

DEPOSIT INSURANCE, DEPOSIT FLOWS AND BANKING

Discussion

by

Anjan Thakor

John E. Simon Professor of Finance, Director WFA Center for Finance and
Accounting Research.

Olin Business School, Wash U

OVERALL SUMMARY OF KEY INSIGHTS FROM PAPERS

- All three papers deal empirically with what happens when you either increase or decrease deposit insurance coverage.
- This is important both from a research standpoint and from a policy standpoint as we wrestle with the question of the *socially optimal* deposit insurance coverage.

Papers	When you Increase Deposit Insurance Coverage	When You Decrease Deposit Insurance Coverage
1) Cucic et al		<ul style="list-style-type: none"> • Depositors withdraw uninsured deposits and allocate deposits across multiple banks to stay under coverage limit • This benefits the banks most affected by 2007-09 crisis – they raise interest rates more to attract funding flows. • Reallocation has real consequences - more affected banks increase lending to less profitable and productive firms with higher <i>ex-post</i> default rates.

Papers	When you Increase Deposit Insurance Coverage	When You Decrease Deposit Insurance Coverage
2) Palvia, Shoukry and Stone	<ul style="list-style-type: none"> • Staying within Transaction Account Guarantee (TAG) program helps to strengthen growth in non-interest-bearing deposits (NIBDs). ⇨ Banks exiting this expanded deposit insurance program experience persistent NIBD declines. • When there is risk-based pricing of fee to participate in TAG, those facing higher premia opt out of program and face NIBD decline. • Weak NIBD growth encourages banks to stay in expanded insurance TAG program. 	

Papers	When you Increase Deposit Insurance Coverage	When You Decrease Deposit Insurance Coverage
3) Kim, Kundu and Purnanandam	<ul style="list-style-type: none"> • <i>De facto</i> increase in coverage through Reciprocal Deposits (RD) allows banks to attract more deposits while offering lower interest rates • It allows banks to get bigger • Bank increase interest rate risk. 	

THE COMBINED MESSAGE

- **When you *increase* deposit insurance coverage:**
 - 1) You allow depositors to *reduce* the number of banks they need to deposit with and *not* have to allocate their deposits across multiple banks.
 - 2) You strengthen the inflow of non-interest-bearing deposits (NIBDs).
 - 3) You induce banks to get bigger and take more risk.
- **But *reducing* the coverage can also have adverse risk consequences as:**
 - 4) Reallocation of deposits across more banks encourages some banks to compete more aggressively for deposits by offering higher rates, and this *leads to lending to riskier firms*.

COMMENTS ON INDIVIDUAL PAPERS

Cucic et al: “Distortive Effects of Deposit Insurance: Administrative Evidence from Deposit and Loan Accounts”

Overall

- Very nice paper that uses a nice natural experiment based on Danish data. During 2007-09 crisis, Denmark fully guaranteed all bank liabilities. Then after the crisis, in accordance with EU Directive, *reduced* coverage to \$100,000, so...20% of all retail accounts left without guarantee.
- Paper looks at retail deposit and corporate loan accounts during 2005-16 plus bank-level supervisory information and detailed information about account holders.

- Danish banks were *not* directly exposed to US mortgage crisis, but 2008 events meant there was a *wholesale funding shock* for Danish banks.
- Banks' exposure to this shock is proxied by loans/deposits ratio
- Higher ratio \Rightarrow greater exposure.
- *Dichotomous variable*: If you are in top 25% based on this ratio, you are exposed. If in bottom 75%, not exposed.

Main Results

- 1) Decrease in deposit insurance limit led to depositories reallocating their deposits across multiple banks.
 - Depositors disproportionately channeled uninsured deposits into insured deposit accounts at the *more exposed* banks as these banks increased rates more to compensate for funding shortfall due to wholesale funding market freeze.

- 2) Exposed banks made more risky loans ... by *continuing* their lending to less productive firms that would have been cut off had the wholesale funding of these banks shrunk.
- 3) The less profitable firms that received this (higher) continuation funding also showed more exit
 - ⇒ Redirection of credit away from more productive firms led to:
 - decline in TFP
 - decline in aggregate output

Assessment/Comments

1) Why a dichotomous exposure variable?

Why not continuous?

2) Exposed banks had lower Tier-1 capital ratios ... so documented effects are consistent with banking theories which say that banks with more capital:

- screen and monitor loans better (Holmstrom and Tirole (*QJE*, 1997), Coval and Thakor (*JFE*, 2005), and Mehran and Thakor (*RFS*, 2011)).
- take less risk (Merton (*JBF*, 1977))
- make better loans (Holmstrom and Tirole (*QJE*, 1997)).

