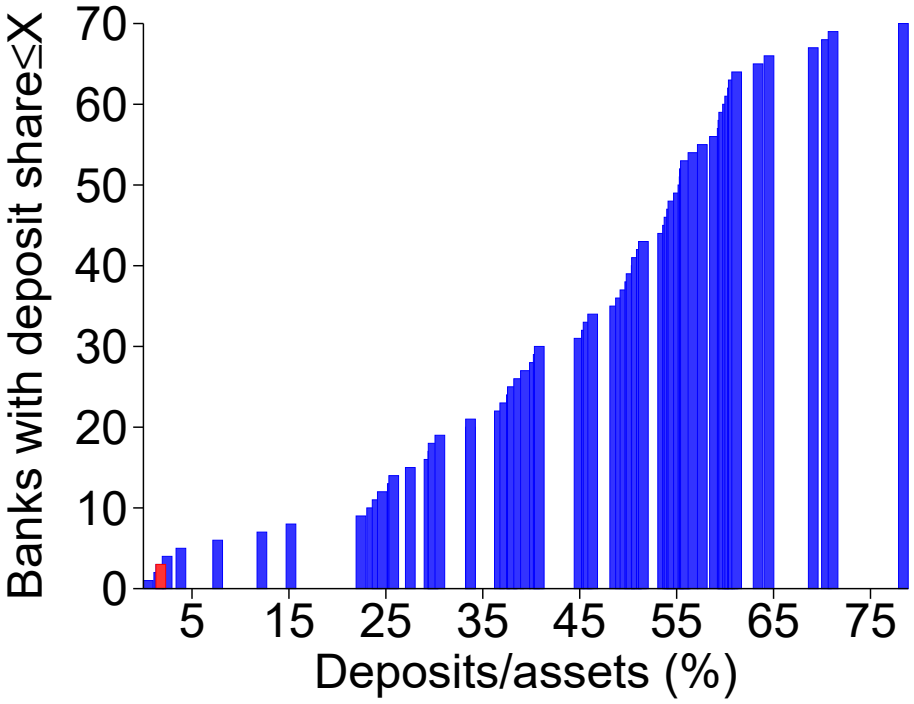

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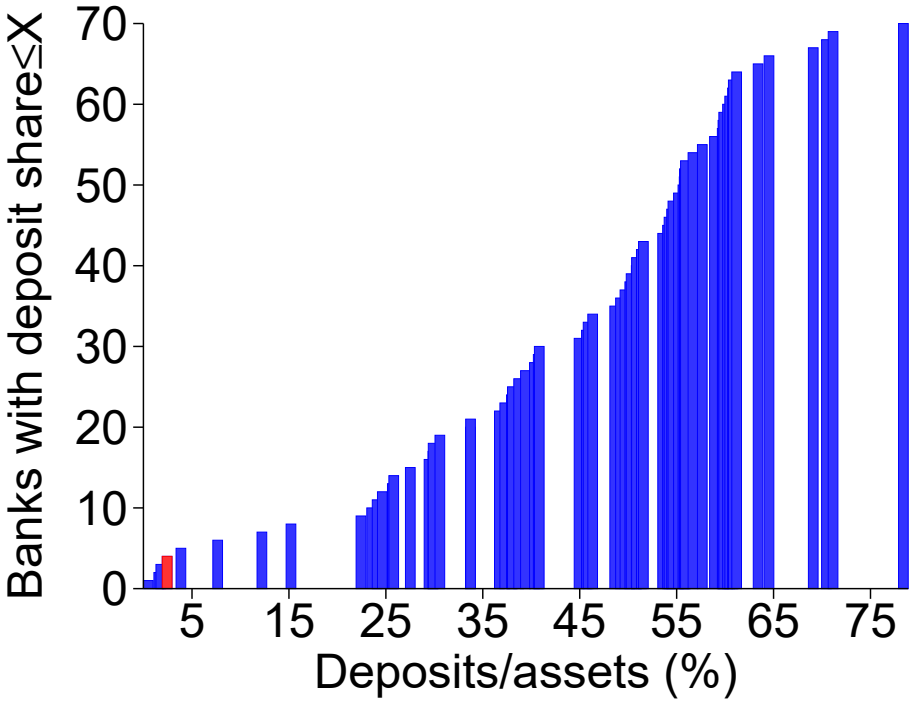

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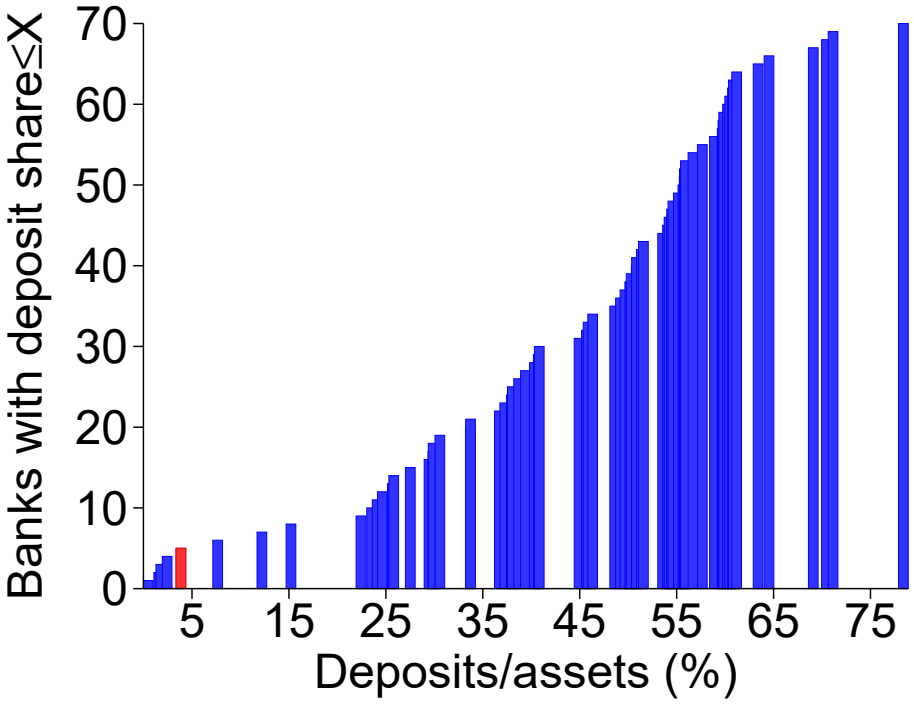

