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The fall of SVB: are all banks systemically large?

Enrique Feás | Senior Analyst, Elcano Royal Institute | @EnriqueFeas

Miguel Otero-Iglesias | Senior Analyst, Elcano Royal Institute | @miotei

José Juan Ruiz | Chairman, Elcano Royal Institute | @ElcanoJjRuiz

Federico Steinberg | Senior Analyst, Elcano Royal Institute | @Steinbergf

Ernesto Talvi | Senior Research Fellow, Elcano Royal Institute.

Jorge Tamames | Analyst, Elcano Royal Institute | @Jorge_Tamames

Theme

This paper explains the fall of the Silicon Valley Bank (SVB), its global shockwaves and the policy implications of the event.

Summary

How is it possible that the failure of a regional bank in California –with a very peculiar (albeit simple) asset and liability structure not akin to any of the other regional banks. least of all the global banks, with a marked-to-market asset base sufficient to meet the bulk of its obligations with all its creditors, including uninsured depositors, and that was immediately intervened by the FDIC– generated a major wave of contagion not only to other regional banks but eventually to US global banks and banks across the world, despite the extraordinary emergency measures taken over a weekend by the US authorities?

Analysis

(1) The ugly truth

By now we all know a great deal about Silicon Valley Bank (SVB).

First, that it went bankrupt.

Second, that it is a rather small bank, with US$200 billion in assets and a market capitalisation of US$$16 billion, compared with a stock of US bank deposits of US$23 trillion.

Third, its asset and liability structure was peculiar. Around 97% of its deposit base was uninsured by the Federal Deposit Insurance Corporation (FDIC) that guarantees deposits of up to US$250,000 (and thus more exposed to a potential run); most of these deposits were corporate (thus more sensitive to interest-rate changes); and more than

half of its assets were invested in long-term-low-yielding US Treasury securities and mortgage-backed securities (MBS) –thus exposed to good old duration risk–.

Fourth, the decision by SVB to restructure the asset side of its balance sheet by selling long-term securities (thus taking capital losses of US$1.8 billion) to reinvest in higher-yielding short-term securities to improve profitability, and the failed attempt to recapitalise the bank (by arranging a US$2.25 billion public offering of its shares), resulted in a massive run on deposits. SVD lost US$42 billion of its deposit base in the blink of an eye (in less than 24 hours), partly triggered by the panic generated through social-media platforms and chat groups. This was the first Twitter-fuelled run on a bank.

Fifth, the FDIC took over control of the bank and removed its top management.

Sixth, marking to market the securities held by SVB (and assuming away the need to sell its assets at heavy discounts, a reasonable assumption as the bank had been intervened) would have wiped out the totality of the bank's capital. However, the assets were still sufficient to pay back its creditors almost in full, including the bulk of uninsured deposits.

Seventh, the collapse of SVB triggered a run on other regional banks (eg, First Republic, Western Alliance and Comerica, among others) that suddenly became suspect, prompting a collapse in their stock prices. However, none of these banks' asset and liability structures resembled the SVB's: none had such a large base of uninsured depositors, and neither did they have such a large exposure to low-yielding long-term securities and interest-rate risk.

On 14-16 March, negotiations between the Secretary of the Treasury, Janet Yellen, the Chairman of the FED, Jerome Powell, and the Chairman & CEO of JP Morgan, Jaime Dimon, led to the deployment of a US$30 billion fund to cover uninsured deposits at First Republic. The rescue deal –similar to the US$3.6 billion one put in place by the financial sector during the 1999 Long-Term Capital Management crisis– was financed by 11 US banks. The four leadings ones, providing US$5 billion apiece, were JP Morgan Chase, Bank of America, Wells Fargo and Citigroup. They were followed by Goldman Sachs and Morgan Stanley (US$2.5 billion each), and a US$1 billion contribution from BNY Mellon, PNC, State Street, Trust and US Bank, respectively. The money provided a lifeline for First Republic, but the move failed to reassure the markets. The bank's stock plummeted by a third of its value by the end of the week and S&P downgraded its credit rating from B+ to BB+ on 19 March. At the time of writing, the bank is still in search of a buyer.