1) The paper needs to explicitly articulate its research question (RQ). I framed it as: *How do depositors and banks react to a reduction in the deposit insurance coverage and how does this affect bank lending behavior?*

10

- 4) Paper needs to delineate its marginal contribution relative to Perignon, Thesmar and Vuillemeys (*JF*, 2018). They study uninsured ST funding (wholesale) funding market for deposits in Europe and conclude that there was NO market wide freeze during 2008-14 ... But many banks (mainly with *lower capital ratios* and poorer future performance) experienced funding dry-ups.
- 5) The paper needs to provide a better theoretical foundation for what we should expect as the baseline results and how to interpret the actual results
 - Acharya and Naqvi (*JFE*, 2012) provide a theory in which banks have an *endogenous* incentive to “buy” liquidity by increasing interest rates on deposits, and how this sows the seeds for a subsequent crisis.

- Merton and Thakor (*JFI*, 2019) provide a theory in which even risk neutral depositors value deposit insurance (and will accept lower rates) because they are customers who wish to be insulated from the bank's idiosyncratic risk
- + Earlier-mentioned theories.
- So, excellent paper that can be improved ... highly recommend reading it.

Palvia, Shoukry & Stone: “Deposit Insurance and Bank Funding Stability: Evidence From the TAG Program”

Overall

- Very thought-provoking paper on the effect of the TAG program on NIBD funding.
- Rich in institutional detail.
- Careful in dealing with endogeneity concerns and providing causal evidence.

Main Results

- Basically the paper shows that targeted deposit insurance protection during a crisis can stem deposit outflows ... and that banks value this protection.
- During 2008, many NIBDs were *above* the deposit insurance limit. So TAG created in 2008 – expired December 2010.
- Voluntary participation.
- **3 main results:**
 - 1) TAG led to an increase in NIBD funding. Banks opting out of TAG experienced persistent declines in funding relative to those that stayed in.

- 2) During TAG extension, participants were charged different risk-based fees.
 - Those facing higher premia opted out.
 - Decline in NIBD post exit.

- 3) Weak NIBD growth (where market NIBD growth is used – it affects bank NIBD growth) causes banks to stay in TAG.
 - *The banks have lower capital ratios.*

Assessment/Comments

- 1) Very nice paper. Endogeneity concerns (e.g. risk choice, decision to stay in TAG or opt out, and even NIBD growth are all *endogenously to-determined*) are nicely dealt with.

- 2) Execution is better than motivation. Need to explicitly articulate the RQ. “In this paper we study the implications of the TAG program for bank funding ---” is NOT an RQ.

I framed it as:

What are the attributes of banks that seek greater deposit insurance coverage when the price is risk-sensitive, and how does this affect banks?

The RQ and motivation for it can be used to *broaden* the appeal of the paper.

- 3) Connect the paper better to the theories:
- Allen, Carletti and Leonello (*Oxford Review of Economic Policy*, 2011)
 - Chari and Jagannathan (*JF*, 1988)
 - Merton and Thakor (*JFI*, 2019)
 - Calomiris and Jaremski (*ARFE*, 2016)

- 4) Provide a better interpretation of the results. For example, the results show that lower-capital banks exited, which implies that the risk-based premium structure was relatively “unfair” to the stronger, better-capitalized banks. If the insurance is fairly priced, no bank should find it more advantageous to stay in the program relative to other banks (for theoretical connection see Chan et al “Is Fairly Priced Deposit Insurance Possible?”, *JF*, 1992).
- 5) Overall, very informative and insightful paper that can broaden its appeal ... highly recommend reading it.

Kim, Kundu and Purnanandam: “The Economics of Market-Based Deposit Insurance”

Overall

- FDIC ruling in 2018 made Reciprocal Deposits (RD) come into prominence.
- Ruling exempted classification of deposits as brokered deposits and hence to be linked with deposit insurance up to a lower limit \Leftrightarrow Banks could now pay lower rates on these deposits ... and this led to a *de facto* increase in deposit insurance coverage because the RD network allows large deposits to be broken up and spread out over multiple banks.

Main Results

- 1) RD network allowed banks to get more deposits and pay lower rates on deposits (lowers cost of deposits by 10-15 bps)
- 2) Banks grew – responded by increasing assets (mainly through RE lending).
- 3) Banks took on more interest rate risk.

Assessment/Comments

- 1) Very nice paper. The RD phenomenon is not well known, so just providing institutional data and summary statistics is valuable.
- 2) Addresses endogeneity issues (unobservable bank risk) well.
- 3) RQs are clearly identified.

- 4) Provide a better theoretical motivation for what we should expect as baseline results. Many relevant theories:
- value of deposit insurance with risk neutral depositors (Chari and Jagannathan (*JF*, 1988), Merton and Thakor (*JFI*, 2019))
 - Greater moral hazard with deposit insurance (e.g. Merton (*JBF*, 1977)).
 - Deposit insurance and interest rate risk and how capital requirements can deal with this (Golding and Lucas, “Duration Gap Disclosure and a Modest Proposal to Prevent Another SVB”, WP, MIT Sloan, 2023).
- 5) Excellent paper ... still early in development but highly recommend you read it.