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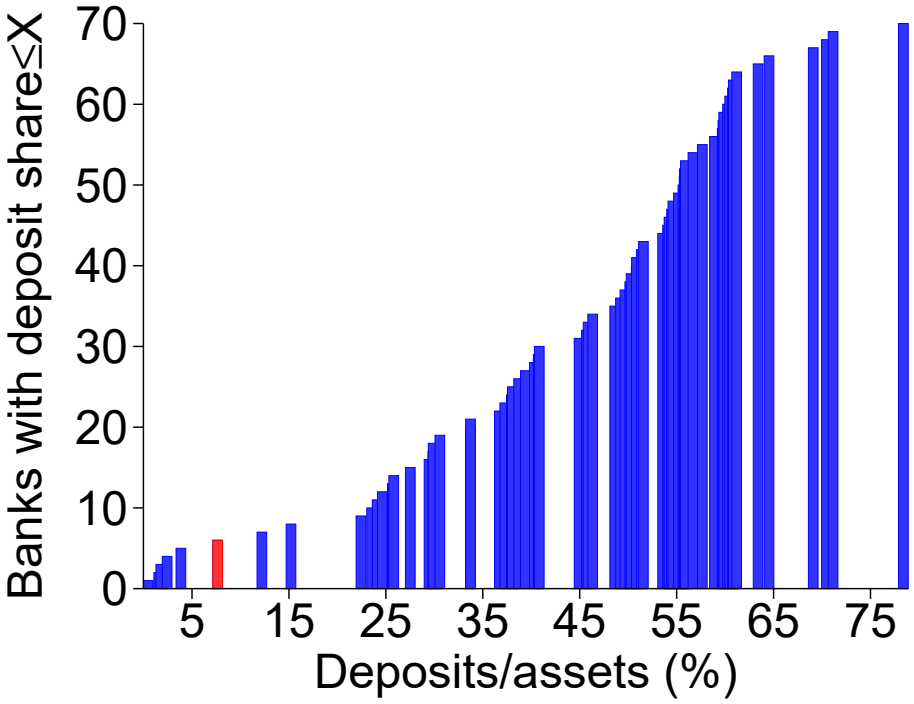

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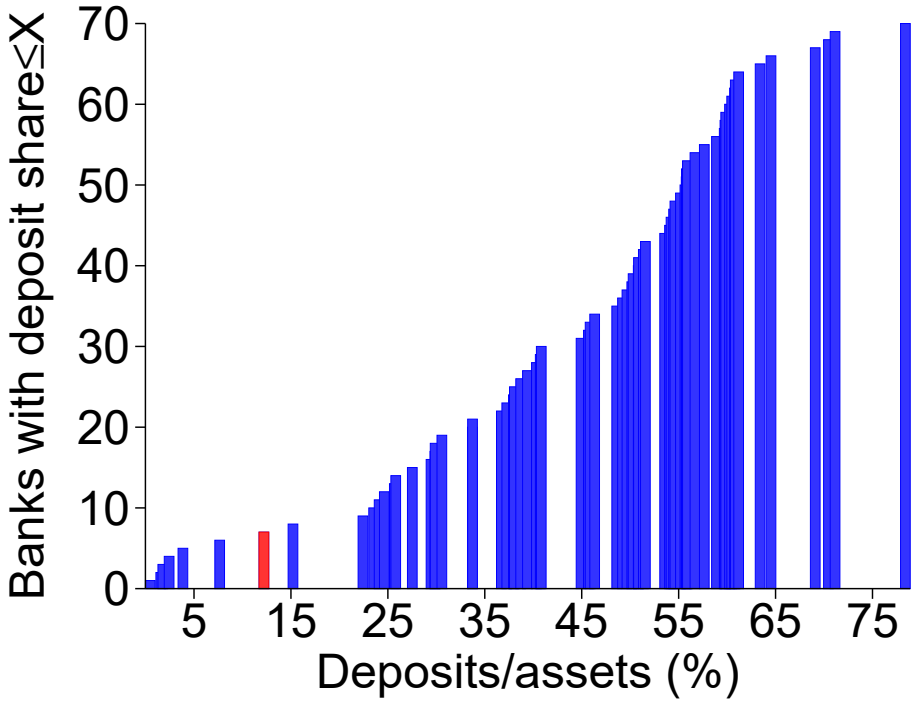

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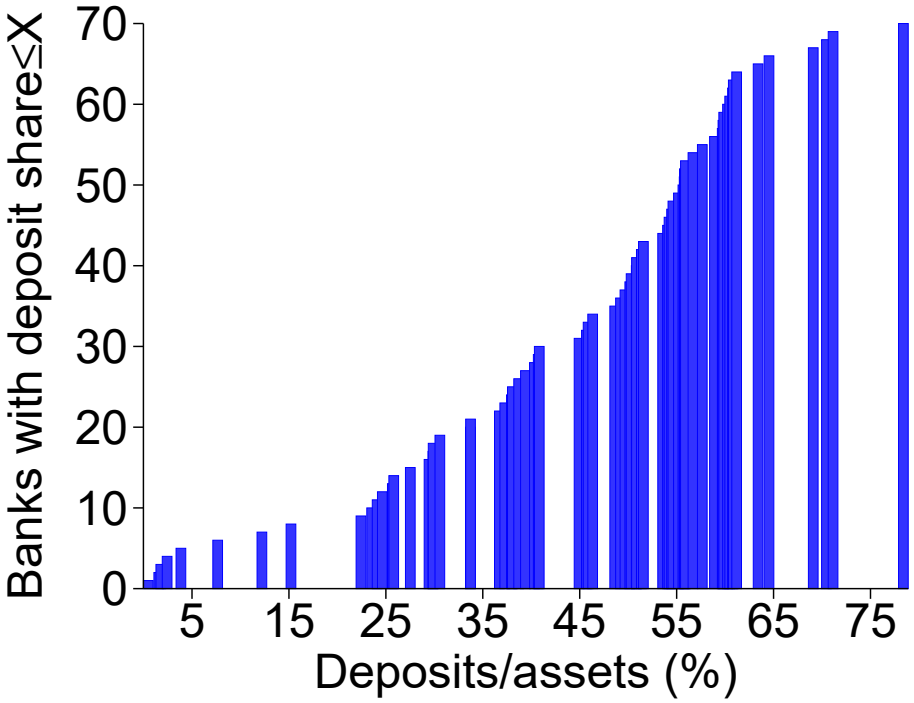

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- European banking sector in 2014 hardly in steady state.
- Suggestion: do robustness dropping state banks and dropping banks owned by governments due to bailouts.

Minor quibble

- 5 year s.d. of firm's return on assets as measure of riskiness:
  - Trailing 5 year period for main sample is 2007-14. Many things happening in Europe during that period.
  - Could banks with higher deposit bases invest more in soft information which could help disentangle sovereign crisis from borrower riskiness?
  - Is risk measure idiosyncratic? Basic finance says that's not a problem if bank diversifies (e.g. through syndication).
  - Maybe validate measure ex post using e.g. bank-level delinquency and charge-off data.
- Variance of stock return has similar issues.

