WATERLOO CAPITAL

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What Happened to Silicon Valley Bank?

LIABILITY

ASSET

The failure of Silicon Valley Bank was caused by a run on the bank. The company was not, at least until clients began rushing for the exits, remotely insolvent. But banking is an enterprise that relies as much on confidence as it does liquidity — and if that runs out, the game is over.

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Let's start with a discussion on Asset Liability Management:

In sum, we can fault Silicon Valley Bank's poor Asset liability management for their ultimate demise. Asset liability management (ALM) is a financial management technique that analyzes the duration of both a financial organization's assets and liabilities and implements strategies to mitigate risks associated with mismatches in duration exposure. Put simply, the duration of a financial instrument is a measure of it's sensitivity to changes in interest rates. It is a mathematical calculation that considers an asset's expected cash flows and the timing of those cash flows to quantify them as a weighted average time period. **In general, the higher the duration of a financial asset, the more sensitive it is to changes in interest rates (in the denominator of the equation below).** As interest rates rise, the value of the future cash flows from the asset are discounted at a higher rate, resulting in a lower present value. Conversely, when interest rates fall, the value of the future cash flows from the asset are discounted at a lower rate, resulting in a higher present value.

$$\text{Bond Price} = \frac{Coupon_1}{(1+i)^1} + \frac{Coupon_2}{(1+i)^2} + \cdots + \frac{Value\ @\ Maturity_n}{(1+i)^n}$$

Duration is commonly used by risk officers to assess the interest rate risk of their investments and to assist in making informed risk management decisions concerning portfolio allocations. ALM is particularly important for financial institutions, such as banks and insurance companies, which have large portfolios of assets and liabilities.

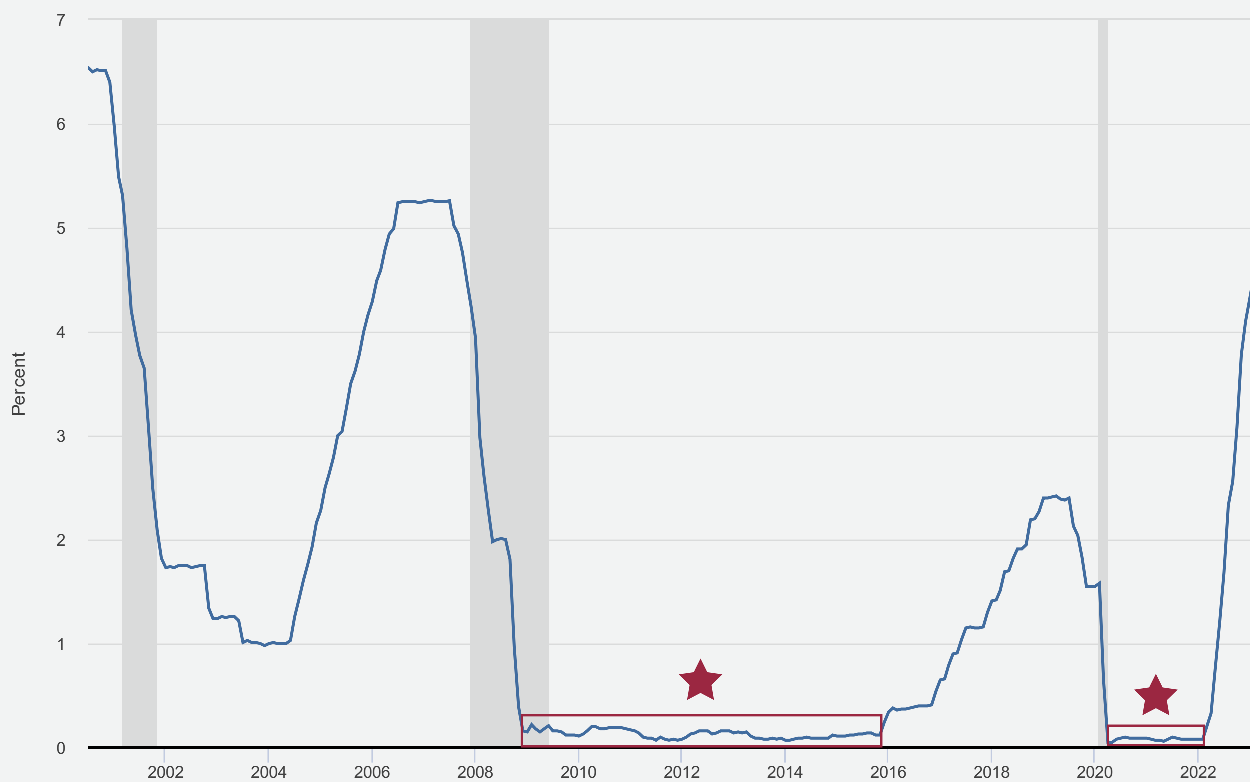
These organizations must carefully manage their assets and liabilities to ensure that they have sufficient liquidity to meet their short-term obligations [while also maximizing returns and minimizing risk.] Effective ALM also involves assessing the risks associated with an organization's interest rate risk, credit risk, and liquidity risk, and developing strategies to manage those risks. This may involve adjusting the mix of assets and liabilities, hedging against risk factors, and most importantly monitoring and managing the organization's cash flow.

By effectively managing their assets and liabilities, organizations can ensure that they have enough liquidity to meet their obligations. This, in turn, helps to ensure the long-term financial stability and success of the organization.

