

Update on SVB's LCR

Bill Nelson | March 28, 2023

With more time to delve into SVB's Y-9Cs, Y-15s, Call Reports, 10-Ks, 10-Qs and investor presentations, and with a lot of helpful feedback, we are publishing revised estimates of what SVB's LCR would have been at the end of 2022. The previous estimate is available [here](#), and that earlier note provides important background for this note.¹

As discussed below, we made two changes to our calculations: First, we now assume that, if there had been no tailoring, SVB would have been subject to the full LCR rather than the modified LCR because of its foreign exposures. Second, we refined our estimate of the cash outflows from deposits that likely would have been calculated under the LCR by drawing on additional data and present two different estimates based on different interpretations of the data. After the adjustments, we estimate that SVB's LCR would have been 101 or 75, depending on the assumptions used to derive the estimate of projected deposit outflows. If, as seems likely, SVB would have reduced its foreign exposures so that it was subject to the modified LCR, we estimate that its LCR would have been 144 or 107.

FOREIGN EXPOSURES

In the prior estimate, we assumed that, in the absence of regulatory tailoring, SVB would have been subject to the modified LCR that reduces projected net cash outflows by 30 percent because it had less than \$250 billion in assets. We neglected to factor in that at the end of 2022, SVB probably had more than \$10 billion in foreign exposure and therefore would have been subject to the full LCR. The first line of Schedule E of SVB's 2022 Y-15 (available [here](#)) indicates SVB had foreign claims on an ultimate-risk basis of \$23 billion. While the exposure needs to be adjusted for data on the FFIEC 009 Country Exposure Report, which are not public, it seems highly likely that the bottom line would still be above \$10 billion, requiring SVB to comply with the full LCR under the pre-tailoring regime.

PROJECTED DEPOSIT OUTFLOW

We draw on a much more extensive set of data and develop two alternative estimates of projected outflows from deposits. In one case, the estimate is \$51.5 billion and in the other the estimate is \$69.9 billion, both above our previous estimate of \$49.5 billion.

Because of the large fraction of SVB liabilities that are uninsured deposits, the composition of uninsured deposits has a large effect on the cash outflows that would be projected under the LCR. Unfortunately, using publicly available data, the composition is uncertain.

¹ This discussion ignores the trapped liquidity problem of the LCR. Bank holding companies cannot count HQLA held at a commercial bank subsidiary that exceeds the projected net cash outflow of the subsidiary. As a result, the reported LCR can be significantly different from estimates based on balance sheet data alone in ways that are not particularly meaningful. It is essentially impossible to adjust for this problem using data available. For further discussion see "[I Don't Think the LCR Means What You Think It Means](#)," October 22, 2021.

Estimate 1

The amount of uninsured deposits can be estimated with reasonable precision. On the call report, Schedule RC-O, SVB reported that uninsured deposits at domestic offices and offices in Puerto Rico and U.S. territories were \$151.6 billion. Domestic deposits, from Schedule RC of the call report, are \$161.5, so assuming SVB had no deposits in Puerto Rico or U.S. territories, its insured deposits were \$9.9 billion. From SVB's Y-9C, Schedule HC, its total deposits were \$173.1 billion leaving \$163.2 billion as uninsured.

The correct outflow rates for uninsured deposits depend on two things. First, whether the depositor is retail (household and small business), a nonfinancial business or a financial business. Second, whether the deposit is operational, that is, used for daily operations; or nonoperational, that is, excess deposits.

On p. 141 of SVB's [10-K](#), the bank reported that it had \$80.8 billion in noninterest-bearing demand deposits, \$52.7 billion in money market deposit accounts and sweep deposits in foreign offices, \$6.7 billion in time deposits and \$32.9 billion in interest-bearing checking and savings accounts. On p. 11 of its [earnings presentation for 2022Q4](#), SVB stated that:

- Clients' operating cash was typically held in on-balance-sheet noninterest-bearing deposits.
- Clients' excess liquidity was generally held in on-balance-sheet interest-bearing deposits or off-balance-sheet client funds.

We assume that the \$32.9 billion in interest-bearing checking and savings accounts and that the \$6.7 in time deposits is retail, and that all insured deposits (\$9.9 billion) are retail, leaving \$29.7 billion in uninsured retail. The outflow rates on insured deposits are 3-40 percent, where 3 percent is for a stable retail deposit. Assuming an outflow rate of 5 percent results in a \$0.5 billion projected outflow. Uninsured retail deposits have an outflow rate of 10 percent, giving an outflow of \$3.0 billion.