Minor quibble

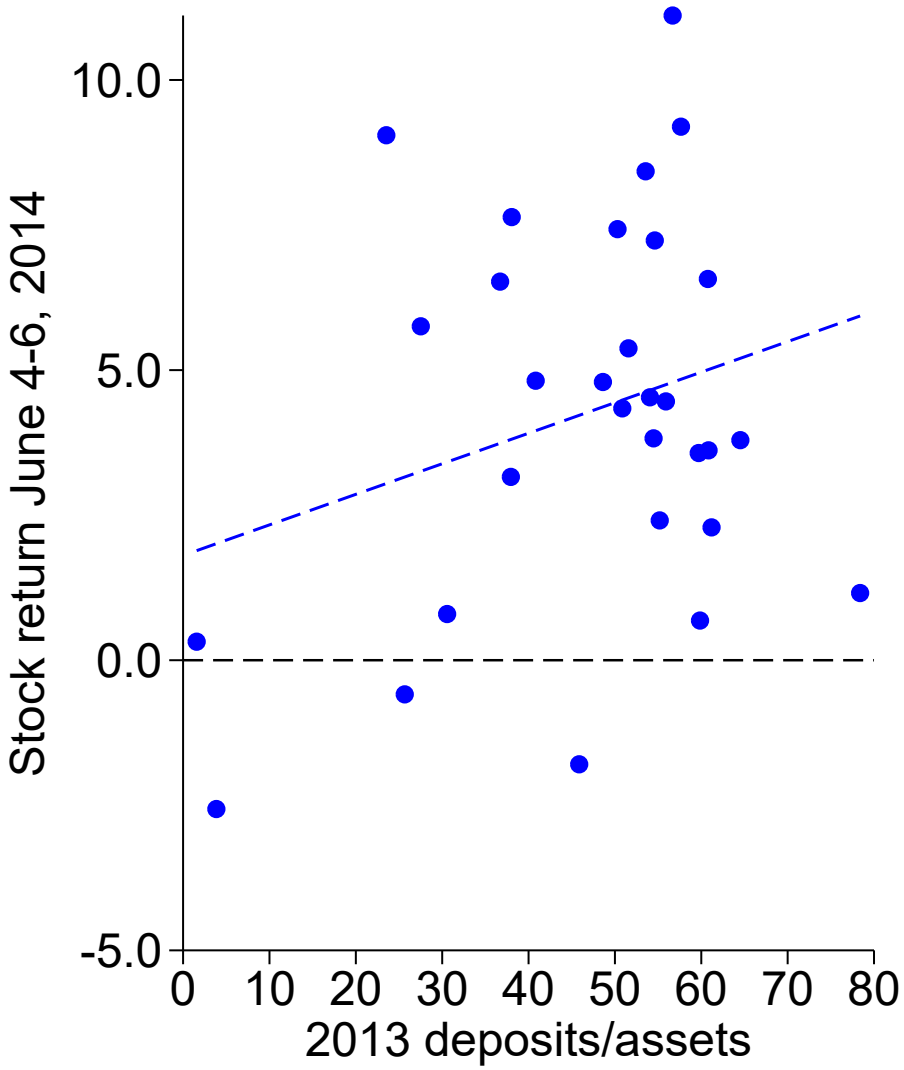
- Observation count varies across specifications due to data availability. Table 11 shows main effect is concentrated among private borrowers. Missing data also usually concentrated among private borrowers.
- Is absence of response of loan terms due to sample changing?
  - Main result: $N = 1576$.
  - Loan spread: $N = 791$.
  - Other loan terms: lead share ($N = 591$), covenants ($N = 2450$?), etc.

Minor quibble

- Placebo rate reduction is 25 b.p. cut on July 5, 2012.
- Other things happening around that period:
  - June 28: euro area countries endorse banking union in concept.
  - July 10: Eurogroup approves financial assistance for recapitalization of Spanish banks.
  - July 26: "the ECB is ready to do whatever it takes to preserve the euro."
- Portugal, Ireland, Greece still in Eurogroup programs.

Effects on Bank Equity

Announcement returns



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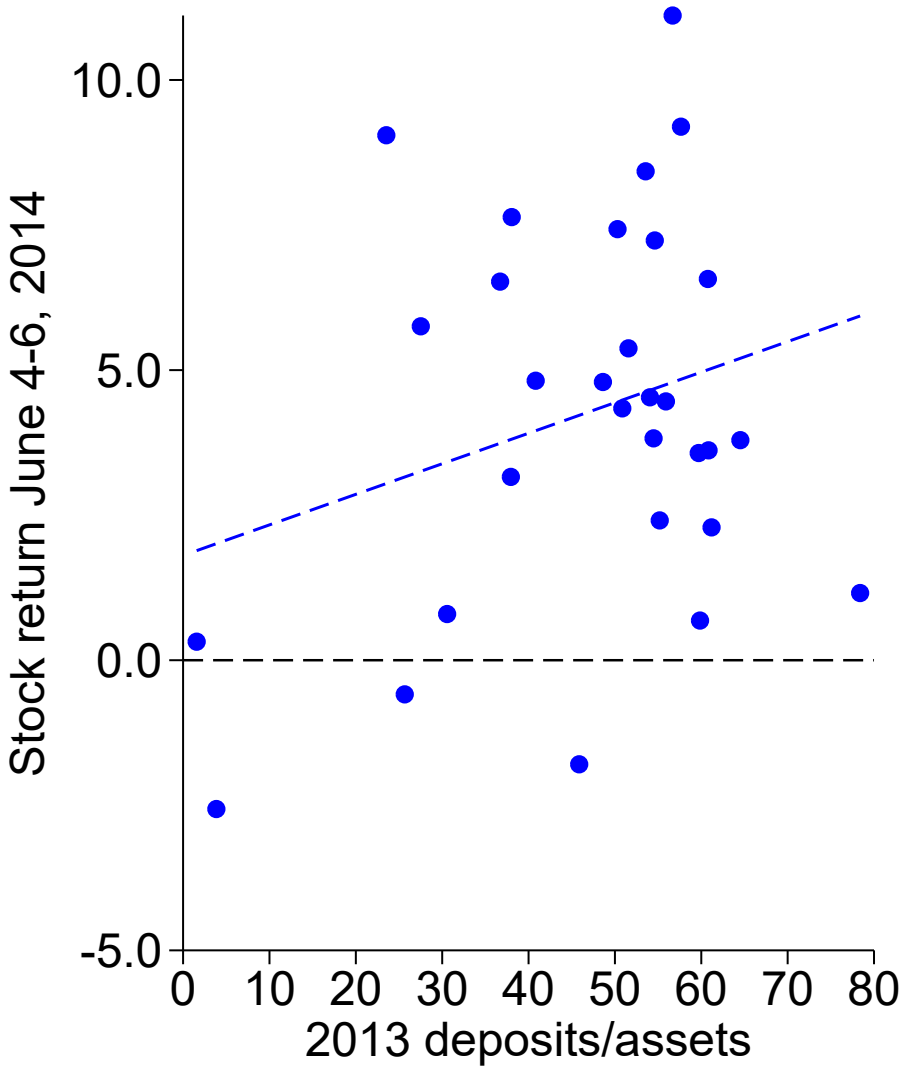
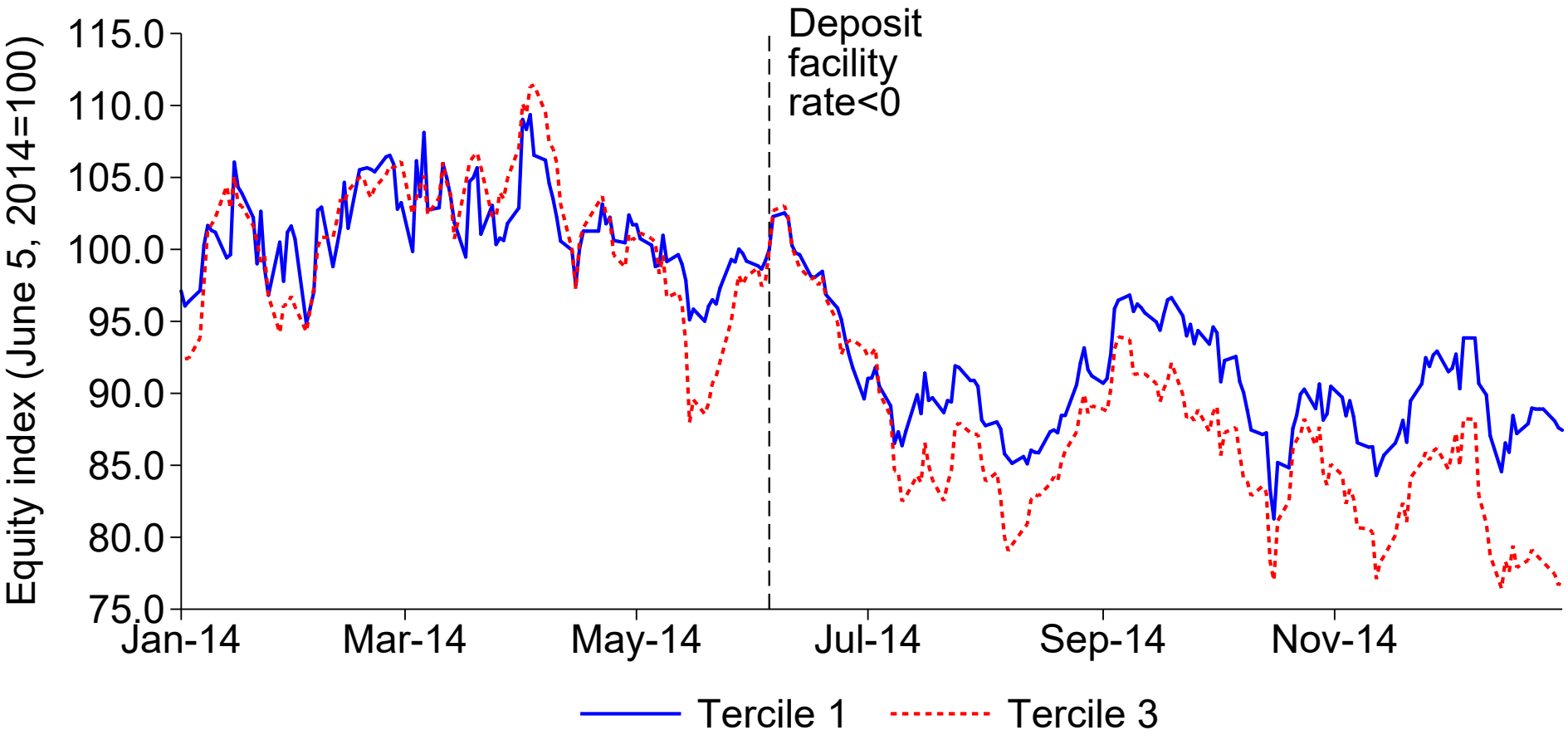