Eighth, the US authorities reacted by announcing over the weekend following the run on SVB a full guarantee for all deposits held at the bank (and Signature Bank), including uninsured deposits, by invoking a 'systemic risk' exception for SVB (and Signature), and extended the full guarantee to banks that posed a systemic risk to the financial system. In addition, the Federal Reserve launched a lending facility for non-systemic banks to ensure that depositors' withdrawals could be met. The FED's Bank Term Funding Program (BTFP) provides liquidity lines of up to one year and US$25 billion, taking government-backed bonds as collateral, and valuing the bonds at par (ie, absorbing all the interest risk), an unprecedented move. Independently of the BTFP, in the following

days US banks used the FED primary credit facility (a lending programme available to depository institutions that are in generally sound financial condition) more intensively than during the 2008 crisis.

Ninth, despite all these emergency measures the SVB crisis spread beyond the regional banks leading to sharp declines in global bank stock prices across the globe, namely, in the US, Japan and Europe.

On Tuesday, 15 March, major European banks led by Credit Suisse (once it became known that a key shareholder had refused to inject new capital) took a severe beating in the stock market and Credit Suisse itself was granted a €54 billion liquidity line by the Swiss National Bank. Other European banks, such as Société Générale, Monti dei Paschi di Siena and Unicredit, also took a severe hit.

On 19 March the Swiss National Bank and the regulator Financial Market Supervisory Authority (Finma) promoted a deal for UBS to acquire Credit Suisse for US$3.24 billion (CHF2 billion, at CHF0.5 per share). The Swiss authorities, who previously secured the approval of regulators in the US and in Europe, have imposed many conditions, among them the bypassing of a UBS shareholder vote and the write down of US$17.5 billion of contingent-convertible bonds (CoCos), whose holders will lose everything. In return, the Swiss National Bank will offer UBS a US$1 billion liquidity facility.

After the SNB announced the merge between UBS and Credit Suisse, the Federal Reserve and five other leading central banks (the European Central Bank, the Bank of England, the Swiss National Bank, the Bank of Canada and the Bank of Japan) announced in a joint statement on Sunday 19 March that, starting on the following day, they would switch from weekly to daily auctions of dollars in an effort to improve global access to dollar liquidity.

The announcement of daily dollar auctions across time zones ‘was last put in place during the 2020 COVID-19 shock. The Fed’s swap line network, first set up in 2007, has provided an important funding backstop for global banks during periods of acute market stress. Lenders outside the US can use the swap lines to access dollars in exchange for their domestic currencies by pledging collateral at their respective central banks.’

Finally, and tenth, we are again in a global financial mess provoked by the failure of a relatively small bank in an apparently remote corner of the financial markets.

(2) SVB and global shockwaves: too small to fail?

All of the above raises the following question: how is it possible that the failure of a regional bank in California –with a very peculiar (albeit simple) asset and liability structure not akin to any of the other regional banks. least of all the global banks, with a marked-to-market asset base sufficient to meet the bulk of its obligations with all its creditors, including uninsured depositors, and that was immediately intervened by the FDIC– generated a major wave of contagion not only to other regional banks but eventually to US global banks and banks across the world, despite the extraordinary emergency measures taken over a weekend by the US authorities?

There are at least three possible explanations: regulation and supervision failure; contagion; and the information content of policy announcements, which can be a double-edged sword.

(2.1) Regulation and supervision failure: delegated monitoring and mistrust in bank supervisors[1]

One possible explanation is that the SVB's fall revealed very serious regulatory flaws and damaged the information value of bank balance sheets, thus creating uncertainty about their underlying worth and triggering contagion.

First, the US has a two-tiered bank regulatory regime, whereby systemically important banks are subject to higher capital and liquidity requirements and more frequent stress tests than smaller banks, as a result of the 2018 flexibilisation of the Dodd-Frank Act for banks with assets below US$250 billion.

Second, the US also has a two-tier supervision system whereby the responsibility of overseeing state-chartered banks is shared by the Fed and the state regulator, making the system prone to coordination failures.

Third, and most importantly, the genesis of this mess was that, although US government bonds have no credit risk, they are still subject to market risk. If interest rates rise, as they did since early 2022, and by a significant amount to fight spiralling inflation, the market price of every fixed income security, including US Treasuries, falls.

