FT Alphaville Banks

The US bank system is more fragile than you'd think

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Staring at HTM portfolios © Midjourney

Robin Wigglesworth 4 HOURS AGO

Academia isn't exactly famous for churning out timely papers of practical value. But occasionally a gem emerges from the scholastic grind at the perfect moment. One such effort has landed in FTAV's SVB-bloated inbox today.

The abstract from five researchers at the University of Southern California, Northwestern University, Columbia University, Stanford University and NBER (our emphasis below):

> We analyze U.S. banks' asset exposure to a recent rise in the interest rates with implications for financial stability. **The U.S. banking system's market value of assets is $2 trillion lower than suggested by their book value of assets accounting for loan portfolios held to maturity. Marked-to-market bank assets have declined by an average of 10% across all the banks, with the bottom 5th percentile experiencing a decline of 20%.**
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> We illustrate that uninsured leverage (i.e., Uninsured Debt/Assets) is the key to understanding whether these losses would lead to some banks in the U.S. becoming insolvent-- unlike insured depositors, uninsured depositors stand to lose a part of their deposits if the bank fails, potentially giving them incentives to run.
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> A case study of the recently failed Silicon Valley Bank (SVB) is illustrative. **10 percent of banks have larger unrecognized losses than those at SVB. Nor was SVB the worst capitalized bank, with 10 percent of banks having lower capitalization than SVB.** On the other hand, SVB had a disproportional share of uninsured funding: only 1 percent of banks had higher uninsured leverage. Combined, losses and uninsured leverage provide incentives for an SVB uninsured depositor run.
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> We compute similar incentives for the sample of all U.S. banks. **Even if only half of uninsured depositors decide to withdraw, almost 190 banks are at a potential risk of impairment to insured depositors, with potentially $300 billion of insured deposits at risk.** If uninsured deposit withdrawals cause even small fire sales, substantially more banks are at risk. Overall, these calculations suggests that recent declines in bank asset values very significantly increased the fragility of the US banking system to uninsured depositor runs.

You can find the full paper here.

The Silicon Valley Bank-related stuff will be painfully familiar to anyone who has read Alphaville since -*checks notes*- last... Thursday?? By now it's clear that SVB was a huge outlier among banks when it came to uninsured deposits.

But Erica Jiang, Gregor Matvos, Tomasz Piskorski, and Amit Seru estimate that there are quite a few banks with bigger unrecognised losses and worse capital positions than SVB. The $2.2tn of unrealised losses is much bigger than most other figures floating about. Here's the breakdown:

	(1) Total	(2) Small (<1.384B)	(3) Large (1.384B, 250B)	(4) GSIB (>250B)
Aggregate Loss	2.2T	144B	1.3T	0.73T
Individual Dollar Loss	28.6M	22.3	308.0	837.0
	(6.7B)	(38.2)	(8.9B)	(69.7B)
Share RMBS	13.2	11.4	22.6	17.4
	(19.2)	(18.5)	(20.6)	(32.8)
Share Treasury and Other	15.5	17.0	10.4	8.1
	(35.1)	(37.5)	(14.8)	(33.0)
Share Residential Mortgage	19.9	19.8	20.4	20.5
	(33.4)	(35.4)	(19.5)	(35.9)
Share Other Loan	32.8	32.7	33.8	1.0
	(32.7)	(34.3)	(21.6)	(38.9)
Loss/Asset	9.2	9.1	10.0	4.6
	(4.7)	(4.8)	(4.4)	(6.1)
Uninsured Deposit/MM Asset	24.2	22.7	35.7	19.0
	(14.1)	(12.6)	(15.8)	(26.6)
Insured Deposit Coverage Ratio	4.2	3.9	5.9	15.4
	(32.7)	(30.4)	(36.4)	(115.7)
Observations	4844	4072	743	29

As KWB's Tom Michaud told Alex yesterday: "These underwater bond positions are going to have to be addressed . . . Banks who have larger [mark-to-market losses] could be candidates to raise capital."

The SVB combination of factors still looks *very* idiosyncratic though. Even setting aside differing quality of risk management and intensity of regulations, the vast majority of banks will never have to recognise mark-to-market losses on their bond portfolios as they can and will just hold them until maturity. This isn't junk, it's overwhelmingly Treasuries and high-grade mortgage bonds.

What forced SVB into booking the losses was an evaporating deposits as tech companies pulled money *en masse*. That meant it had to sell $21bn of bonds at a $1.8bn loss, and started the avalanche. But the fragile deposit base was the crucial weakness. As the paper notes: "If SVB failed because of losses alone, more than 500 other banks should also have failed."

Nonetheless, the researchers argue that the US banking system is a lot more fragile than commonly assumed.

> . . . Prior to the recent asset declines all US banks had positive bank capitalization. However, after the recent decrease in value of bank assets, 2,315 banks accounting for $11 trillion of aggregate assets have negative capitalization. This calculation underscores that recent declines in bank asset values significantly decreased bank capitalization and bank insolvency risk.