Using SVB's guidance on operating deposits versus excess liquidity, we assume that the \$80.8 billion in noninterest-bearing demand deposits is operational deposits and the \$52.7 billion in money market deposits is nonoperational. The presentation also states that 47 percent of clients' funds were in "operating cash typically held in on-balance sheet, noninterest-bearing deposits," and the \$80.8 billion in noninterest-bearing demand deposits is 47 percent of total deposits, further supporting the conclusion that the \$80.8 billion are operational deposits.

To assign an outflow, we need to break these deposits up further between financial and nonfinancial. SVB also filled out Form [Y-15](#), which is used to determine if an institution is systemic and to calculate its capital surcharge if it is. Schedule G on p. 6 reports that SVB had \$108.9 billion in unsecured wholesale funding obtained outside the financial sector and \$28.8 billion in unsecured wholesale funding obtained within the financial sector. The instructions for the Y-15 state that these two lines should include wholesale deposits (more on this below), indicating that 21 percent of SVB's wholesale deposits are from financial firms and 79 percent are from nonfinancial firms. The two items sum to \$137.7 billion, close to the \$133.5 billion in the deposit from the 10-K we did not attribute to retail.

We can use these data to divide up the non-retail deposits into the relevant components and estimate the LCR outflows. Taking 21 percent of the \$52.7 billion in money market deposits gives \$11.1 billion in financial nonoperational deposits which have a 100 percent outflow rate, so an outflow of \$11.1 billion. The remainder is \$41.6 billion in nonfinancial nonoperational deposits which has an outflow rate of 40 percent so an outflow of \$16.6 billion. For operational wholesale deposits, the \$80.8 billion in noninterest-bearing demand deposits, the outflow rate is 25 percent for financial and nonfinancial firms, yielding an outflow of \$20.2 billion.

Adding these all up yields a total projected outflow from deposits of \$51.4 billion.

Estimate 2

The correct estimate of projected deposit outflow hinges on what, exactly, SVB was reporting on its Y-15 under unsecured wholesale funding. The instructions for the Y-15 state:

From FR Y-15 Instructions ([here](#)): pp. 30-31, Schedule G

- Item 1c Y846 “Unsecured wholesale funding obtained outside of the financial sector”
 - “Report the value of unsecured wholesale funding where the customer or counterparty is not a financial sector entity or a consolidated subsidiary of a financial sector entity (as defined in 12 CFR 249.3). For more information, see the Glossary entry for “unsecured wholesale funding.””
- Item 3c Y878 “Unsecured wholesale funding obtained within the financial sector:
 - “Report the value of unsecured wholesale funding where the customer or counterparty is a financial sector entity or a consolidated subsidiary of a financial sector entity (as defined in 12 CFR 249.3). For more information, see the Glossary entry for “unsecured wholesale funding.””

The glossary entry for unsecured wholesale funding points to [12 CFR 249.3](#) (the Code of Federal Regulations) for the official definition:

- “Unsecured wholesale funding means a liability or general obligation of the Board-regulated institution to a wholesale customer or counterparty that is not a secured funding transaction. Unsecured wholesale funding includes wholesale deposits. Unsecured wholesale funding does not include asset exchanges.”

Note that the instructions state that unsecured wholesale funding includes deposits from wholesale customers with no mention of whether the deposits are operational or nonoperational, a critical distinction for the calculation of the LCR.

However, the instructions for another form, the [FR 2052a](#), the Complex Institution Liquidity Monitoring Report, provide different guidance. SVB would have been filling out the FR2052a on a monthly basis; the report is not public. Appendix VII of the instructions, starting on pdf page 179, provides a cross reference between the items on short-term wholesale funding on the Y-15 and the items on the FR 2052a. The appendix states that unsecured wholesale funding obtained outside of the financial sector on the Y-15 should include “O.D.5, 6, 8, 9, 10, 11, 13, 14, 15.” “O.D.” is short for “Outflows-Deposits” and these items are defined in the body of the instructions. The critical fact is that the list does not include O.D.4 – Operational Account Balances or O.D.7 – Operational Escrow Accounts. Indeed, a comparison of the LCR disclosures for those firms that report the LCR to their Y-15 reports suggests that the banks are reporting only *nonoperational* wholesale deposits (reported on the LCR disclosure) under unsecured wholesale funding (reported on the Y-15).

If we assume that the \$137.7 billion in unsecured wholesale funding that SVB reported as wholesale funding on the Y-15 are nonoperational deposits, then we can no longer maintain the assumptions above about retail and operational deposits because it all adds up to more than total deposits. Adding further to the complexity, the data reported on the Y-15 are annual averages, and there is no simple, plausible way to make a guess at year-end versions because total deposits rose in the first quarter and then fell in the subsequent quarters, and some components of deposits rose over the year while others fell sharply.

