

The Deposits Channel of Monetary Policy

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Transmission of monetary policy

- ▶ With financial frictions in credit market
- ▶ Credit channel
 - ▶ Balance sheet channel
 - ▶ MP affects the cost of borrowing through its effect on borrowers' net worth
 - ▶ Bank lending channel (affecting supply of credit)
 - ▶ costly to substitute deposit funding
 - ▶ increase in M / relaxe reserve req. → more deposits
→ more bank loans
 - ▶ impact moderated by bank capital

This paper: deposit rate channel

- ▶ Assumes
 - ▶ imp. competition in deposit markets among diff. banks
 - ▶ competition from cash (good substitute when rates are low) and bonds (bad substitute)
- ▶ MP influences degree of competition
- ▶ Mechanism:
 - ▶ increase in FFR increases banks' market power (supply shock)
 - ▶ deposit spread (FFR—deposit rate) widens
 - ▶ reduction in deposits as households substitute towards rel. less liquid deposits/ bonds
 - ▶ bank lending channel effects after fall in deposits

Empirical Findings

- ▶ Data (1994/8-2008)
 - ▶ commercial banks: branches & consolidated
 - ▶ branch level deposit rates from Rate-watch
- ▶ Findings
 - ▶ FFR increases passed-through less in concentrated deposit markets (Neumark and Sharpe, QJE 1992)
 - ▶ higher deposit spreads & higher outflows
 - ▶ Nature of data allows them to rule out many alternative (e.g. demand, news driven) stories
 - ▶ 100 bp increase in the FFR (relative to competitive counties)
 - ▶ 1.5% larger outflow in total deposits
 - ▶ dep spread go up by 5-12 bp
 - ▶ reduces assets by 100bp & mortgages by 70 bp

Discussion

- ▶ Imperfect competition in deposit provision plausible
- ▶ Relevance for monetary policy depends
 - ▶ loan share of banks most affected by policy
 - ▶ funding alternatives to deposits
 - ▶ alternatives to banks
- ▶ Bank-level regressions

Replication

Log Growth	Deposit		Assets	
	(1)	(2)	(3)	(4)
$\Delta FF \times Hfd$	-1.84 (.2)	-1.58 (.2)	-1.33 (.18)	-1.05 (.18)
R^2	0.009	.01	0.009	.016
bank & qrt f.e.	Y	Y	Y	Y
bank char.	N	Y	N	Y
Obs	358,669	358,669	358,669	358,669

FDIC commercial bank level sample from March 1997 to June 2008. Bank-level Herfindahl calculated using county-level Herfindahl indices weighted by lagged branch-level deposits. Main effects are included in the regression. Standard errors are clustered at the bank level.

Concentrated banking sector

- ▶ Small banks (in the bottom 75 pctile) hold
 - ▶ 8.5% of assets
 - ▶ 8% of loans
 - ▶ 10% of deposits
 - ▶ 2% average asset growth
- ▶ Large banks (in the top 25 pctile) hold
 - ▶ 91.5% of assets
 - ▶ 92% of loans
 - ▶ 90% of deposits
 - ▶ 3% average asset growth

Bank size matters

Log Growth	Deposits		Assets	
	Small	Large	Small	Large
$\Delta FF \times Hfd$	-1.48 (.19)	-.81 (.84)	-1.03 (.16)	-.15 (.78)
R^2	0.015	0.01	0.011	0.07
bank & qrt f.e.	Y	Y	Y	Y
Obs	269,027	89,642	269,027	89,642

FDIC commercial bank level sample from March 1997 to June 2008. Bank-level Herfindahl calculated using county-level Herfindahl indices weighted by lagged branch-level deposits. Main effects and bank characteristics are included in the regression. Standard errors in brackets are clustered at the bank level. Note: Small banks hold assets in the bottom 75 pctile- Large banks are in the top 25 pctile.

Effect of MP & Market Concentration

- ▶ Small banks: strong effects but small lending share
- ▶ Large banks: small effects but high lending share
 - ▶ Caveat: Herfindahl index using deposit shares perhaps imprecise measure of market power for large banks?

Alternatives to Deposit Funding

Log Growth	Repo		Other borrowed M	
	Small	Large	Small	Large
$\Delta FF \times Hfd$	2.86 (1.72)	10.78 (8.54)	6.66 (2.45)	13.53 (10.7)
R^2	0.01	0.05	0.03	0.06
bank & qrt f.e.	Y	Y	Y	Y
bank charact.	Y	Y	Y	Y
Obs	269,027	89,642	269,027	89,642

- ▶ Alternatives to deposits used
- ▶ Would be interesting:
 - ▶ explore large banks' access to other sources of funds
 - ▶ fund. cost still exposed to changes in FFR

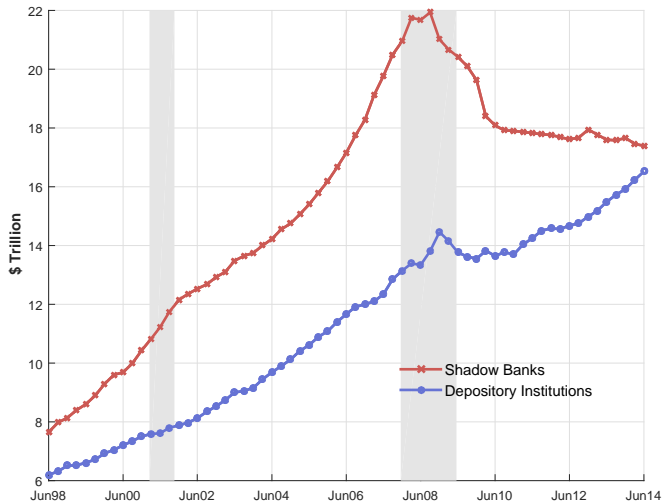
Effect on Net Interest Income

Increase in FFR rel. to competitive counties:

- ▶ larger outflow of assets & deposits
- ▶ increase in spread (as authors show)

Log Growth	Net Interest Income		
	Small	Large	All
$\Delta\text{FF} \times \text{Hfd}$	4.96 (.67)	-2.31 (1.25)	4.27 (.58)
R^2	0.92	0.96	0.93
bank & qrt f.e.	Y	Y	Y
bank char.	Y	Y	Y
Obs	269,027	89,642	358,669

Alternative to banks: Fin assets by sector



Conclusion

- ▶ Very nice paper with interesting implications
- ▶ Insightful exploration of MP effects on the supply of deposits when banks have market power
- ▶ Convincing story for small banks
 - ▶ increase in profits, outflow of deposits, balance sheet reduction
- ▶ Suggest further exploration of channel's importance for large banks