

Shadow 뱅킹 시장에서의 발생할 수 있는 뱅크런에 관한 고찰

Jun Kyung Auh, Ph.D.

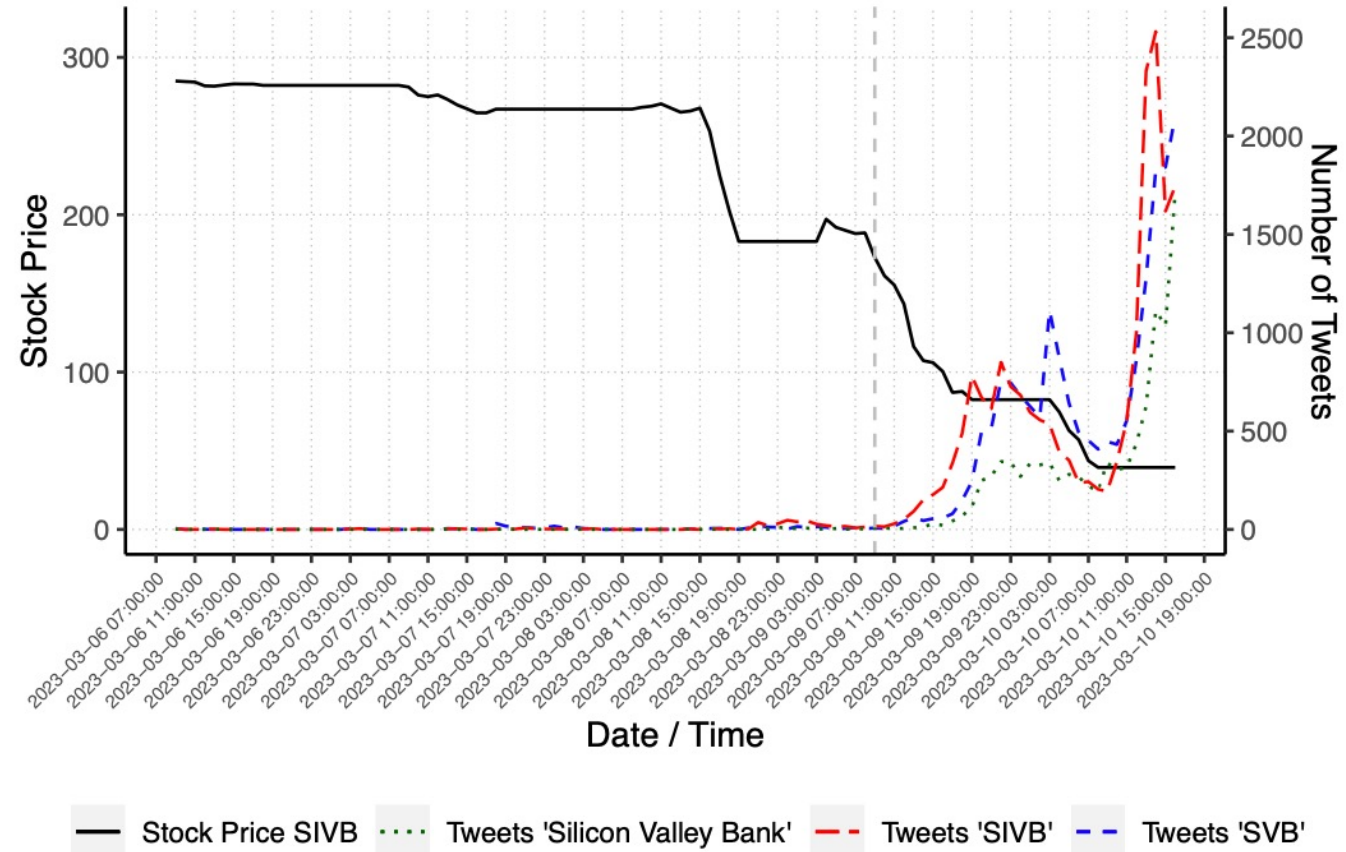
Yonsei University

10 days in March

3/8	3/9	3/10	3/12-13	3/15-16	3/19
<ul style="list-style-type: none"> SVB said it was forced to sell a bond portfolio at a \$1.8bn. loss Moody's downgrades the bank's bond rating 	<ul style="list-style-type: none"> Panic spread on social media Wave of customer withdrawals Stock lost 60% value 	<ul style="list-style-type: none"> SVB announced FDIC took it over (\$175bn.) Contagion to First Republic, Signature Bank and Western Alliance 	<ul style="list-style-type: none"> FDIC seized Signature Bank Government strongly signaled First Republic bank stock lost 60% 	<ul style="list-style-type: none"> CS stock lost 24% First Republic received \$30bn. deposit CS borrow \$54bn. 	<ul style="list-style-type: none"> UBS take over CS for \$3.2bn. FDIC sold 40 branches of SVB to NYCB

Social media fuels bank runs

Investor tweets (\$SIVB) spike in volume first, followed by more keywords from more general conversations (SVB, Silicon Valley Bank)



Cookson et al (2023)

A typical bank balance sheet

		Asset	Liability
72% of \$24 tr.	{	Long-term loan	Insured deposit (63%)
		MBS	
		CMBS	
		US Treasuries	
		Other ABS	Uninsured deposit (23%)
			Other debt (4%)
		Others (28%)	Equity (10%)

Jiang, Matvos, Piskorski and Seru (2023)

SVB versus 4800 other U.S. banks

- Was not thinly capitalized
 - ~8% equity capitalization; better than bottom 10th percentile
- But its portion of uninsured deposit (“shadow banking”) stood out
 - ~78% was funded by uninsured deposits; top 1st percentile
- Uninsured depositors stand to lose a part of their deposits if the bank fails
- They have a strong incentive to run before other creditors

Simplified balance sheet of SVB

Asset	Liability
Long-term asset	Insured deposit (14%)
	Uninsured deposit (78%)
	Equity (8%)

In a “bad” scenario

- Interest rate increases by a large degree
- Uninsured depositors concern long-duration asset value may decrease more than 8%
- This gives an incentive for them to withdraw
- The asset fire sale is likely to impair insured deposit and makes FDIC intervention more probable
- This scenario reinforces the run incentive of uninsured depositors

