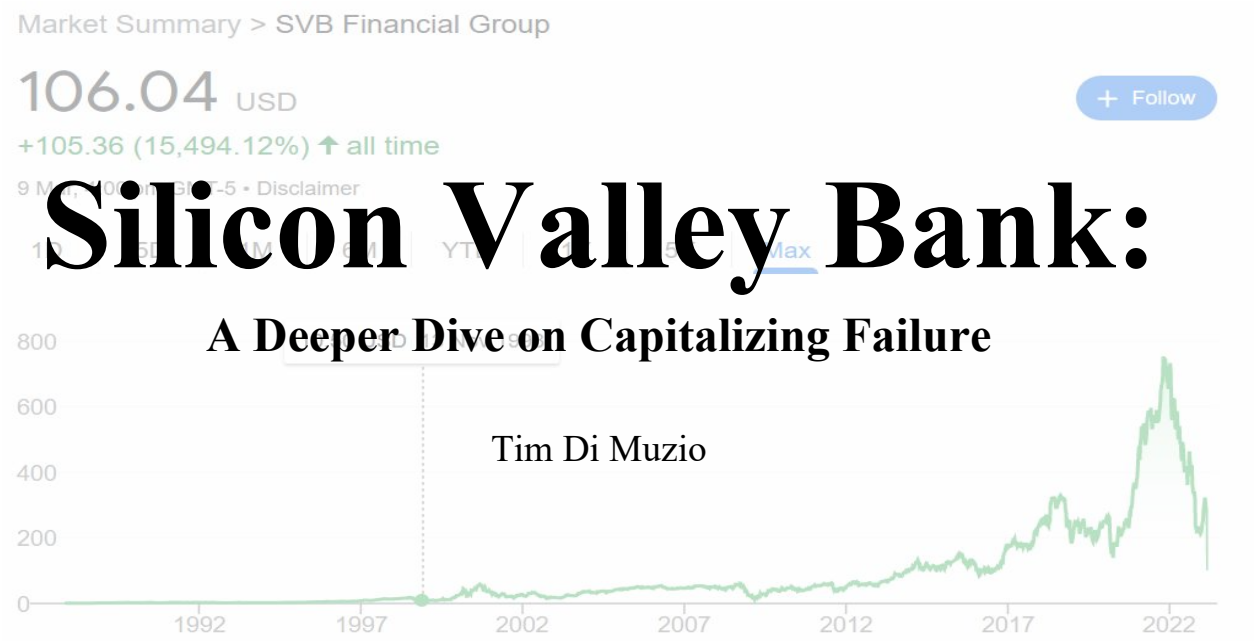

Silicon Valley Bank:

A Deeper Dive on Capitalizing Failure

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Splashed all over the headline news is the recent failure and subsequent receivership of Silicon Valley Bank (SVB) by the Federal Deposit Insurance Corp (FDIC). While SVB once boasted a little over $200 billion in assets, it is now, from the point of the view of its balance sheet, underwater. At the moment of this writing, depositors are scurrying to get their deposits back and companies are struggling with their own finances, including payroll – the FDIC only guarantees deposits up to $250,000 where SVB had about US$174 billion in deposits. It is also estimated that about 2.7% of accounts had $250,000 or under, making this the largest financial crisis since the GFC in 2007 (most of the deposits are technically uninsured though recent statements by the Fed state everyone will get their money back). As is to be expected the share price and capitalization of its parent company SVB financial has *plummeted* by just about 86% since its height in November of 2021 and trading appears to be suspended.

At the moment I find the reporting fairly superficial, so the point of this commentary is to dig a little deeper and go over a few financial and accounting aspects to the story so far. We also have to keep in mind that a few short traders, when looking at the company's last earnings report, knew the bank was in trouble given the state of its balance sheet after the last earnings report.