Nevertheless, if the Y-15 data are nonoperational deposits they almost surely suggest SVB’s projected deposit outflow under the LCR is much higher than calculated in the first estimate. To see that, we maintain our

assumption about insured deposits and retail deposits and assume that wholesale deposits declined over the year in a straight line (a quarterly break-out of the 10-K data on the composition of deposits is not available).

Deposits apart from those we are assuming are retail deposits declined by 26 percent over the year, suggesting that the year-end versions of the Y-15 data were 13 percent lower than the quarterly averages. In that case, nonoperational deposits of nonfinancial companies would be \$94.7 billion; an outflow rate of 40 percent yields an outflow of \$37.9 billion. Nonoperational deposits of financial companies would be \$25.1 billion, which is also equal to the outflow.

Subtracting from total deposits (\$173.1 billion) the estimate of retail deposits (\$39.6 billion) and nonoperational deposits (\$94.7 billion + \$25.1 billion) yields \$13.7 billion as an estimate for operational deposits. The outflow rate on operational wholesale deposits is 25 percent, yielding an outflow of \$3.4 billion. Summing the estimated outflows from estimated nonoperational, operational, and retail deposits derived in this alternative way results in combined projected deposit outflows of \$69.9 billion, significantly above the first estimate of \$51.4 billion.

BOTTOM LINE

Taking on board these corrections and adjustments, as shown in table 1, the estimate of SVB's LCR is much lower than the 150 calculated in the previous note. We estimate SVB's LCR to be 101 or 75 using the first and second estimate of deposit outflows, respectively.

However, even if the tailoring rule had not been adopted, it would have been relatively easy for SVB to manage down its foreign exposures so that it was subject to the modified LCR in which projected net cash outflows would have been multiplied by 0.7. In that case, SVB's LCR would have been 144 or 107, depending on the estimate of the deposit outflows.

Putting aside whether SVB would have passed either the LCR or modified LCR, subjecting SVB to the LCR would not have mitigated its interest risk exposure, as it likely would have directed its investments in securities toward longer-term Treasuries of Ginnie Maes and away from Fannie or Freddie MBS. Because HQLA must consist of 60 percent level 1 assets (reserve balances and Treasuries) and because SVB had more agency-MBS than it could count because of the cap, each dollar switched would have raised its HQLA by \$1.67. For example, even assuming the larger projected deposit outflow and the full LCR, SVB could have come into compliance by diverting only one-fifth of its investments in Fannies and Freddies into Ginnies or longer-term Treasuries. Based on this analysis, a clear conclusion is that the LCR would not have prevented SVB from taking on excessive interest rate risk.

Table 1a
Silicon Valley Bank's Liquidity Coverage Ratio
December 31, 2022

High-Quality Liquid Assets			
Balance Sheet Item	(\$) Billions	Haircut Percent	Contribution (\$) Billions
Level 1			
Reserve balances	7.8	0	7.8
Treasuries	16.2	0	16.2
Ginnie Maes	7.7	0	7.7
Total			31.7
Level 2a			
Agency debt and MBS excluding Ginnies	61.7	15	52.4
Capped amount			21.1
Total HQLA			52.8

Table 1b
Silicon Valley Bank's Liquidity Coverage Ratio
December 31, 2022

Net Cash Outflows			
Balance Sheet Item	(\$) Billions	Outflow/Inflow Percent	Contribution (\$) Billions
Outflows			
ST borrowing (FHLB)	13.6	25	3.4
Lines of credit	62.2	20	12.5
Insured deposits	9.9	5	0.5
Uninsured retail deposits	29.7	10	3.0
Estimate 1			
Nonoperational deposits from nonfinancial firms	41.6	40	16.6
Nonoperational deposits from financial firms	11.1	100	11.1
Operational deposits	80.8	25	20.2
Estimate 2			
Nonoperational deposits from nonfinancial firms	94.7	40	37.9
Nonoperational deposits from financial firms	25.1	100	25.1
Operational deposits	13.7	25	3.4
Inflows			
Deposits at financial institutions	5.3	100	5.3
Loans w/in 3 months	59.5		
Estimate w/in 30 days	19.8	50	9.9
Total			15.2
Net cash outflow			
Estimate 1			52.1
Estimate 2			70.6

Table 1c Silicon Valley Bank's Liquidity Coverage Ratio December 31, 2022			
			Percent
LCR			
Estimate 1			101
Estimate 2			75
Modified LCR			
Estimate 1			144
Estimate 2			107
<i>Source: 10-K, Y-9c, Y-15, investor presentations, and Call Report</i>			

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