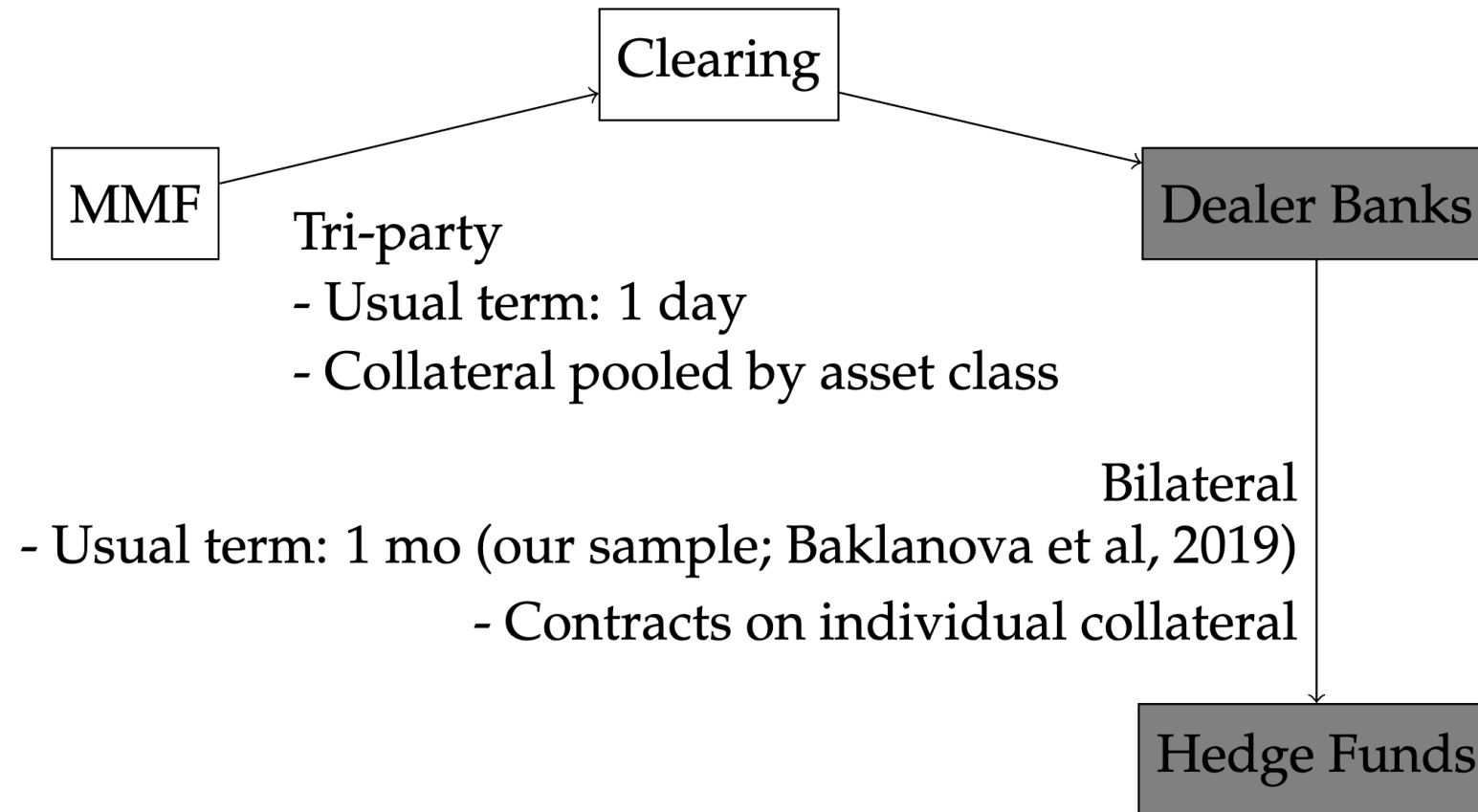
How a bank finances itself with repo

- A bank or HF wants to finance an 100-worth asset (UST or SF)
- The bank (or HF) pledges the asset as collateral and borrows 90 while making a promise to “repurchase” the asset back at $90 + \text{interest}$ after 3 days.

Example: 3-day repo, 10% haircut, 3.60% repo rate

Day	Asset Price	Action	Lender CF	Cash Margin	Total Coll.
0	100	Sale	-90	0	100
1	98	Margin call	+2	2	100
2	100	Margin release	-2	0	100
3	–	Repurchase	+90.027	–	–

Repo, a primary channel of “shadow banking”



Auh and Landoni (2022)

