Commentary: Lessons from SVB's collapse on sustainability and sustainable finance: ensuring resilience from "unsustainability"

1. Introductory remarks

Banks play an important role in channeling funds (about $6–10tn annually) to finance productive investment opportunities. They provide loans to businesses, finance college educations and allow us to purchase homes with mortgages. Banks' normal activities of lending, taking deposits with differing maturities and interest rates and buying securities may expose them to interest rate risk which may apply to the banking book as well as the trading book.

While accepting some interest rate risk is inherent in the banking business, excessive interest rate risk can pose a significant threat to banks' earnings and capital adequacy. Banks should therefore have a process to identify, measure, control, monitor and manage interest rate risk in a timely and comprehensive fashion. This is where asset liability management (ALM) comes into the picture.

With profit becoming a key factor, it has now become imperative for banks to move toward integrated balance sheet management where components of the balance sheet and its different maturity and rate mix will be looked at from a profit angle of the bank. Hence, ALM is fundamentally a risk management function about how both the assets and liabilities are managed optimally in the face of diverse risks, internal and external.

To ensure its long term sustainability, a bank would need to have a resilient balance sheet or business model first. Silicon Valley Bank (SVB) had a weak and vulnerable balance sheet and asset-liability profile, and when faced with a perfect storm scenario akin to a black swan event, unfortunately, it went bust! Old-fashioned optimal ALM was not practiced and its skewed (distorted) asset–liability profile further exacerbated its collapse, fueled by the rapid spread of rumors in Silicon Valley where most of its clients were based. In a recent statement, House Financial Services Committee chairman Patrick McHenry characterized what was happening as "the first Twitter-fueled bank run." (https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=408652).

2. What a typical bank does and lessons from the 2008 crisis

For typical lenders such as banks and credit unions, their cost of funds is usually determined by the interest rate paid to depositors on financial products including savings accounts and time deposits. Most financial institutions that rely on borrowing (from depositors and funders) are impacted by the costs they must incur to gain access to capital. These sources of funds that cost banks money fall into a number of categories as discussed below.

Deposits are the primary source of funds, with most people choosing to deposit their money in a bank, which the bank pays interest on the deposit, and in return uses that money for its own revenue-generating operations. Banks also obtain funds through shareholder equity, wholesale deposits, and debt issuance, etc. By diversifying their funding sources or depositors focusing especially on those that are captive, they enhance the likelihood of such funds staying with them during periods of stress.

Banks then make money by charging interest on loans that is higher than the initial cost of funds amount. There are many different kinds of loans that banks issue, and consumer

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lending comprises the largest amount of lending in the United States. Mortgages on property, home equity lending, student loans, car loans and credit card lending are all such loans that banks offer at variable, adjustable or fixed interest rates.

For many of us managing the balance sheet of a bank during the Great Financial Crisis in 2008, the primary dislocation seemed to be a drying up of liquidity (https://www.investopedia.com/ask/answers/033015/how-did-financial-crisis-affect-banking-sector.asp). Concerns over cash flow were simply more pressing than concerns over capital positions in respect to (possibly sub-prime) loan books. Something seemed to have imploded in liquidity conditions, both in the ability to easily liquidate securities for cash and in the ability to borrow new funds. As a result, many banks were in danger of simply running out of money and a fair few did. Most banks pulled in their horns, dramatically restricting the amount of new loans and increasing their price, so as to have more cash on hand.

3. SVB was not your typical bank

SVB's collapse was not a normal bank failure. SVB was a special kind of financial institution, and this was one of the main reasons for its demise, particularly, taking into account its concentrated relationship and positioning with Silicon Valley.

SVB provided banking services and credit to thousands of startup companies and venture debt had been a core part of their lending practice for decades. Hence, SVB was not a typical bank and was distinguished from its peers by two key characteristics – its skewed liability portfolio and undiversified concentration of its assets in the form of long-dated and fixed-rate government bonds.

With SVB, firstly, its business model was focused on the venture capital ecosystem, with a particularly high concentration of customers in the tech start-up space. Many of its customers were startups, venture capital firms and rich tech founders. Their bank accounts very likely had more than $250,000 in them. That means FDIC insurance did not have the same power to calm a panic, compared to a typical bank where the average depositor probably has $2,000 to $50,000 in their checking and savings accounts (https://news.yahoo.com/silicon-valley-bank-collapse-particularly-203126858.html?fr=sycsrp_catchall).

Also, in recent years, the boom in speculative investment in small technology firms, resulted in more than 200% growth in both the bank's assets and deposits, facilitating and benefiting SVB's channel of financing, what more in a low interest rate environment. As a result, by the end of 2022 SVB had a poorly diversified customer (depositor) base that was increasingly concentrated in large corporate accounts, with just 12% of its deposit base below the FDIC's limit of $250,000 (https://www.schroders.com/en-us/us/wealth-management/insights/silicon-valley-bank-what-are-the-implications/). Typically, US banks have a far more diversified deposit base with a higher proportion of smaller accounts and are therefore far less exposed to the risk of large deposit outflows when interest rates start to rise, especially in the past year.