(SVB) is a financial institution that specializes in providing banking and financial services to the technology industry. The bank grew quickly as it catered to startup firms that were too unprofitable or too small to merit relationships with larger banks. **SVB had a large portfolio of loans to technology startups, which were typically funded with short-term deposits from venture capital firms and their employees.**

This business model created a significant mismatch between their assets and liabilities, as SVB decided to hold longer-term debt because they provided higher interest rates than the zero percent lower bound that the Fed kept rates at during almost the majority of the Obama administration. As you can see below, for a decade, the Federal Reserve maintained short term policy rates near zero. A key question is whether the central banks' ZIRP policies, subsequent rapid rate increases, and poor regulatory oversight was a major contributor to SVB's demise.

Federal Funds Rate was Kept @ 0% for Nearly a Decade



Source: Board of Governors of the Federal Reserve, fred.stlouis.org

The Federal Reserve's zero interest rate policy (ZIRP) was implemented in response to the 2008 financial crisis to stimulate the economy and encourage bank lending. This policy kept short-term interest rates near zero for years and made borrowing cheaper. Under a ZIRP policy, a central bank sets the target for short-term interest rates at or near zero percent, effectively keeping the cost of borrowing at a minimum. This is commonly referred to as "free money".

The idea behind a ZIRP policy is to encourage investment and spending by making borrowing cheaper and reducing the cost of carrying debt. This can, in the short run, stimulate economic activity and loan generation. Additionally, a ZIRP policy can help to prevent deflation, which can occur when prices and wages are falling, leading to a slowdown in economic activity. ZIRP policies are typically used only during times of dire economic crisis or deep recession, when central banks are looking for ways to invigorate the economy and encourage lending. **However, ZIRP policies also have long term unintended consequences, such as creating asset bubbles or increasing risk-taking behavior among investors and lenders beyond what is prudent.**

For regional banks, the Zero Interest Rate Policy (ZIRP) policy has huge challenges particularly after the Fed started to raise policy interest rates. On one hand, the Federal Reserve's low policy rates allowed banks to lend at lower rates and encourage more borrowing. On the other hand, low interest rates meant that banks had a more difficult time generating any revenue from investing in high quality, liquid, short maturity fixed-income securities or loans. **This led to duration mismatching by some banks.** Some took in low-cost deposits and made slightly longer-term loans and fixed income purchases. If there is plenty of liquidity in the portfolio, some mismatching is OK. **However, in the last year the Federal Reserve began to raise interest rates at the fastest pace in history to fight inflation, causing every loan or fixed income purchased in the era of ZIRP to fall in value rapidly.** If these assets can be held to maturity, this isn't a problem as the bank can recover the value on the bond's due date.. If liquidity is needed, however, there are significant losses on its longer-term loans and bonds they made previously. SVB sold off some of their longer-term debt to reduce their interest rate risk. They also implemented stricter risk management practices and tried to reduce their reliance on short-term deposits.

A run on the bank, Silicon Valley Bank (SVB), also occurred in the early 2000s, during the dotcom bust, when many technology startups were going bankrupt or struggling to survive. SVB had built its business by providing banking and financing services to these startups, but as the economic downturn deepened, many of the startups began to default on their loans. This created a crisis for SVB, as it had a large amount of non-performing loans on its balance sheet and was struggling to maintain sufficient liquidity. As word of the bank's problems spread, depositors began to withdraw their funds, fearing that the bank might fail. This led to a run on the bank, with depositors lining up outside SVB branches to withdraw their money.

A run on any bank can have serious consequences, not just for the bank itself, but for the broader financial system and the economy. All runs on a bank occurs when many depositors simultaneously withdraw their deposits from a bank, usually because they fear that the bank may become insolvent or fail. This sudden and mass withdrawal of deposits can cause the bank to run out of cash and become unable to meet the demands of its depositors. It can lead to a loss of confidence in the banking system, triggering more bank runs and financial instability. Therefore, in the micro sense, a bank run can cause the institution to become insolvent, leading to the loss of depositors' funds. In the macro sense, this can potentially lead to a ripple effect throughout the economy as confidence subsides and alarm ensues.

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This latest instance wasn't credit driven like the dotcom bust but reflects disintermediation. Disintermediation occurs when investors withdraw their deposits from financial intermediaries such as SVB and instead invest directly in shorter dated investments like Treasury bills. **The choice between earning near 0% on deposits or near 5% on a risk-free T-Bill is pretty much a no-brainer.** Disintermediation greatly disrupted SVB's business model of taking in cheap deposits and lending to Silicon Valley venture capitalists.

To prevent runs on banks, central banks typically have measures in place to ensure the safety and stability of the banking system. These may include deposit insurance programs, regulatory oversight and supervision, and lender of last resort facilities to provide liquidity support to banks in times of crisis. **In this case, the FDIC, the Fed, and other regulators met over the weekend to layout a transparent roadmap on the situation and eventually released a statement acknowledging that depositors would have full access to their deposits this week,** even over the $250,000 FDIC-insured limit. According to the joint statement released by Fed chair Powell and FDIC chair Gruenberg, losses to the Deposit Insurance fund to make these depositors whole will be recouped by a special assessment on banks. The same cannot be said for shareholders and bondholders in the company.

Fed policy and its "long and variable lag" effect is finally rearing its ugly head. As we move forward through the next few days and weeks, a close eye will be on the potential contagion effects throughout other banks and the overall economy. **The action taken over the weekend has mitigated a number of left tail risks in terms of large-scale bank runs for depositors. Yet, investor fear remains elevated and has caused a repricing in volatility.** In the aftermath of this unwind, senior management across the space will lean more towards a more conservative approach. It will likely lead to stricter lending standards which can trigger a faster slowdown in the economy than was already expected. This, combined with many points we highlighted in our 2023 Market Outlook: Return of Gravity, leads us to remain cautious in the short run.

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