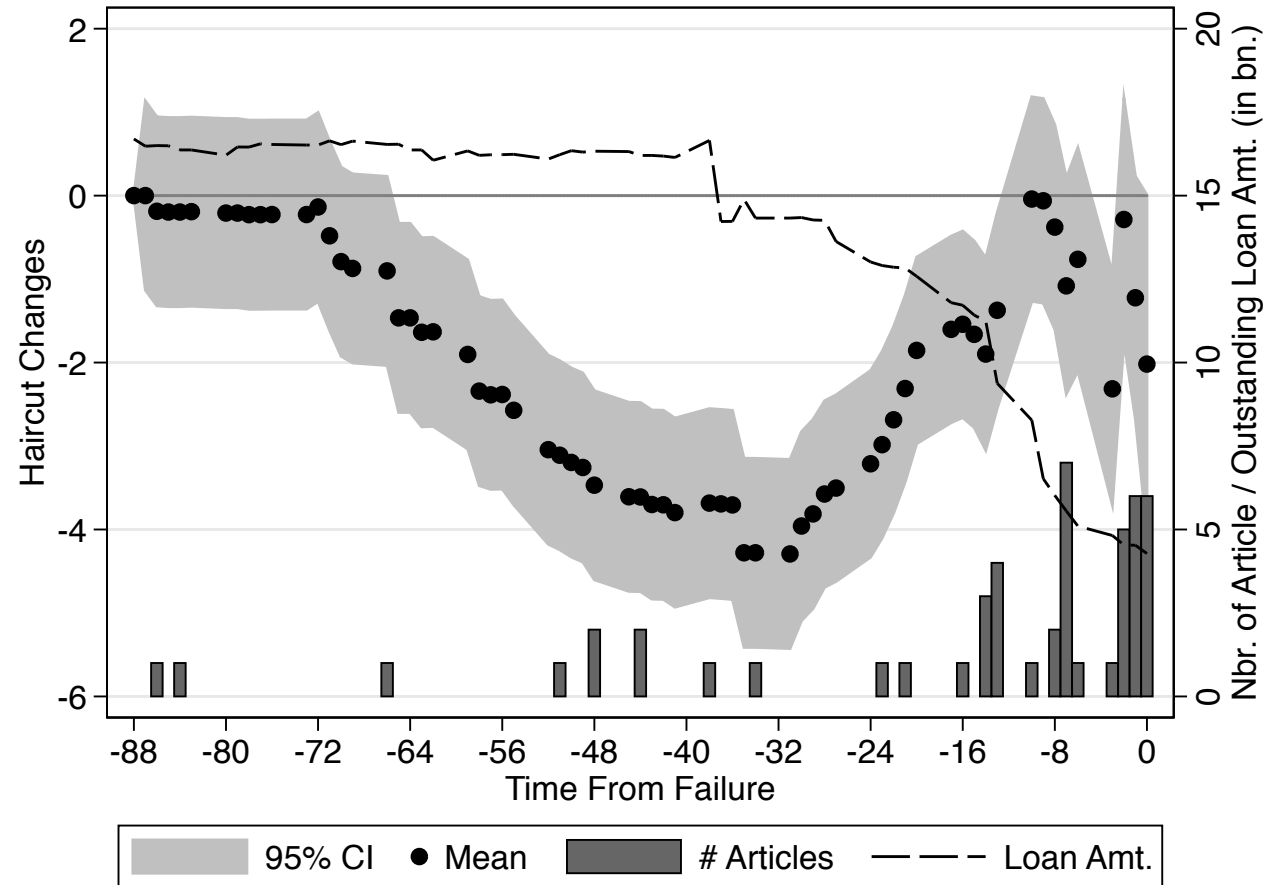
Zooming in with micro-data

- Auh and Yun (2023) examine the complete repo book of one of the largest borrower that has failed
 - 13,688 repurchase agreements
 - 1,496 distinct collateral securities
 - 905 securitization conduits
 - 45 lenders
- What happened to the “uninsured deposit” right before the borrower failed?

Dynamic credit supply/contraction

Decreasing haircut implies credit supply and raising haircut is associated with credit contraction.

