

Discussion: Banking on Deposits: Maturity Transformation without Interest Rate Risk

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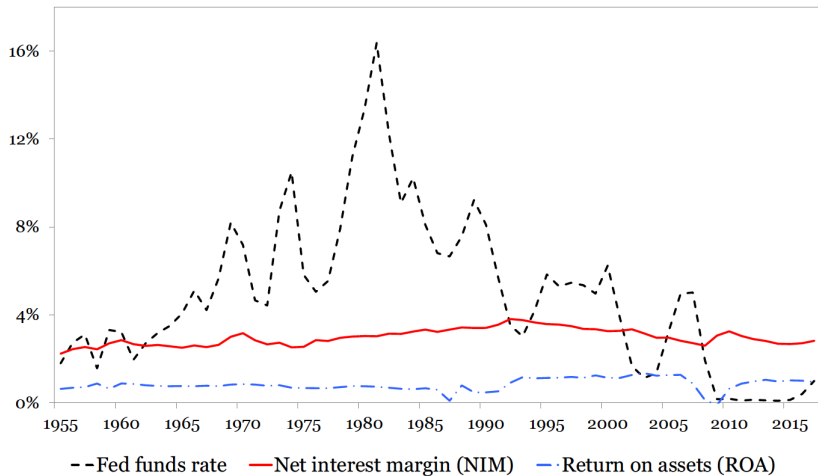
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Banks' Business Model: Traditional View

- ▶ Banks engage in maturity transformation: They borrow short term and invest long-term
- ▶ Textbook model: Banks engage in maturity transformation to earn the average difference between long- and short-term rates
- ▶ This exposes banks to interest rate risk
- ▶ An unexpected increase in the short rate makes interest expenses rise relative to income, reducing NIM

This Paper: Key Result



This Paper: The Bigger Picture

- 1 Banks invest in building a deposit franchise which gives them market power (DSS 2017)
- 2 Exploit market power by charging higher deposit spreads when interest rates rise
- 3 Make deposits akin to long-term debt
- 4 Leads banks to hold long-term assets, thus hedging their NIM and net worth

The Mechanism in a nutshell

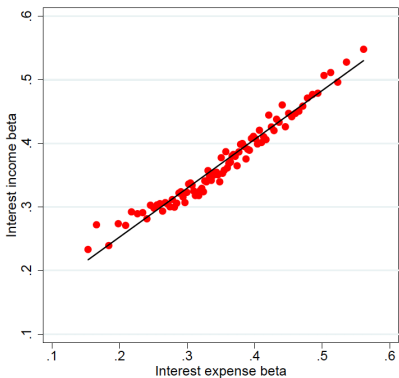
- ▶ NIM insensitive to changes in interest rates
- ▶ Compare interest rate sensitivity of interest income and interest expenses
- ▶ Interest income has low sensitivity to the short rate (expected since most assets are long-term)
- ▶ Interest expenses also have low sensitivity to the short rate (surprising finding)
- ▶ Suggested explanation: Market power through deposit franchise

The Mechanism in a nutshell

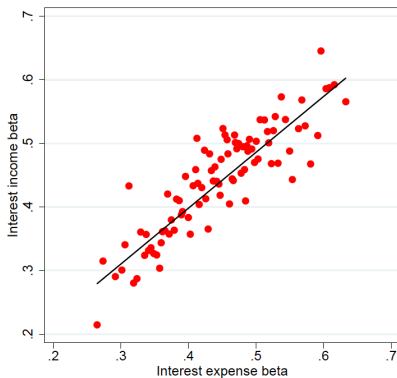
- ▶ Two key components:
 - 1 Market power implies that deposit rates are not determined competitively → no one for one increase with Fed Funds rate
 - 2 Building a deposit franchise incurs significant fixed cost → works like an interest rate swap → banks must hold long-term fixed-rate assets as hedge