WSJ June 5, 2014 print edition: European markets stuck to their recent holding pattern Thursday while investors awaited the European Central Bank's policy announcement. The euro, which has weakened since ECB President Mario Draghi last month suggested that easing measures could be on their way in June, was steady against the dollar at $1.3610. **The central bank is widely expected to cut all its main interest rates at Thursday's meeting, including pushing its deposit rate into negative territory for the first time.**

Longer horizon returns



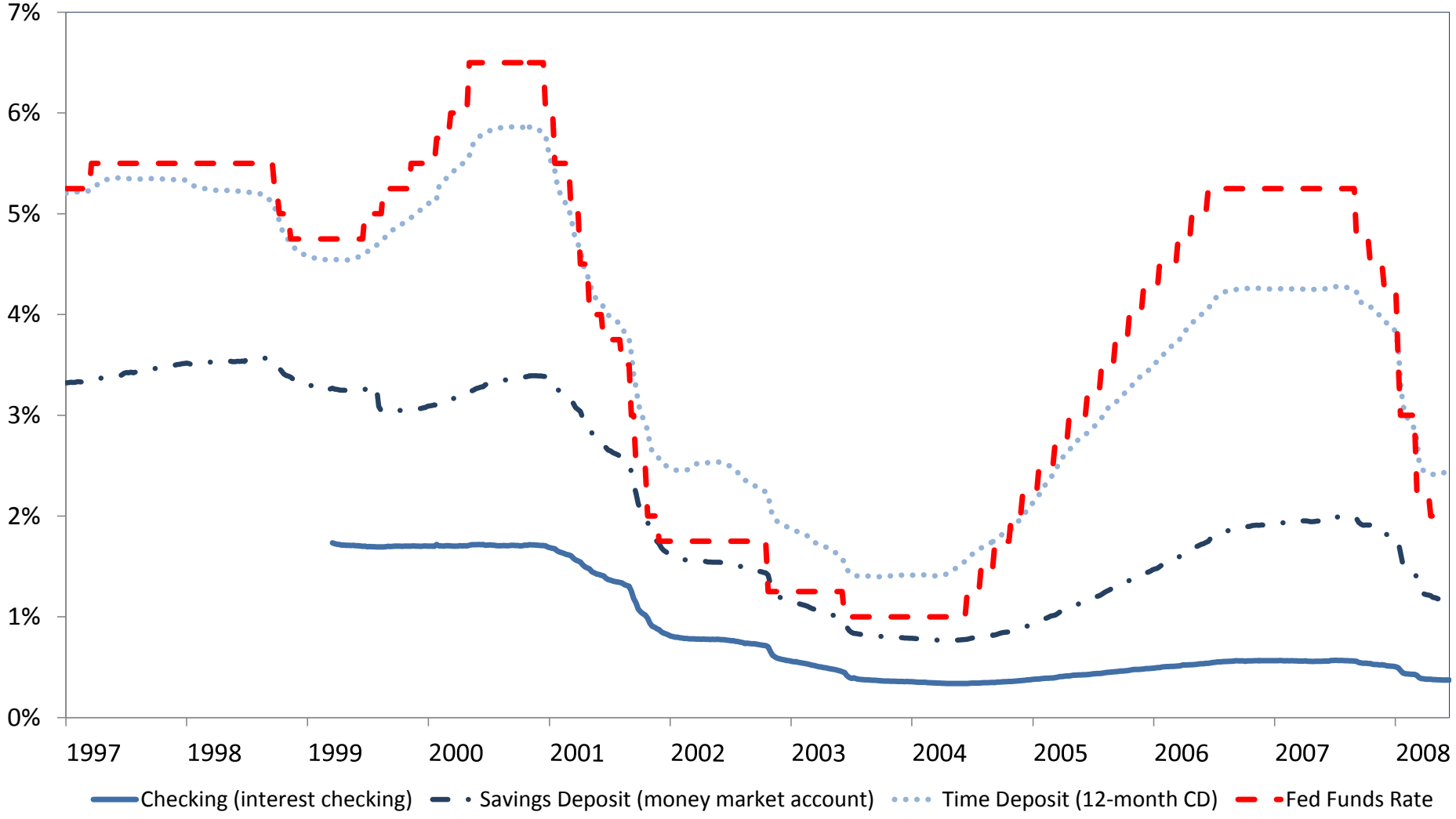
- Equal-weighted indexes of banks with stock price in Yahoo Finance grouped using terciles of HSS deposit reliance.