This is a run-of-the-mill duration risk. Regulators appeared to have missed the implications of interest rate rises on SVB's capital, a predictable and preventable problem had it been addressed in a timely fashion.

How could this happen? Was it laxer supervision encouraged by the 2018 amendment to the Dodd-Frank Act? Was it a failure of coordination between the Fed and the California state regulator?

Be what it may, the demise of SVB calls into question how much trust investors and depositors can have in bank regulators. If they missed such an obvious risk, how credible can the asset value and capital of any bank –small or large, regional or global– be? How can depositors and investors be sure that supervisors and regulators, to whom they delegate the responsibility of watching over the health of the banks, are doing their job properly?

Not in vain, the FED announced it was launching a major supervision review in wake of the SVB collapse. The regulator par excellence recognised *de facto* the flaws in the system.

[1] The authors are grateful to Guillermo Calvo, Sara Calvo, Alejandro Izquierdo and Pablo Ottonello for a very useful discussion on this point. Any errors are solely the authors' responsibility.

(2.2) Contagion: the international connection

Another possible explanation for the systemic nature of the crisis is that the fallout of SVB raised the markets' awareness that the interest-rate risk (and its possible underestimation by regulators) was not limited to medium-sized US banks specialising in the financing of technology companies, but rather a risk also borne by banks and financial institutions the world over, thus triggering contagion.

Any institution or company holding fixed-income securities in their portfolios is exposed to interest rate risk. This is what we learned last autumn from the UK, when Liz Truss's government announced its ill-fated economic programme and set in motion a market crisis that revealed that the 'liabilities-driven hedging strategies' of the pension funds could suddenly drain market liquidity –even in the absence of a run on deposits– and require a lender of last resort to come to the rescue.

US Federal debt held by international investors and institutions totalled US$7.4 trillion at the end of the third quarter of 2022. Half of these holdings are the reserves of international governments, but the other half are held by international private investors, totalling 15% of all US debt securities.

(2.2.1) International bond holdings and systemic risk: the case of Japan

Japan leads the ranking as a holder of US bonds –followed by China and the UK–, which is not surprising considering that it has had virtually zero nominal interest rates for more than three decades and that its monetary policy relies on managing its long-term interest rates. The incentives have therefore been very strong for banks and other financial institutions –insurers and pension funds– to seek higher financial returns outside their domestic market.

Net flows of Japanese investors' purchases of international government and corporate bonds have been a key feature of the global bond market. In 2021 the stock of these assets in the portfolios of Japanese institutions totalled US$3 trillion (of which US$1 trillion are in US Federal debt).

At the beginning of 2022, US$850 billion worth of international bonds were on the balance sheet of Japanese commercial banks, mainly in US and French bonds, and by the end of the year less than US$600 billion remained as a result of both sales and, most of all, the reduction in the value of US and European bonds as interest rates rose. Another US$1 billion was held in 'special' banks such as the Japan Post Bank and two powerful cooperatives.

Aggressive bond purchases by both types of financial institution make it inevitable that a part of their portfolios is currently 'underwater'. Selling the bonds rather than holding them to maturity implies recognising the losses and is likely to trigger the need for recapitalisation. Holding them requires access to the swap or repo markets to hedge the currency risk. In the past, buying bonds and hedging the currency risk was a safe and profitable business because Fed rates were zero, but today –at 4.5%– that is no longer the case. The latter need not imply either a solvency or a liquidity problem for Japanese

financial institutions –it all depends on the beliefs of depositors– but there is certainly a problem of profitability.

It is therefore very likely that the global bond market will have to adjust to a new reality it did not have to live with for the past two decades: Japanese investors are currently net sellers of bonds, not net buyers. Moreover, the change might be accompanied by a substitution in Japanese investors' portfolios towards higher-yielding international bonds and loans to compensate for the higher hedging costs and losses incurred as they sell their portfolios of US bonds.

The two remaining players in the Japanese market are insurance companies –with holdings of US$740 billion, of which around 60% are hedged– and pension funds, especially the giant Government Pension Investment Fund (GPIF), which has 25% of its assets in international bonds that are not hedged. If GPIF portfolios and international reserves are added together, Japan has a 'public' portfolio of around US$1.3 trillion in hedged assets and another US$1 trillion in unhedged assets.

