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Silicon Valley Bank: An Autopsy

Silicon Valley Bank (SVB) was a bank that had \$212 billion in assets and \$175 billion in deposits (the majority of its deposits were uninsured startup deposits rather than retail deposits).

Problems arose from:

- (i.) its balance sheet, which was not diversified; and
- (ii.) poor risk management policies.

How banks should be structured: The balance sheet

Assets and liabilities

As a financial intermediary, one of a bank's most important job is to turn risky assets into safe ones.

The key to this alchemical transfiguration is "diversification" – one of the key tenets of sound banking.

On the asset side of the balance sheet, banks must make loans to large numbers of entities/people across various segments/sectors. On the liabilities side, the bank should have a broad base of depositors, meaning it should not be relying on sources of funding from one sector or industry/segment. It should have multiple streams of funding (deposits) flowing into the bank.

A bank with sound frameworks will ensure that their sources of deposits are spread out across different groups, such as consumers or companies in different sectors.

Diversification is the cornerstone of risk mitigation. Having a broad mix of customers (i.e., depositors) is a sacred tenet of sound banking.

Why do banks need to diversify?

Diversification brings about three benefits to the banking system.

First, it makes it less likely that a single event will cause all the depositors to pull out their money at the same time. For instance, if a bank is overexposed to depositors from a particular sector, a single adverse economic event that is localised to the sector may cause all its depositors to withdraw their funds, thereby creating a bank run. On the flipside, diversifying one's sources of deposits across multiple sectors lowers this risk.

Second, and most importantly, because diversification generally lowers the risk of a bank run, banks do not need to hold 100% of their deposits. Instead, they are able to hold a fraction of their deposits and loan out/invest the remainder, creating the fractional banking system as we know it.

Finally, with the advent of fractional banking, capital not held as reserves in the bank can be loaned out or otherwise invested to earn interest (a portion of which will be used to pay depositors for their deposits).

Why did SVB fail?

Lack of diversification

As mentioned above, diversification is critical to the banking system, and SVB's problems arose from a lack thereof.

SVB's asset mix was too concentrated (**hint:** it wasn't much of a mix). Its customer base was too narrow and focused on Silicon Valley startups (and their founders), with very few retail clients.

In the same way, its liability mix was too narrow because it focused on corporate clients instead of individual customers. Compared to retail clients, corporate clients are more likely to pull money out of their accounts in search of better yields and returns whenever key indicators and rates change.

This meant that SVB's client base was disproportionately more likely to withdraw their funds from bank accounts in search of a better yield the moment the US Treasury rates increased.

Poor SVB was vulnerable to a bank run from the start.

Poor investment thesis

Compounding the mistakes made earlier, SVB's investment thesis added further fuel to fire, when the bank invested a large portion of its deposits in long-term US Treasuries and mortgage-backed securities (MBS) (collectively, the Bond Portfolio).

These instruments are sensitive to interest rates: the price of US Treasuries and MBS decrease when interest rates rise.

Ordinarily, this would not have been such a devastating blow to SVB. Unfortunately for SVB, the Federal Reserve hiked interest rates to counter inflation, and the value of the Bond Portfolio dropped.

Still, this would not have been a problem if SVB had the wherewithal to hold on to the Bond Portfolio until it matured, at which point it would have recovered its capital and be liquid.

However, SVB could not hold on to its Bond Portfolio because it did not have any other liquid assets to cover the withdrawals.

In 2021, SVB shifted its portfolio to bonds with longer maturity dates, such as US Treasuries and MBS to enjoy greater yield.

The typical strategy when a bank shifts its bond portfolio to a longer horizon is to hedge the bond portfolio with short-term investments. These short-term investments were meant to provide quick liquidity as and when required.

But SVB failed to hedge.

This meant that SVB was overweight in long term liabilities that could not be quickly liquidated without incurring severe losses due to the interest rate hikes (value of SVB's Bond Portfolio had already fallen drastically).

Tippling over: The confluence of factors

Ordinarily, the bank would have been able to hobble on for a bit longer.

Unfortunately, its lack of diversification came back to bite it.

Since Silicon Valley startups made up too much of SVB's business, it was inevitable that when the tech industry was hit and venture capital funding dried up, SVB's depositors would start to pull their money out of the bank.

When the tech sector started to withdraw *en masse*, SVB could not cover the withdrawals and had to sell its Bond Portfolio incurring massive losses.

To cover its shortfall, SVB intended to do a capital raise.

Depositors panicked, thinking that SVB was not liquid enough, and Silicon Valley rushed to withdraw their remaining funds, inciting a bank run and landing the final blow on the bank.

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