Summary

- All of economics goes through deposit share affecting bank equity.
- Effect of negative rates not unambiguous: $r < 0 \Rightarrow$ better macroeconomy $\Rightarrow$ higher loan repayment etc.
  - Consistent with positive responses of bank and life insurance equities to QE in U.S. (Chodorow-Reich 2014).
  - About overall effect. Cross-section result may still hold.
- Suggestion: identify all dates on which ECB actively changed expectations of rate cut. Run regression of high frequency (intraday) stock return on deposit share on those dates.

Is Going Negative Special?

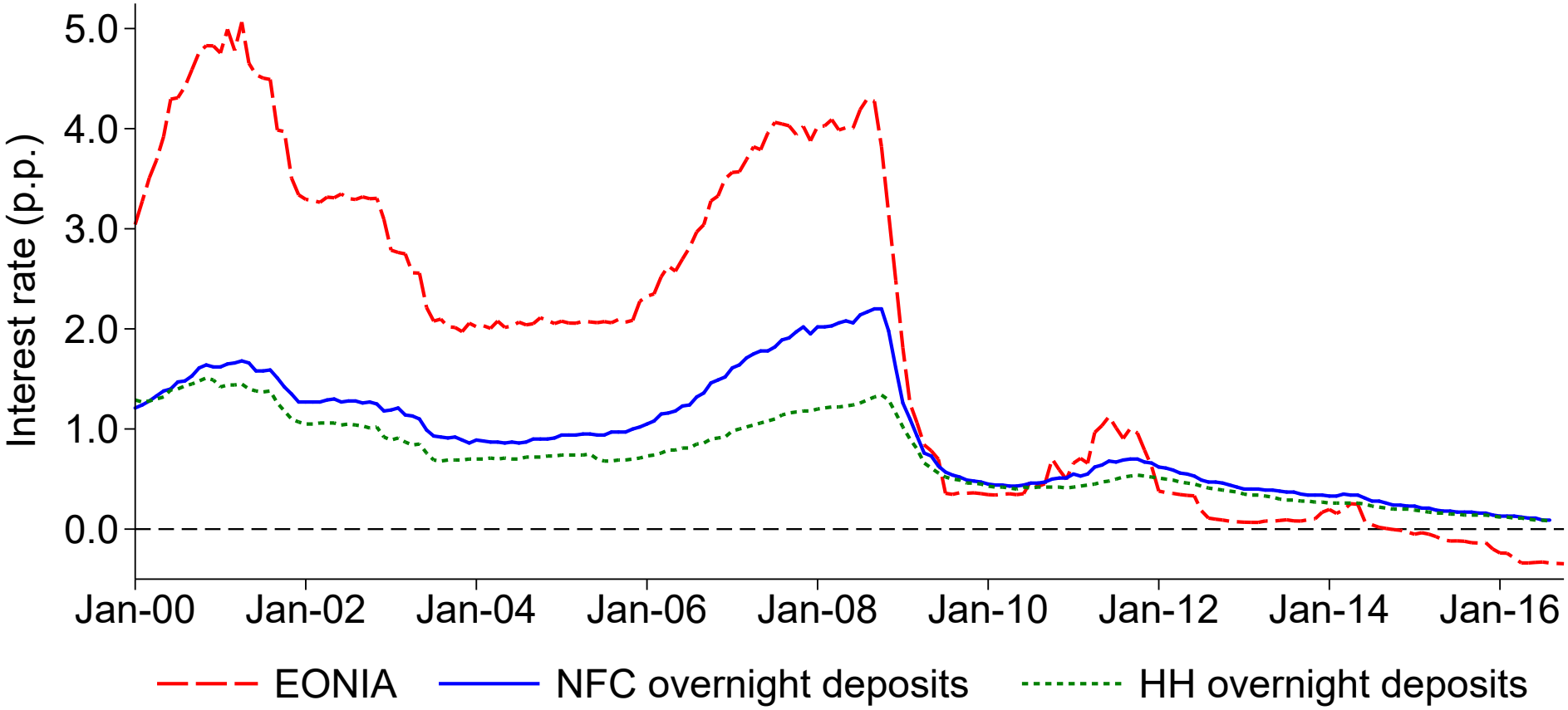
U.S. DEPOSIT RATES ARE STICKY



Source: Drechsler, Savov, Schnabl (2016).

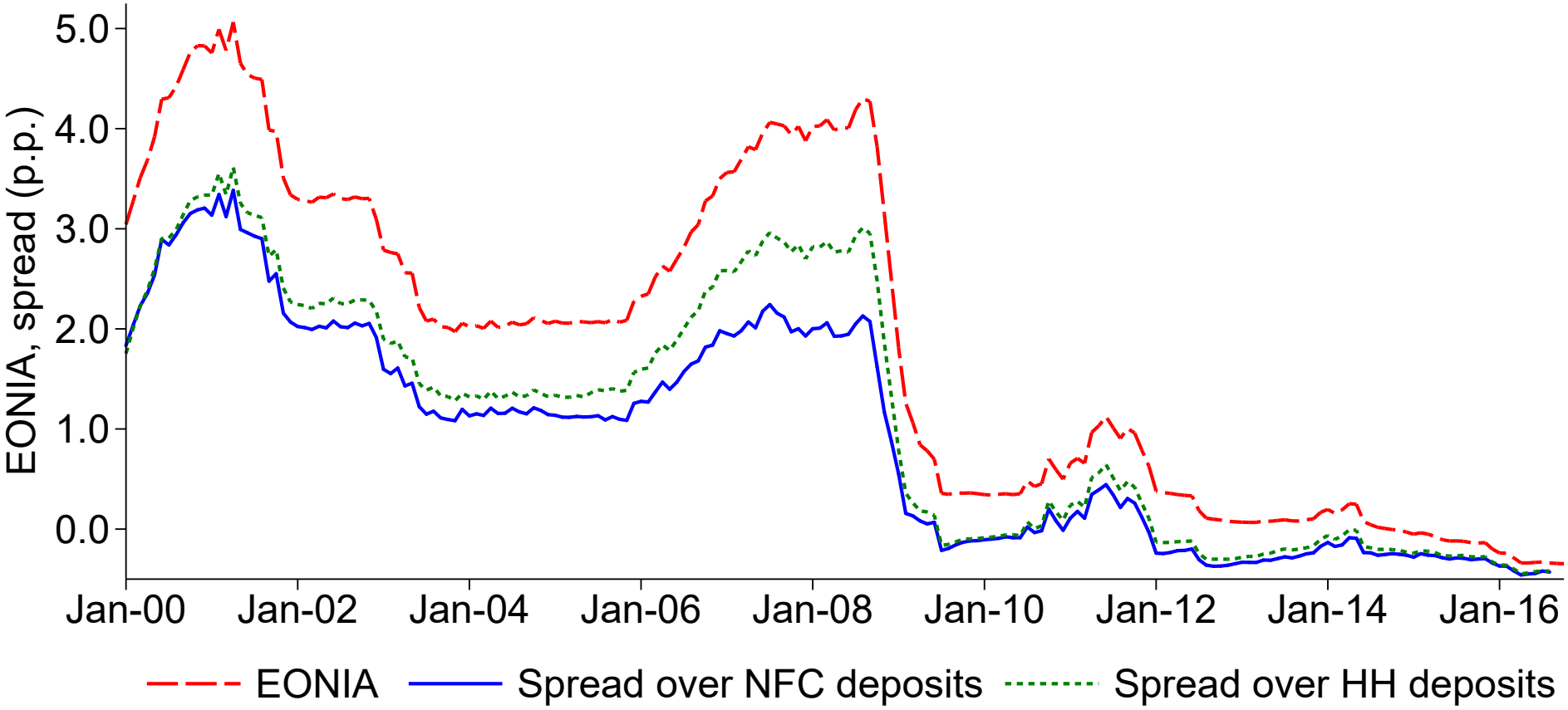
- Deposit rate sticky $\Rightarrow$ interest spread increasing in interest rates.

