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Risk culture and bank runs

Three lessons from the Silicon Valley Bank collapse

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On March 10, the Silicon Valley Bank (SVB), the 16th largest bank in the United States, failed, leading to widespread concern over the regional banking industry. The proximate cause of the failure was $42 billion in deposit outflows in a single day, triggered by depositor concerns over a reported $1.8 billion realized loss on the sale of long-dated bonds.

How did this happen? Like many banks in the United States, government stimulus spending led to a massive influx of deposits at SVB, nearly doubling to $198 billion by the end of the first quarter of 2022. As demand for commercial loans remained relatively tepid through 2021, the bank poured a large portion of these excess deposits into long-dated government-related bonds.

By mid-2022, it was clear that inflation was more than a transient problem, and the Fed began significantly increasing interest rates. This posed a dual challenge for SVB. On the one hand, higher rates made relatively low-yield deposit accounts less attractive to the bank's customers. On the other hand, the higher rates led to declining market values for the bank's bonds. Unlike most banks, SVB left the interest-rate exposure in their bond portfolio largely unhedged.

This came to a head in early March 2023, when the bank was forced to sell $21 billion worth of underwater bonds, locking in a realized loss of $1.8 billion. This loss was revealed to the market after-hours on March 8 and triggered the massive deposit outflows the following day. Those outflows left the bank with a negative cash balance of $1 billion, leading the FDIC to force the bank into receivership.

The root cause of these events was a deficient risk culture at the bank. This will have implications for risk management in the banking sector globally, including how regulators evaluate risk governance in their oversight and supervision, both implicitly and explicitly. The banks that understand this quickly and get ahead of the issues will be at an advantage relative to their peers.

Lesson 1: Solid stress-testing frameworks are a business necessity, not just a regulatory exercise

While SVB was not required to participate in CCAR, the Fed's regulatory stress-testing exercise, its implosion serves as a potent reminder that a solid stress-testing program is essential from a business-as-usual perspective for banks.

Commercial banking fundamentally relies on leverage: its owners require returns appropriate to their status as equity holders (typically 8-10%), but the bank's own investments are in debt with much lower yields (typical bank RoAs are around 1%). The only way to deliver the required RoEs is through leverage. But this leverage amplifies returns in both good times and bad. This means that banks must maximize shareholder returns in good times while ensuring that their portfolios of loans, securities and deposits are constructed to survive the next downturn. This is the true value of stress testing, much more so than regulatory compliance.

Nonetheless, a review of stress-testing jobs at SVB in the past two years shows the focus within stress testing was on limited regulatory requirements, such as the Internal Capital Adequacy Assessment Process (ICAAP) and internal liquidity stress test (ILST). There were no job postings outside of these requirements. Additionally, a

number of senior-level roles in the enterprise risk function appear to have been filled only in the latter half of 2022, presumably as a response to the bank's growth rather than in preparation for it.

Lesson 2: Be wary of exclusions in reported key risk metrics

Banks measure the potential impact of interest-rate hikes on the value of their firms through a metric known as economic value of equity (EVE). SVB's 2022 annual 10-K filing disclosed that the bank calculated EVE and that its assets and liabilities committee (ALCO) signed off on the number. But this value was curiously missing from the actual report. Stranger still, the same language had been used in previous reports, but those had disclosed the EVE numbers for their respective periods.

		EVE		NII	
Date	**Deposit beta (%)**	**+100 bp**	**+200 bp**	**+100 bp**	**+200 bp**
31-Dec-22	70	(not reported)		1.80%	3.50%
30-Sep-22	65	-15.80%	-29.50%	3.00%	5.50%
30-Jun-22	60	-12.70%	-22.90%	6.70%	13.50%
31-Mar-22	60	-16.40%	-30.40%	10.20%	22.90%
31-Dec-21	60	-13.90%	-27.70%	10.90%	22.90%
30-Sep-21	60	-15.20%	-30.90%	13.40%	27.70%
30-Jun-21	50	-10.90%	-22.80%	16.30%	33.70%
31-Mar-21	50	-10.90%	-22.70%	15.30%	31.10%
31-Dec-20	60	-5.90%	-15.40%	15.10%	29.10%

Missing EVE from annual 10-K filing was a risk flag that should have been highlighted by the ALCO.

Interest rate risk is managed by our ALCO. ALCO reviews the sensitivity of the market valuation on earning assets and funding liabilities and modeled 12-month projections of net NII from changes in interest rates, structural changes in investment and funding portfolios, loan and deposit activity and market conditions. Relevant metrics and guidelines, which are approved by the Finance Committee of our Board of Directors and are included in our Interest Rate Risk Policy, are monitored on an ongoing basis.

Interest rate risk is managed primarily through strategies involving our fixed income securities portfolio, available funding channels and capital market activities. In addition, our policies permit the use of off-balance sheet derivatives, such as interest rate swaps, to assist with managing interest rate risk.

We utilize a simulation model to perform sensitivity analysis on the economic value of equity (EVE) and NII under a variety of interest rate scenarios, balance sheet forecasts and business strategies. The simulation model provides a dynamic assessment of interest rate sensitivity which is embedded within our balance sheet. Rate sensitivity measures the potential variability in economic value and NII relating solely to changes in market interest rates over time. We review our interest rate risk position and sensitivity to market interest rates regularly.

Model Simulation and Sensitivity Analysis

Source: Excerpt from 10-K filing, 2022

In its annual filing, the bank had clearly identified the interest-spread risk that eventually materialized. It was, however, left on paper, with no built-in cascading risk metrics following the risk identification.

Market and Liquidity Risks

- Instability and adverse developments in national or global financial markets and overall economic conditions, including as a result of geopolitical matters, may materially affect our business, financial condition and results of operations.
- Our interest rate spread may decline further in the future. Any material reduction in our interest rate spread could have a material adverse effect on our business, results of operations or financial condition.
- Liquidity risk could impair our ability to fund operations and jeopardize our financial condition.

Source: Excerpt from 10-K filing, 2022

We fully expect that the SVB collapse will lead to greatly enhanced expectations for risk reporting, not only from regulators but also from the investing public and depositors.

Lesson 3: All banks require robust risk culture and risk leadership

SVB lacked sufficient risk leadership

The proximate cause of the SVB collapse was poor liquidity management, which typically resides in the office of the treasurer and/or CFO. SVB's failure is thus a reminder that prudent risk management is the job of all leaders in a bank, regardless of whether they sit in the risk function.

The deficiency in SVB's risk culture could be seen from its management structure. The Chief Risk Officer position was vacant from April 2022 to January 2023. The fact that a bank of SVB's size would allow the CRO seat to remain unfilled for nine months betrays a lack of focus on risk, regardless of whether liquidity management would have fallen under the CRO's purview. Similarly, over the past five years, SVB only had two board members with a risk background (Mary J. Miller, former Acting Deputy Secretary of the Treasury, and Kay Matthews, a former auditor). SVB's other board members came from the technology community that SVB focused on as a customer base and/or from the business side of the banking profession.

We expect that, going forward, regulators will place much more emphasis on ensuring ample representation from the risk profession in banks' senior management teams and boards.

Conclusion

Though the rise in interest rates and eventual write-down of SVB's portfolio were the triggers, the lack of a strong risk-management culture was at the root of SVB's collapse. This serves as a critical reminder that risk cannot be an afterthought, but is rather an integral part of the banking business. To be successful, banks must foster a strong risk identification and governance culture that permeates through every level of the organization. While this has always been the right way to run a banking business, going forward, it will be sternly required of every bank's stakeholders, including investors, depositors and regulators.

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