Modern Money, Loans and Deposits

So, first off, we need to know a little something regarding a bank's balance sheet. Actual balance sheets are far more complex but for our purposes we need to know the following accounting identities:

Simplified Commercial Bank Balance Sheet

Assets	Liabilities
Reserves	Deposits
Loans	Equity
Additional holdings (e.g. bonds)	

A change in Loans = A change in Deposits. So, when a commercial bank makes a loan, it does so by creating a deposit in a customer's bank account. Loans make deposits *not* the other way around. When a bank lends it does so by expanding its balance sheet, not by taking money from another person's account as was the traditional and incorrect view of modern banking. **Let's be clear**: to make loans, banks do not necessarily need depositors, but deposits do play a role on the bank's balance sheet – more on this below. Here, we should also note that most money in modern economies like the USA is digital – over 90%, the rest of the money supply consists of physical notes and coins which should be known as *cash*. There have been too many reports that are confusing cash – notes and coins – with the actual money supply as a whole and this has to stop. Though most modern money is digital, we still do have 'cash' in the economic system. This is largely why we have 'reserves' which symbolize actual cash on the balance sheet. While most payments are now made digitally (numbers in bank accounts/electronic payments), some people do want to hold notes and coins and the bank has to be ready for that event up to a point – remember, we are nearing a cashless economy as payment methods are changing and some venues are turning into 'cashless' operations. So don't get confused – more on this later – when you read that there was a 'run on the bank' no one was going to get physical cash but likely to transfer their balances to a more reputable and secure financial institution. That said, it is true that in previous bank runs like in the Great Depression, people did want physical cash, and this obviously caused problems (but that's another story how). Anyhow, the thing to remember is that there are not enough physical notes and coins in circulation to represent all the digital money in bank accounts.

Now, before we go further in the analysis, another good thing to remember is that capitalism is fundamentally a debt based economic system run by the iron (and sometimes not so iron –

see Enron's debacle) law of balance sheets, double-entry bookkeeping and accounting identities.

Ok, so let's go over the other accounting identities.

A change in Reserves = a change in Additional Holdings (e.g., bonds) = a change in equity. Here it is good to note that if people want to hold more cash or banknotes, reserves go down because this is the accounting identity from where they come. Again, this happens, but is increasingly rare due to digital money (and I don't mean crypto but the numbers in your bank account representing fiat currency). In addition, I should note that bank loans *do not* come out of reserves. Reserves, insofar as they exist (some countries have no reserve requirement) are assets of the commercial banks that are housed as assets at the central bank – in the US case, the Fed.

Silicon Valley Bank – A Brief Overview

With these accounting identities in mind let's ask how investors capitalized the failure of Silicon Valley Bank. And let's also try to find out why in the beginning, depositors feared they would not get their money back from SVB. But first, what was SVB?

SVB was founded by Bill Biggerstaff and Robert Medearis, former bank managers from Bank of America. It was a Californian state-chartered commercial bank operating on both the West coast (Santa Clara, California) and East coast (near Boston, Massachusetts). The idea for the bank was that it would help finance start-up companies since many new enterprises were springing up in the computer and tech industry in and around Silicon Valley. The bank opened its doors for business in October of 1983. As the high-tech economy began to flourish, so too did the bank. In the 1990s, SVB's chieftains got into the high-risk real estate loan business as well as lending to wineries. But SVB's core business at this time appeared to be loaning funds to start-ups and venture capitalists by creating new deposits for their clients. Thus, at this stage SVB's investors were capitalizing the bank's ability to make loans and for their clients to service these loans at interest – a source of income for the bank among other things like fees. In the 2000s more loans were made and this expanded the client base of the bank as well as SVB's balance sheet. At this time the bank continued to focus on its niche business: tech start-ups. As many have noted, limiting its market by not expanding into a fully-fledged commercial bank was a risky strategy but one that perhaps helped attract new and upcoming tech firms due to reputation and exclusivity. Still, the eggs were largely in one basket of risk.

Now here's where it gets interesting and where I differ from what the mainstream pundits are saying. It appears true that during the pandemic deposits may have increased as tech company profits soared. It is also true that SVB decided to buy long-term Treasury bonds as another income stream for the business. ***But it cannot be true that they used the deposits of their clients to purchase these securities***. Commercial banks are free to purchase securities at their own risk by expanding their balance sheets in the same way they do when they make loans to clients. So here we have to make a **big distinction** between loans that turn into deposits for clients made by a simple computer entry and actual deposits made by the bank's clients. In the first operation the loan is owed back to the bank at interest. Once the loan is repaid, the account can be considered closed – no more money is owed, and the debt and money are cancelled. In the second operation, there is no loan, someone or company simply warehouses their deposits on the bank's balance sheet. What does that look like on the books? Let's imagine three depositors.