Interest income vs expense beta

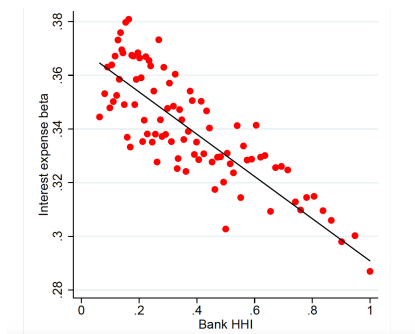
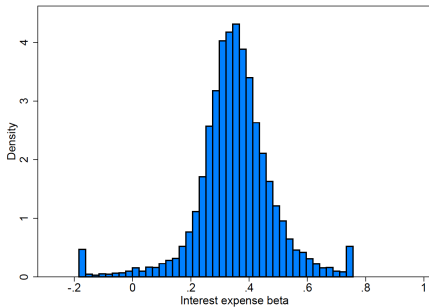
All banks



Top 5%



Market Power vs Expense beta



Overview

- ▶ Great paper that highlights a very plausible and novel channel for the stability of NIM and ROA
- ▶ My comments will be
 - 1 To exploit (even) more the time series and cross-section to complete the picture
 - 2 Is the effect symmetric?
 - 3 What happens at the ZLB/with negative interest rates?

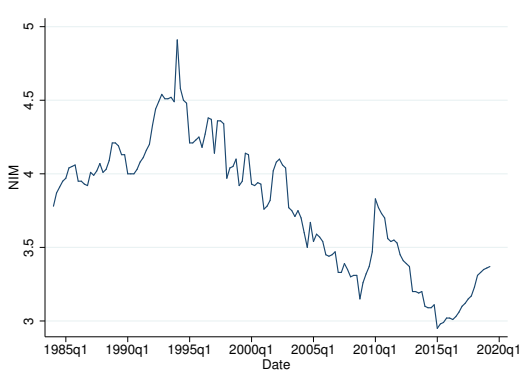
Bank Size

- ▶ What does the effect look like for “smaller” banks?
- ▶ Would help to get a more complete picture of the mechanism

	Δ Interest income rate							
	All banks		Top 10%		Top 5%		Top 1%	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\widehat{\Delta IntExp}$	0.765*** (0.033)	0.766*** (0.034)	1.012*** (0.083)	1.012*** (0.083)	1.114*** (0.099)	1.111*** (0.099)	1.096*** (0.068)	1.089*** (0.076)
$\sum \gamma_\tau$	0.093*** (0.031)		0.003 (0.042)		-0.053 (0.050)		-0.065 (0.050)	
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes	No	Yes	No	Yes
Obs.	1,126,023	1,126,023	89,832	89,832	44,584	44,584	9,833	9,833
Bank clusters	18,552	18,552	1,733	1,733	860	860	157	157
Time clusters	119	119	119	119	119	119	119	119
R^2	0.089	0.120	0.118	0.151	0.120	0.153	0.109	0.150

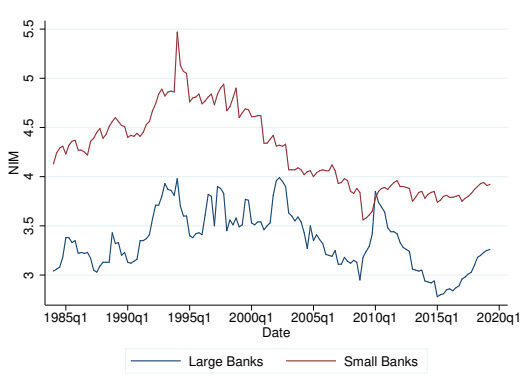
NIM over time

- ▶ NIM in the U.S. banking sector constantly declining since the mid 1990s



Bank Size

- ▶ “Smaller” banks drive most of the decrease
- ▶ No clear downward trend for larger banks



Exploit More Time Series and Cross Section

- ▶ Smaller banks
 - 1 have less (but not zero) market power
 - 2 rely more on deposit financing
- ▶ Yields ambiguous predictions on importance of the effect for smaller banks

	All Banks	Top 5%	Top 1%
$\frac{\text{Interest Bearing Deposits}}{\text{Assets}}$	0.717	0.588	0.467
$\frac{\text{Interest Expenses on Domestic Deposits}}{\text{Total Expenses}}$	0.468	0.366	0.281

- ▶ Smaller banks
 - 1 have lower interest expenses on deposits as a share of total expenses
 - 2 are more reliant on deposit financing (relative to more interest sensitive debt)

More Competition?