The second key difference is the way in which SVB managed its balance sheet. Rather than matching deposits with loans with maturity transformation a key part of its ALM risk management process, SVB instead largely invested in long-dated and fixed-rate government bonds. As interest rates have risen over the past year, the value of these assets declined at the same time as inflows into tech start-ups and other venture capital funding slowed and were drying up, exacerbating further the slowdown in its deposit growth while its cost of funds rose as well (https://techcrunch.com/2022/04/20/the-venture-slowdown-is-impacting-fundraising-for-startups-of-every-size-sector/). This dynamic squeezed profitability and weakened its balance sheet.

It then evolved into a perfect storm scenario for SVB (with venture capital drying up at the same time), forcing startups to draw down funds held by SVB, while the bank was sitting on a

mountain of unrealized losses in bonds just as the pace of customer withdrawals was escalating. In short, its perfect storm scenario could be described as follows:

(a) The startup and corporate depositors withdrawing their cash to finance the viability of their companies since the tech bubble burst, with liability, interest rates and liquidity risk rising;

(b) On the asset side, the "tipping point" that upended SVB came from the successive Fed rate hikes eroding the value of the Treasury bonds held by the bank;

(c) SVB had to liquidate its bond holdings at a loss to pay back the funds withdrawn in (a) above, when jittery uninsured depositors started withdrawing their funds;

(d) As a result of (b), SVB realized large losses on its Treasury holdings, further spooking depositors, and "accentuating" further the "digital" (SVB) bank run, in that the rapidity of alerting the populace (herd mentality) that the bank was going down intensified further fueled by the likes of Twitter and social media, resulting in $40bn being pulled out in just one afternoon (https://fortune.com/2023/03/11/silicon-valley-bank-run-42-billion-attempted-withdrawals-in-one-day/).

(e) Misc.: The contagion effect of its sudden discontinuation of its co-financing role as it was a key source of financing for smaller venture and private equity firms just as those loans have become harder to obtain, thus, playing an outsized role in financing funds that could not access global investment banks, including those in sustainable finance.

4. Concluding remarks

In summary, the distorted and skewed nature of SVB's asset–liability profile with concentration risks apparent in both its liability and asset pools, made it vulnerable to the highly cyclical nature of the venture industry and venture debt availability being highly correlated to industry valuation trends and business cycles. This lack of diversification in funding sources and asset pricing risks and lack of regulatory requirements for stress testing and scenario analysis, eventually led to SVB's downfall. Had it set aside sufficient liquidity buffers to survive disruptions in the funding markets as mandated by the Basel 3 regulations and made a different choice when deploying its capital, or spread its bets more widely via having a more integrated ALM and interest rate risk management practice, it could still be alive today.

The unintended consequences of the successive Fed's action to raise interest rates compounded by the loosening of federal regulations (Dodd-Frank Act) was also partially to blame for the bank's crisis (https://edition.cnn.com/2023/03/14/politics/facts-on-trump-2018-banking-deregulation/index.html). The financial industry lobbied aggressively to weaken the bill before it passed, and was successful on various fronts. Then, when the bill became law, the push continued to weaken it further, resulting in another bill that loosened the Dodd-Frank rules further. The bill raised the threshold over which banks would be required to submit to extra regulations and oversight, from 50 billion dollars in assets to 250 billion. Once the bill passed, many banks under the threshold including SVB did not need to conduct mandated stress tests to see how they would manage during adverse economic conditions; while at the same time, also lowered the amount of cash that these banks needed to have on hand in case of hiccups in the market (lower margin of safety); as they were no longer required to have a plan to quickly shut down without disrupting the rest of the financial system, should a major crisis erupt exacerbated by a Twitter-fueled bank run!

The key takeaways then are that,

(1) Too much differentiation in bank regulations should be discouraged to avoid regulatory arbitrage which might often lead to latent risk, especially those in the blindspots;

(2) So-called banks like SVB should be designated separately as a debt venture fund rather than as a conventional bank when their funding or liability pools are concentrated toward the VC (startup) world;

(3) ALM and liquidity risk management, together with stress testing and scenario analysis should be strongly encouraged and be upper-most in the minds of the senior members and board members;

(4) The "G" aspect or governance needs to rise to the fore to ensure that the reputation and confidence in these firms are always being safeguarded and managed to mitigate or reduce any potential of herd mentality mindset setting in, in an adverse environment that might yield negative impacts and consequences.

(5) Last, but not least, board and senior management should always take a "SIP", with "**S**" referring to always having a margin of **S**afety, "**I**" as in practicing **I**nversion thinking to imagine failure or the worst scenario (reverse stress testing), and "**P**", imagining all the **P**athways to a resilient and sustainable future.

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