Euro area deposit rates are also sticky



- Figure 2 of HSS extended back to start of euro.

Interest spread collapses before negative rates



- Banks always earn higher spread when interest rates are higher.

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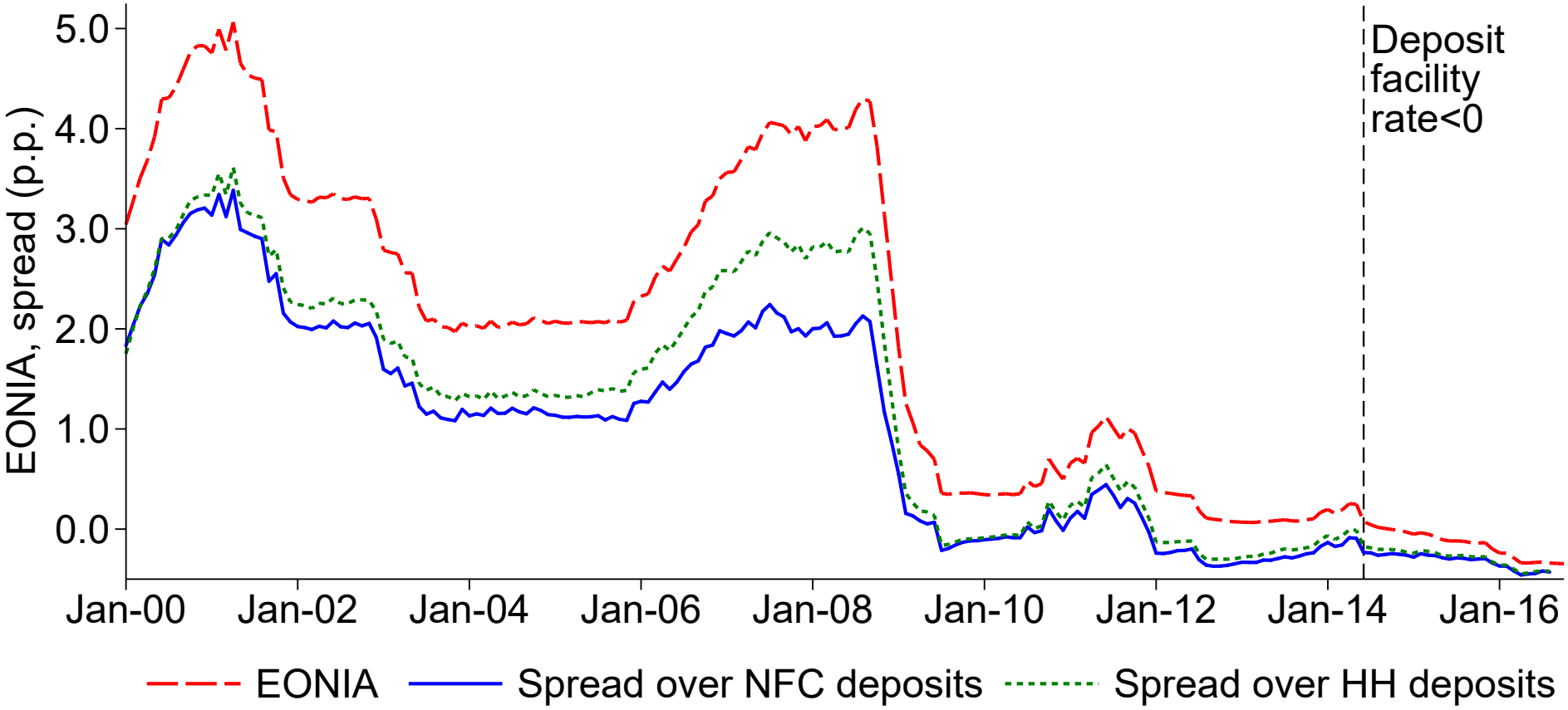

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U.S. MMFs at low interest rates

- Typical MMF structure (2006): "deposit rate"=3.86% = [4.40% gross yield] - [0.54% charged expenses].