The strategy intensifies concerns on the eve of bank earnings season about the direction of a key profit measure for lenders — their net interest margins, the difference between what banks pay for funds and make on loans.

“It’s a super-competitive environment,” said Greg Demas, director of retail transformation at Popular, who said the bank required funds to expand. “With growth in assets comes a need for deposits. We wanted to put a rate out there that was attractive, that was going to attract money.”

- ▶ Decrease in NIM result of more competition?
- ▶ Competition between banks and from non-banks is increasing
- ▶ Decreases franchise value especially for smaller banks → expense β should increase over time

Bank Size

Despite the Federal Reserve's successive [rate increases](#), the largest US retail banks have managed to avoid passing on much of the benefit to consumers, a phenomenon known in the industry as a low deposit “beta”.

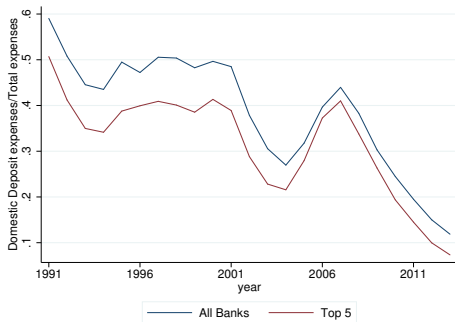
[Bank of America](#), for instance, paid an average 0.01 per cent on US savings accounts in the final three months of last year.

Executives at the biggest banks have argued that consumers value sophisticated online tools, national branch networks and other services that are provided only by the largest institutions just as much, if not more, than interest rates on deposits.

Source: Financial Times: Bank competition heats up for US customer deposits

- ▶ Large Banks have less deposit financing, but significantly more market power
- ▶ → Would expect difference in expense β between large and small banks to increase over time

Deposits Expenses less Important?



- ▶ Interest expenses on domestic deposits smaller share of total expenses over time
- ▶ Does this suggest that the deposit channel becomes less important over time

Implications

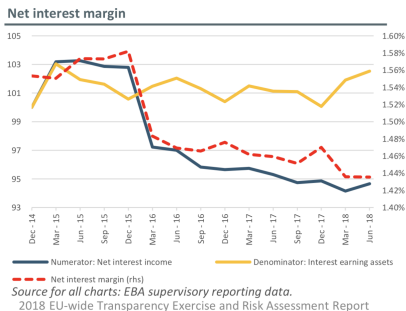
- ▶ Lower franchise value → less “hedging” with long-term assets needed over time (especially for small banks)?
- ▶ Does the asset composition for large and small banks evolve accordingly?
- ▶ Over time (small) banks should
 - 1 change asset composition
 - 2 hold more short term and/or less fixed rate assets
 - 3 see an increase in sensitivity of NIM to interest rate
- ▶ Would be interesting to see the effects for different subperiods

Is the Effect Symmetric?

- ▶ Banks with high market power on deposit side should
 - ① increase deposit rates less when fed funds rate increases
 - ② decrease deposit rates more when fed funds rate decreases
- ▶ To achieve a match of interest income and expense sensitivity, it should be that banks with market power in the deposit market also have market power on the asset side
- ▶ Hence, does a low expense β lead to a higher level of profits/ROA for these banks?

Outlook: Can Banks Still Do it at the ZLB?

EU banks' **net interest income (NII)** has continued its **declining trend** in recent quarters (almost -1% compared with the same period of 2017), despite growing lending volumes. This was driven by a **decreasing net interest margin**, reaching 1.44% in June 2018 (the lowest since the supervisory data has been collected).



- ▶ Hardly any downward adjustment possible for retail deposits (other than fees)
- ▶ BIS suggests that banks compensate for thin lending margins by leaning on fee-based income, or dialing up the amount of risk they take

Outlook: Can Banks Still Do it at the ZLB?

- ▶ Once interest rate drops to/below zero, no more adjustment of deposit rate to changes in interest rate
- ▶ Leads to a decoupling of deposit rate and interest rate for all banks (independent of market power)
- ▶ Is there a corresponding decoupling of interest income and interest rates on the asset side?

Conclusion

- ▶ Great paper that sheds light on a completely new mechanism how banks manage interest rate risk
- ▶ Very convincing results that leave little room for alternative interpretations