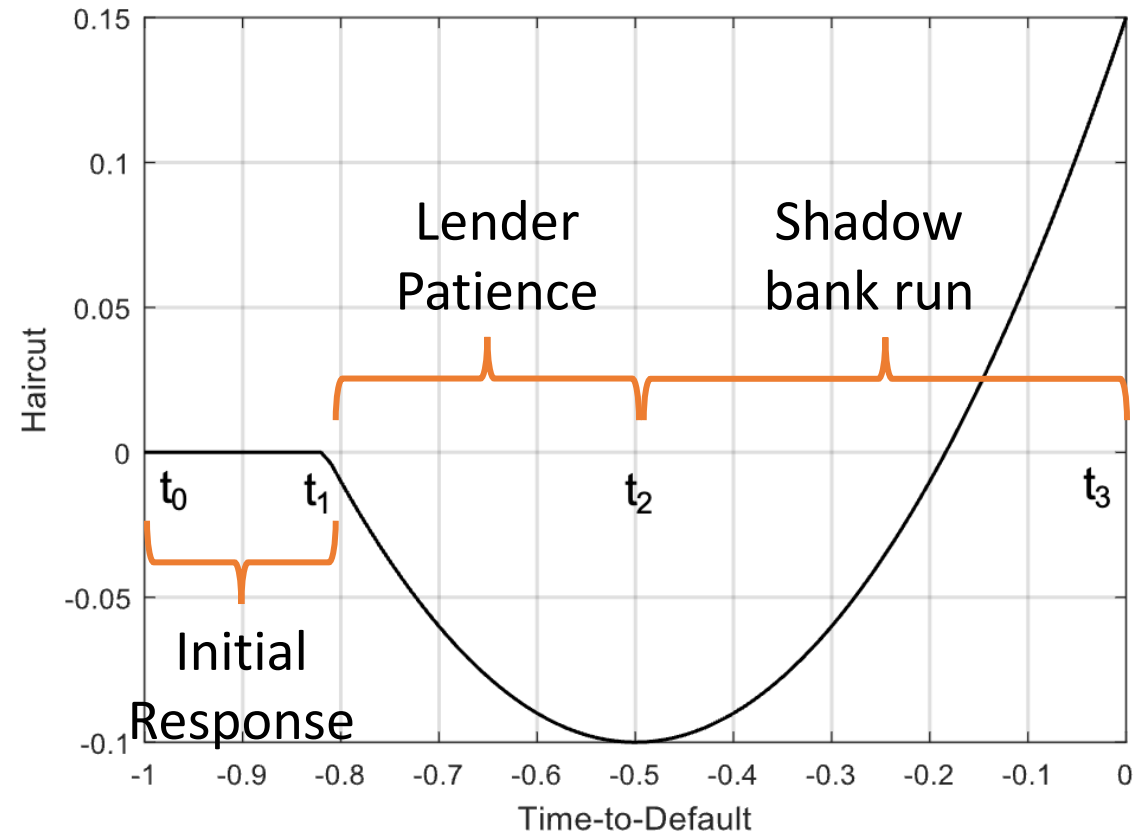
The "run" is not monotonic in this case.



Characterizing lender behavior

Initial Response = $t_1 - t_0$

Lender Patience = $t_2 - t_1$



Heterogenous behavior by collateral

Dependent Variables	Initial Response ($t_1 - t_0$)			Lender Patience ($t_2 - t_1$)		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Structured Finance	-0.57793*** [0.06105]			3.91747*** [0.16019]		
Corporate	-0.45295*** [0.06516]			3.41386*** [0.19259]		
CDO		0.00199 [0.05098]			0.37254*** [0.12820]	
AAA			0.13995** [0.06071]			-0.41298*** [0.14542]
AA			0.10884* [0.06503]			-0.14962 [0.15373]
BBB			-0.05597 [0.09674]			-0.04055 [0.16424]
BB			-0.15481 [0.23186]			0.34959 [0.28790]
B			-0.65455*** [0.05623]			0.38069*** [0.10601]

Compared to UST, more illiquid assets are associated with shorter IR and longer LP

Compared to A, more liquid asset (AAA and AA) are associated with longer IR and shorter LP

Key takeaway

- In the presence of deposit insurance, uninsured deposit through shadow banking is a crucial driving force of bank run
- Illiquidity of collateral asset plays a role of “coordination device”
 - Initial supply of credit
 - Delayed credit contraction
- When the negative signal becomes sufficiently precise, such a coordination fails and acute credit contraction occurs (i.e., bank run)
- Deposit insurance alone can't prevent the bank run; understanding detail structure of shadow banking system is important