The question is whether this international asset structure can constitute a global systemic risk. Today, Japanese financial culture and incentives suggest that institutions would rather be cautious in selling their bonds, trying to avoid massive losses and divesting only the assets that have the most liquid markets and still have accumulated capital gains.

But there is a risk that one or more institutions may be forced –for reasons of profitability or liquidity (precisely the case with SVB)– to be more aggressive in their sales of international securities and less selective in the assets to be sold. If fire sales occur, the result will not only be the collapse in prices of international securities –thus aggravating the situation of unrecognised losses in the portfolios of the holders of these assets– but also that the markets might enter into a downward spiral due to lack of liquidity.

This is the rationale for the coordinated action by the central banks of the main investor countries in the global markets, as mentioned above. But the fact that, in principle, central banks have at their disposal the tools to avoid a catastrophe does not necessarily mean that ex-ante this huge accumulation of risk can be disregarded.

Ángel Ubide, a member of the Elcano Scientific Council, has rightly pointed out that, after the 2008 crises, the consensus was that deposits were safer than market funding, and that bonds were safer than loans. The SVB experience has shown that the two beliefs are not always true. And Japan can potentially generalise the refutation of this principle.

The SVB affair inaugurated a new risk paradox: trying to minimise risk by investing in US Treasury bonds rather than in complex synthetics and derivatives, ended up exacerbating risk nationally (SVB) and globally (international bond holdings).

(2.3) The information content of policy announcements: a double-edged sword?

Another possible explanation, not necessarily inconsistent with the previous ones, is the signalling dimension of policy announcements.

To be able to pay off uninsured depositors, bank regulators needed to determine that SVB (and Signature) pose a systemic risk. A systemic risk determination involves supermajority approvals by the FDIC board, the Federal Reserve board and the secretary of the Treasury, in consultation with the President and intended to be used only under extraordinary circumstances. Moreover, the full guarantee has been extended to all banks that pose a systemic risk to the financial system.

By deciding to fire a nuclear missile on an otherwise apparently manageable problem, the authorities might have unwillingly signalled that the situation is worse and the financial system more fragile than previously believed, thus triggering further contagion.

In principle, an intervention of the bank and an orderly liquidation of SVB's assets, which certainly required temporary liquidity assistance by the FED, should have been enough to ensure that all SVB's creditors, including uninsured depositors, would eventually have recovered most of their money in full.

Was it really necessary to fire a nuclear missile at a problem that apparently could have been resolved with a single battalion? Should the resolution of the SVB crisis have been of a more surgical character rather than signalling by an 'overreaction' that the situation was far more serious? That is an open question worth asking; and answering.

(3) SVB and geopolitics: is Silicon Valley too strategic to fail?

It can reasonably be conceived that the influence and lobbying, and the narrative-setting power of the venture capitalists and start-ups who had unsecured deposits at SVB, was decisive in generating the large and extraordinary bailout crafted by the FDIC, the FED and the Treasury.

Alternatively, the prospect that Silicon Valley tech companies with unsecured deposits would be unable to meet their payroll obligations and/or be forced to halt their operations, might have been a genuine concern, not just the result of a coordinated lobby tactic to force the authorities to bail these companies out.

Furthermore, apart from the importance that Silicon Valley has for the US economy, it is also reasonable to argue that in the current age of geopolitical rivalry and trade and tech wars between the US and China, the last thing the Biden Administration wanted was a disruption in its most precious tech ecosystem.

In this regard, SVB was small from a financial market perspective but too strategic to fail from a geopolitical one.

(4) SVB and Europe: lessons to be learnt and open questions

There are several lessons to learn and questions to ask from the vantage point of Europe.

First, systemic financial crises can be triggered by problems originating in apparently small and rather remote corners of the banking and financial system. This occurred in the 1998 LTCM crisis, the subprime mortgage crisis in 2008 and again now with SVB. It was also the case in the eurozone crisis. Greece, which accounted for less than 2% of

the Eurozone's GDP, triggered a systemic crisis that spilled over to many key European countries such as Ireland, Portugal, Spain and Italy.