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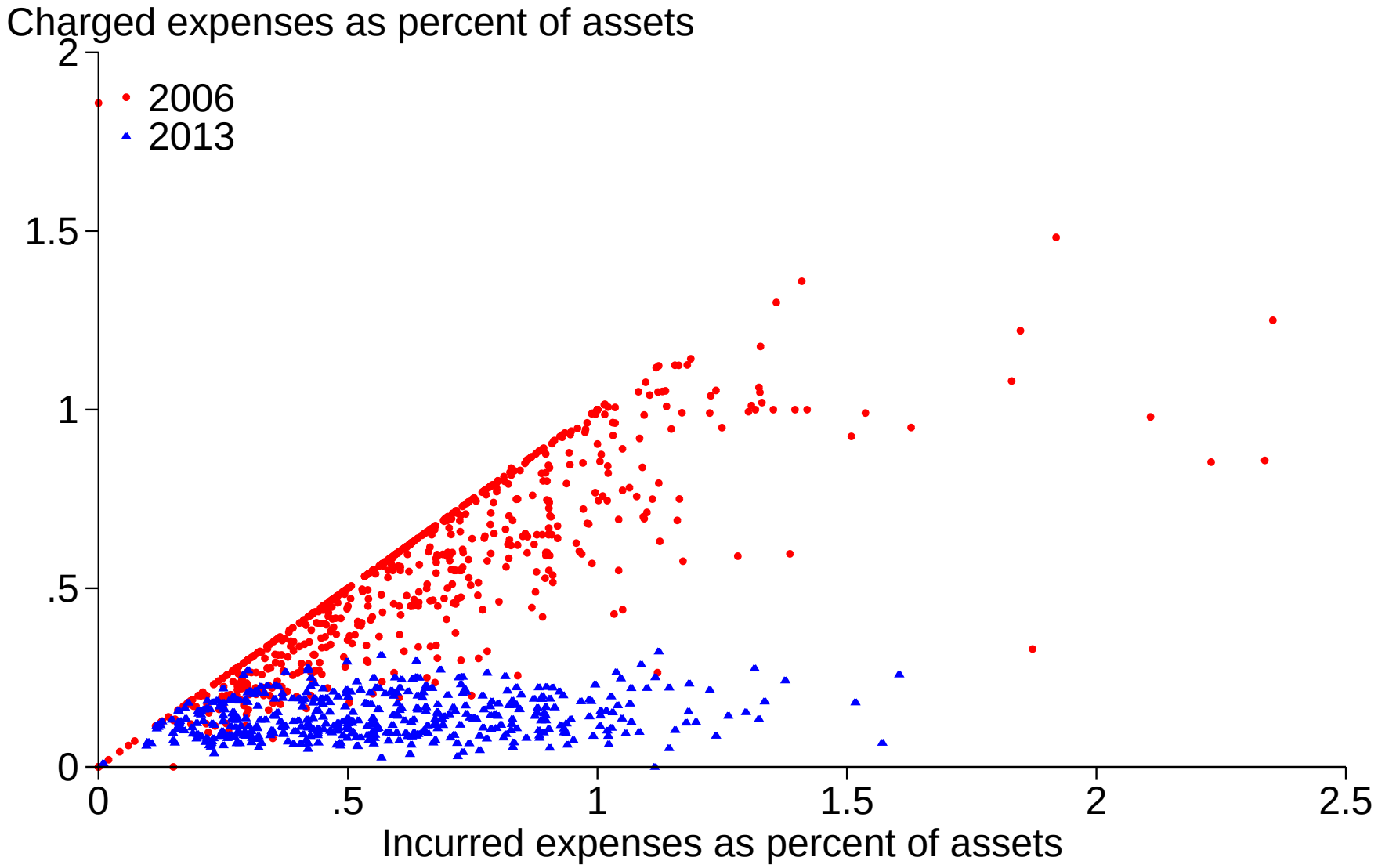
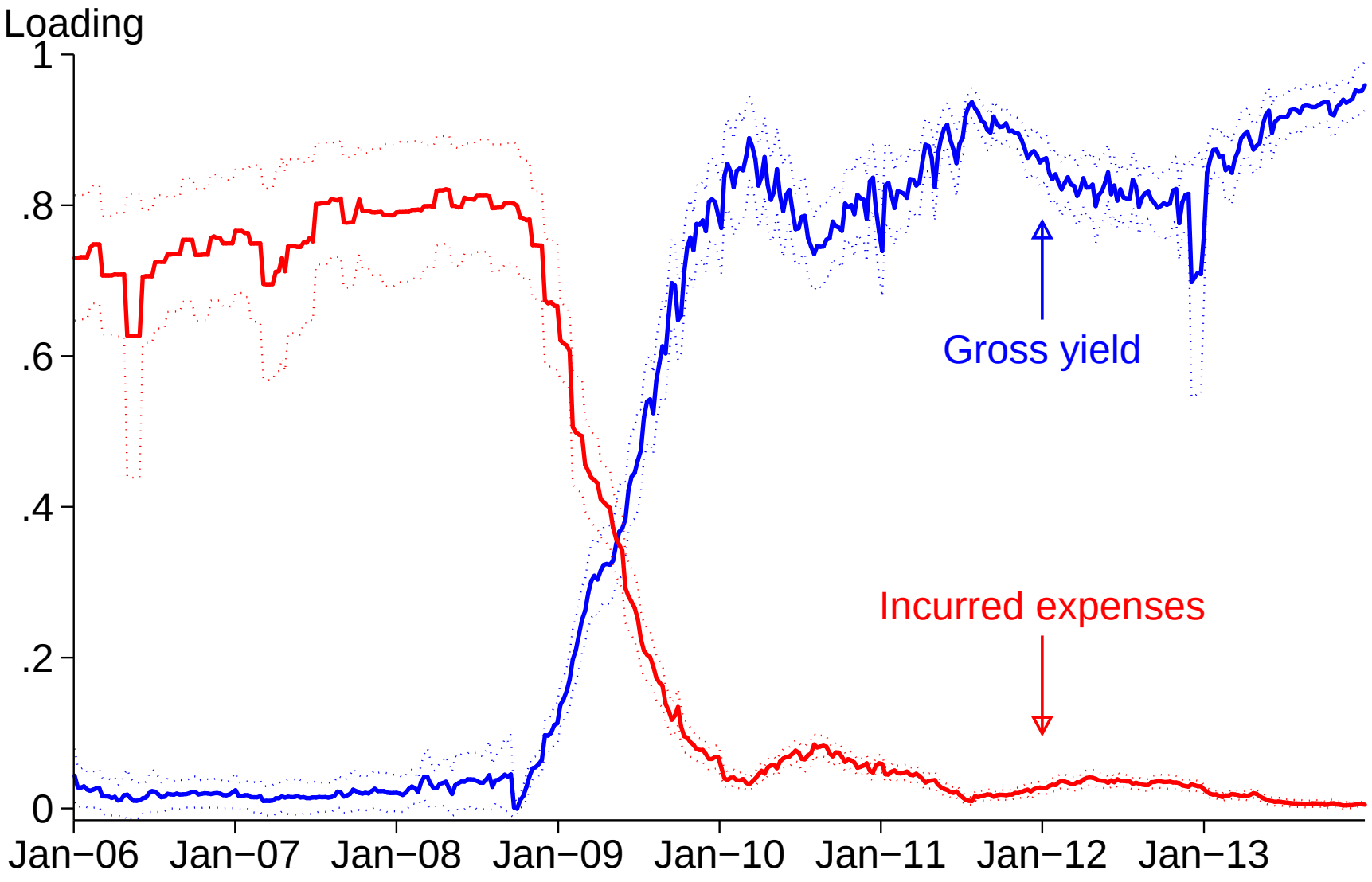
- MMFs with higher ex ante expenses less able to pass through decline in gross yield. Similar to banks with higher deposit shares.
- Chodorow-Reich (2014) studies risk-taking across MMFs with different expenses.

Low interest rates squeeze MMFs...