Simple Representation of Depositing Identities

Entity	Debit (dr)	Credit (cr)
Company A	$200	$200
Company B	$1000	$1000
Company C	$5000	$5000

Note that the entries balance and that on the credit side of the entry, this is money that customers can theoretically withdrawal at any time. So, we have a problem – at least according to mainstream reports that are confusing cash with digital money and loans and with what I've called actual deposits (not loans). How, if banks do not use customer deposits to make wild speculative purchases or risky investments, did we arrive at the insolvency of SVB? It's a bit complicated so let's go over what insolvency means in the first place and how this relates to a balance sheet. I know, fun stuff.

Insolvency

First off, there are many types of insolvency, but a bank insolvency is particular since these entities are dealing with deposits and create money out of thin air as loans to customers. Here it is good to recall that whether the deposits are coming from the bank making loans to clients or from clients making deposits that are not loans (say the cash flow of tech companies) they

still count on the same side of the balance sheet. So, in a bank failure (insolvency) what occurs is that the value of assets falls below the value of the bank's liabilities. And yes, in the case of SVB, increasing interest rates and bad investments triggered the collapse. Let's take a closer look why by going back to our simplified bank balance sheet. To recall, capitalism fundamentally rests on double entry bookkeeping and banks are at the heart of credit creation.

Assets	Liabilities
Reserves	Deposits
Loans	Equity
Additional holdings (e.g. bonds)	

We can see here that the bank's assets are its reserves with a central bank, loans it makes to clients from where it derives interest and fees and any additional holdings which we can simply call investments. As is well known, SVB's chieftains expanded the asset side of their balance sheet by purchasing long-term government bonds and was holding mortgage-backed securities made famous during the GFC. By the end of 2022, SVB was holding $117 billion of securities on its books which accounted for a significant chunk of the $211 billion registered on the books as assets ($117 billion is 247% of $211). When the Fed increased interest rates, these bonds became more difficult to sell because investors could purchase new bonds with higher interest rates. Eventually, they were forced to sell at considerable losses, reducing their asset side of the balance sheet significantly. To put it bluntly, why buy a security at 1.5% when you can get a yield of 3.5% for example? So, to simplify, - see the highlight above - the value of SVB's investments was dropping drastically.

In addition to their investment assets dropping in value, another source of assets was drying up. As the tech world started shedding employees and encountering profitability problems of their own, there were fewer companies asking for loans which would have expanded SVB's balance sheet on the asset and liability side. This further compounded the problem of the decreasing value of their so-called investments. Banks are in business to make loans, and no open valve of takers was forthcoming. Now, as the asset side was decreasing in value, so too was the liability side as companies rushed to transfer their deposits to another financial institution. This is why SVB's leadership wanted to raise more equity – it would have helped balance its books, but this too failed. Eventually, however, liabilities exceeded assets and SVB was declared balance-sheet insolvent, and the FDIC took charge.

Conclusion and Personal Note

This brief commentary began with my frustration over the mainstream media failing to do a deep dive into SVB's failure. Analysis was relatively superficial, and many incorrect statements were made like 'depositors wanted their cash out' and that 'the deposits of Silicon Valley firms were used to make shoddy investments.' Both statements are untrue, Silicon Valley firms were in no way arriving to the bank with suitcases to be filled with notes and coins – and if they did, there obviously wouldn't be enough. Second, the bank used its legal ability to expand its balance sheet by buying securities rather than by using the funds of their depositors. With all this said, thanks to double-entry bookkeeping, there is a relationship between the asset and liability sides of the balance sheet. In this case, the value of the bank's assets fell below its liabilities, making its balance sheet insolvent given the choices made by leadership and changing circumstances in the world of interest rates.

On a personal note, this is not the end of the story and only a brief commentary. There is additional detail not covered here as well as shenanigans to uncover, but I hope this brief commentary clarifies a few things people might be asking, as I was when listening to the news on yet another story where investors were capitalizing failure. On another note, I'm in the middle of a full semester, so I wrote without sources – I will add these when I have the time.

If you got this far, thanks for reading.