Second, the European banking system is two-tiered also. Although all banks need to apply the Basel III regulation, in light of the SVB affair it is reasonable to ask whether the levels of supervision are equally tight across the EU's financial space.

Third, how resilient are European banks to interest-rate increases? In this regard, it should be noted that banking supervision alone might not be enough to identify systemic interest-rate risks in the financial system, since shifts in the market value of public debt not only directly affect investments but also risk-hedging guarantees (as illustrated by the UK gilt crisis mentioned above). The EU's financial supervisors should take due notice.

Fourth, the FDIC, the Fed and the Treasury reacted swiftly over a weekend to deal with the failure of SVB and Signature Bank and the other regional banks that were drawn into the storm. Would the European authorities be able to do the same with an incomplete banking union which does not have a supranational/federal deposit insurance scheme?

Fifth, are the extraordinary measures applied in the US –namely a full guarantee of all deposits for banks that pose a systemic risk to the banking system, and the treatment of US Treasuries at par value for collateralised lines of credit from the FED– a precedent that will persist? Will the European authorities incorporate these measures to their crisis management toolboxes? If not, will investors and credit institutions see the US as a safer place?

Fifth, any institution or company holding fixed-income securities in their portfolios is exposed to interest-rate risk. US Federal debt held by international investors and institutions (excluding official international reserves) is close to US$3.7 trillion, with Japan leading the pack. If one or more large institutions are forced for reasons of profitability or liquidity (precisely the case with SVB) to sell their holdings of international securities, this will pose a systemic risk that cannot be disregarded.

The European Central Bank (ECB) has a proved track record of standing ready to provide liquidity to the financial system and even act as a backstop for sovereigns if required. However, what this crisis shows is the need to accelerate the fiscal, banking and capital markets unions in the EU, precisely at a time when the Stability and Growth Pact is being reformed.

Finally, it might also be necessary to enact changes in some of the poorly-managed small and medium regional banks in certain member states, such as the Sparkassen in Germany.

Conclusions

First, the collapse of SVB is a classic 19th century banking crisis that has its origins in a poorly-supervised duration risk that resulted in the total loss of capital that triggered a run on mostly uninsured bank deposits. The only modern feature seems to have been the role of the social media, which facilitated the remarkably fast run on deposits.

Second, it also shows that problems in the financial sector tend to come from unexpected places with apparently rather small systemic implications.

Third, it highlights the crucial role played by information content of seemingly uneventful occurrences as well as the information content of corporate and policy announcements. The announcement that SVB was launching a public offering of its shares to raise capital to compensate the losses taken by the sale of Treasury securities might have signalled to market participants that its liquidity and capital situation was very fragile, thus triggering the run. The demise of SVB signalled to market participants the serious flaws in the regulatory and supervisory system, severely damaging credibility and triggering contagion. The announcement by the US authorities of extreme emergency measures to address an apparently manageable crisis could have signalled to market participants that the situation was more serious and the financial system more fragile than previously believed, triggering further contagion.

Fourth, this crisis highlights the centrality of the US financial system and the US dollar. A crisis in a small US bank triggered contagion in Europe, Japan and the emerging markets. As in previous crises, there was a flight to quality to US government securities, despite the US once again being the epicentre of the crisis to begin with.

Fifth, the de facto protection of all US deposits in banks that pose systemic risk, insured and uninsured, has intensified the debate on whether it would not make sense to allow firms and individuals to have 100% ‘safe’ deposits at the central bank (whether they are ‘managed’ by commercial banks or not). This is a prospect that will only intensify with the introduction of Central Bank Digital Currencies (CBDCs).

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Finally, this crisis poses a new dilemma for Central Banks. So far, it has been clear that the monetary authorities have had to focus primarily on inflation and raise interest rates to avoid a 1970s type wage-price spiral that generated a de-anchoring of inflation expectations. Now, however, financial stability considerations have taken the driver’s seat. In the short term, central banks can simultaneously raise interest rates to contain inflation and at the same time provide liquidity to banks to ensure financial stability (as the Bank of England did during the gilt crisis, and as the ECB did, and rightly so, in the midst of the current storm). However, since these two policies are inconsistent (the

former is a monetary contraction and the latter a monetary expansion), they cannot be maintained indefinitely.