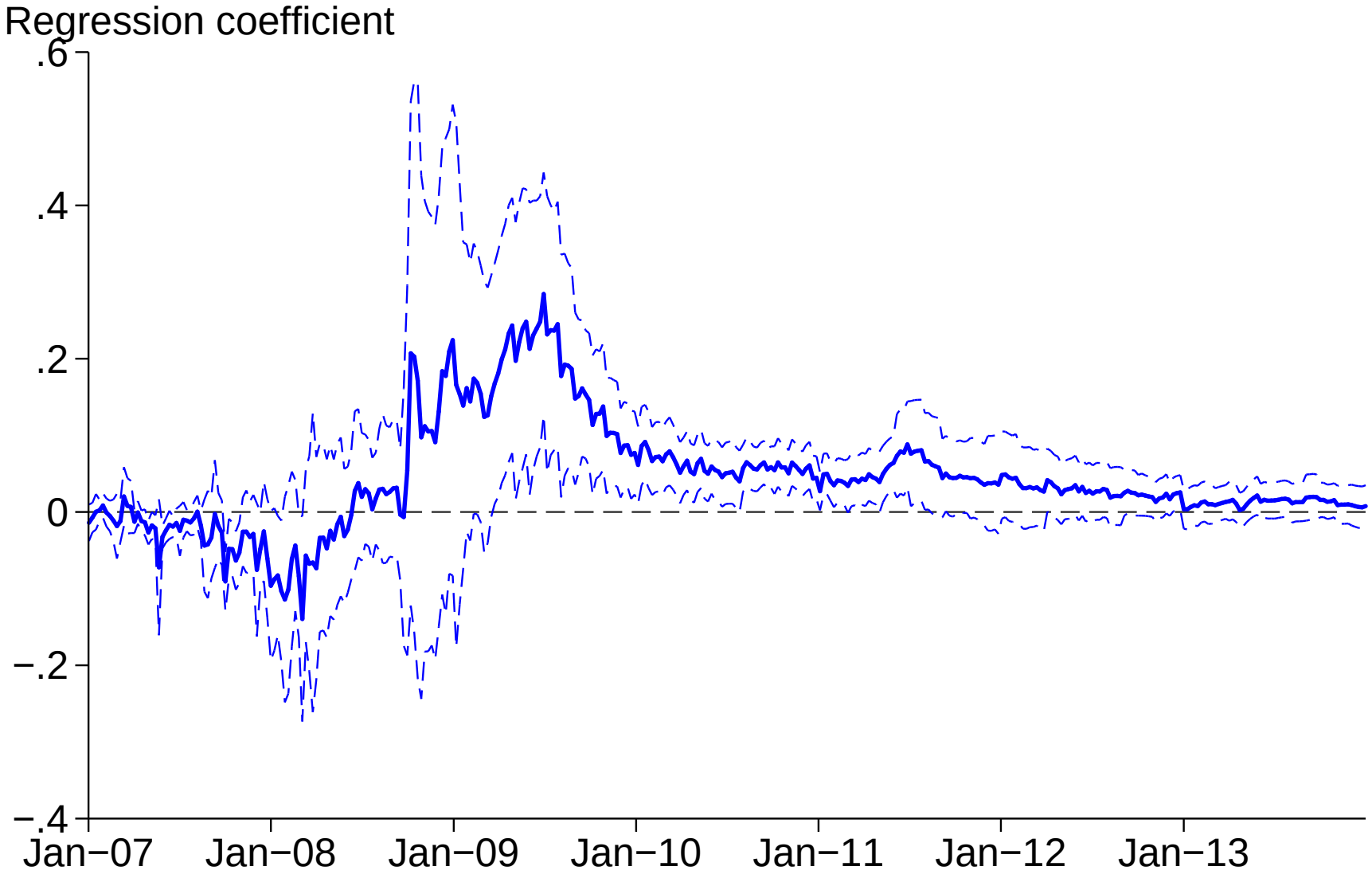
Source: Chodorow-Reich (2014).

Making charged fees dependent on yield...



$$\text{Charged}_{i,t} = \alpha_t + \gamma_t \left[\text{Incurred}_{i,t}\right] + \beta_t \left[\text{yield}_{i,t}\right] + e_{i,t}$$

Incentivizing high cost funds to seek yields



$$[\text{Gross yield}]_{i,t} = \alpha_i + \delta_t + \beta_t \left[\widehat{\text{Incurred}}\right]_{i,t} + \gamma_t' x_i + e_{i,t}.$$

Summary

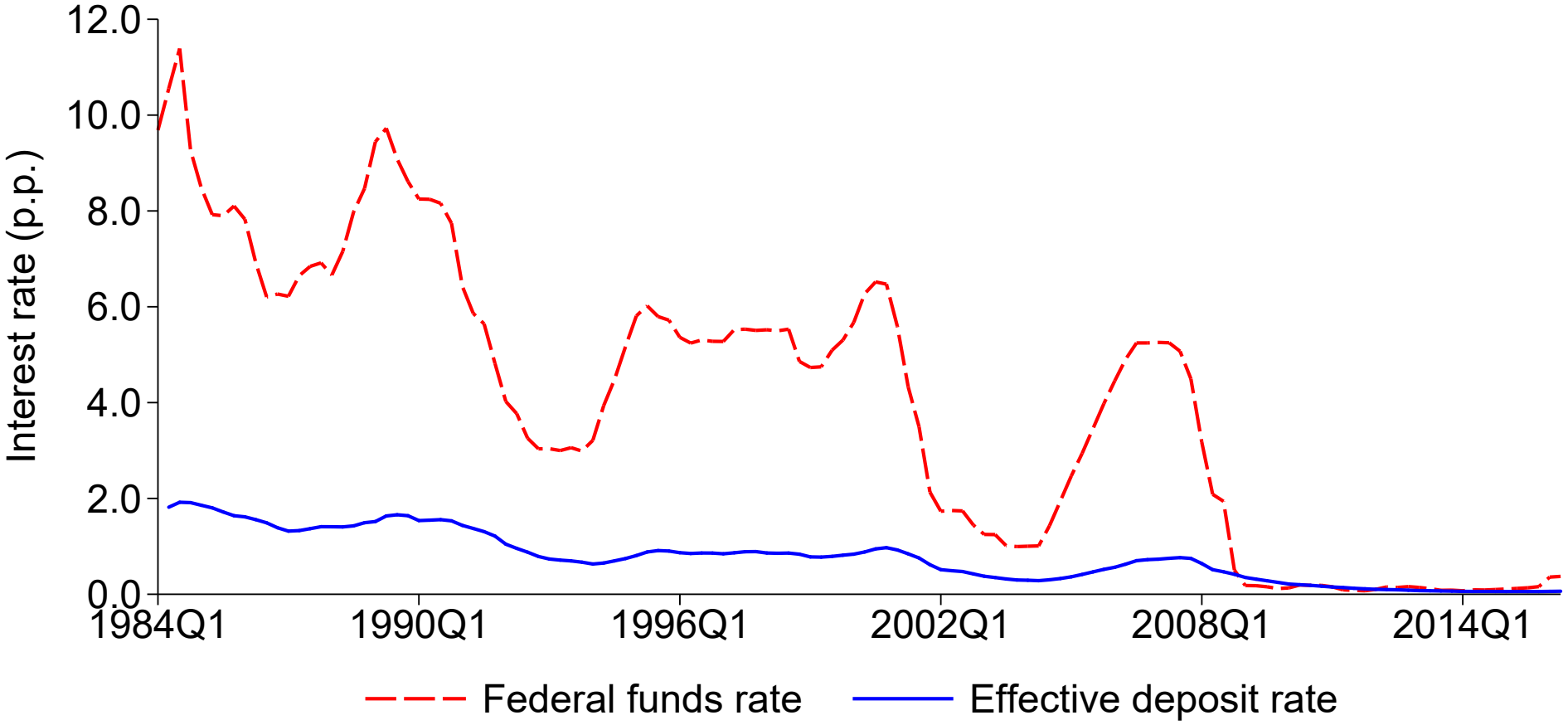
- Lots of attention paid to affect of negative interest rates on financial sector health.
- But all (unhedged) monetary policy actions affect financial sector health.
- Evidence at positive rates.
  - U.S. MMFs at near zero interest rates.
  - Gomez, Landier, Sraer, Thesmar (2016): cash-flow exposure of U.S. banks to interest rate risk predicts change in lending following interest rate change.

Conclusion

- HSS illustrate plausible story which has received a lot of attention.
- Could do more to bolster internal validity and to tie to bank equity valuation.
- I'm skeptical crossing zero is that special.

Appendix slides

U.S. EFFECTIVE DEPOSIT RATES ARE EQUALLY STICKY



- Actual interest paid by banks equally insensitive.