



CROFT FINANCIAL GROUP

MACRO-ECONOMIC RESEARCH

Canaries in the Coal Mine?

March 2023

Richard N Croft, Chief Investment Officer

rcroft@croftgroup.com

CANARIES IN THE COAL MINE?

We all knew that aggressive interest rate hikes would eventually break something. The first shoe dropped on March 10th and March 11th, when the Federal Deposit Insurance Corporation (FDIC) took control of two insolvent commercial banks: Silicon Valley Bank (SVB) and Signature Bank (SBNY) were the second and third largest bank failures since Washington Mutual collapsed in 2008.



The Silicon Valley Bank is a subsidiary of SVB Financial Group (symbol SVIB, NASDAQ). SVIB is a financial services and bank holding company that provides financial services through four main subsidiaries: Silicon Valley Bank (commercial lending), SVB Private (wealth management), SVB Capital (funds management) and SVB Securities (investment banking).

Signature Bank was founded in 2001 and catered to privately held businesses, their owners and executive teams. It was a major lender to New York City apartment owners and clients such as the Trump organization and Trump's son-in-law Jerrod Kushner and his family. Ivanka Trump was a member of SBNY's Board until her father ran for President in 2015. Another famous Board member was Democratic Congressman Barney Frank who co-authored the 2010 Dodd-Frank Act that overhauled regulations across the banking industry.



SBNY was also the go to bank for many crypto currency businesses and became the first FDIC insured bank to offer a blockchain-based digital payment system. In 2021, SBNY's deposit base expanded by 67% in 2021 with the bulk of new deposits coming from the crypto industry. When FTX crashed and eventually declared bankruptcy, SBNY began pulling away from the crypto space. In 2022 SBNY's deposit base shrank by US \$17 billion as crypto businesses sought alternative custodians such as Silverlake Capital that, in a twist of fate, declared bankruptcy this month. The press release suggested that Silverlake may not have sufficient capital to make all depositors whole.

The failure of these institutions can be traced back to a misalignment of assets and liabilities during a period when central banks were raising interest rates at an unprecedented pace. Rule number one in the banking industry is to always match the timing of your assets (loan portfolio) and liabilities (deposit base).

On a broader scale, these failures represent the unintended consequences of narrowly focused central bank policy. While the inflation reduction strategy is admirable, the aggressive approach may have gone too far too quickly. What seems clear is these failures signify a seminal moment, not only because of their size, but because they demonstrate that aggressive rate hikes are having the desired, albeit painful, effect on the financial system.

The fallout is being felt most among US regional banks as contagion fears caused market values to plummet. Even the thirty largest US money center financial institutions and the big six Canadian banks were not immune to the fear induced sell-off.

Before panic sets in, we think it is helpful to examine the timeline that created the perfect storm to understand the macro-economic repercussions. In the case of SVB, aggressive rate hikes made it more difficult for tech startups to borrow or raise capital to fund their cash burns. Tech startups tend to sacrifice their balance sheets (i.e., burning through cash at an elevated pace) to augment their longer-term growth prospects.

The typical trajectory for a tech startup is to spend aggressively in search of customers who would provide a real-world beta test to validate the new technology. SVB, and other banks who understood this visionary spirit, would lend money to startups collateralized by the firm's private equity that hopefully, would appreciate when the tech company went public via an initial public offering (IPO).

The business models began to fall apart when financing costs went ballistic. The surge in rates made it too costly for venture firms to add layers of capital and challenged the cost-benefit analysis for SVB. By mid-2022 SVB was no longer willing to capitalize startups through loans collateralized by the private equity of an unprofitable company.

It is a similar story with SBNY, as loans it made to crypto businesses were no longer tenable given the higher cost of money. It was also more difficult to finance residential construction projects as real estate values were declining and cash flow metrics were more difficult to sustain.

While their core businesses may have been the venerable TNT, the fuse was their sizeable, albeit thin, deposit bases. As loans to their core clients became untenable, the banks decided to invest their deposits in a portfolio of available for sale (AFS) securities made up mostly of short-term US treasuries that yielded less than prevailing rates. Higher short-term rates caused the value of their AFS portfolios to decline. This is not a serious problem if the bank were able to hold the securities until they matured.

With the lack of available funding from venture capital firms and the banks, tech startups and crypto businesses began withdrawing funds from their operating bank accounts (a significant portion of which was held at these institutions). SVB and SBNY had to sell their AFS portfolios at a discount to manage the liquidity crunch. It came to a head on Wednesday March 8th when SVB stated that it intended to raise capital by issuing US \$2.25 billion in common equity and convertible preferred shares to shore up its balance sheet.

SVB CEO Gregory Becker urged clients to “stay calm” amid concerns about the Bank’s financial position. Becker added, the bank has “ample liquidity to support our clients with one exception: If everyone is telling each other SVB is in trouble that would be a challenge.”



And there lies the rub. At the time SIVB was experiencing losses across all its business unit’s investment banking had ground to a halt. Commercial lending to startups burning cash to support growth was untenable and concerned FSB depositors were demanding their money.

The “shore-up-the-balance-sheet” rhetoric lit the fuse that prompted many VC firms, notably Peter Thiel’s Founders Fund, to move money out of the banks while at the same time, encouraging other VCs to do the same. The resulting tsunami of withdrawals was the worst case that Becker was trying to avoid. That these institutions were unable to placate their deposit



base was rooted in the position that a bank's business model is predicated on trust and confidence, not on net interest margins.

As with all banks, deposit accounts are guaranteed up to US \$250,000 by the FDIC. The problem with SVB and SBNY is that an inordinate number of deposit accounts held more than the FDIC insured limits. That created the run on the bank as depositors demanded their money which ultimately led to a similar run on SBNY.

The shares of both companies collapsed on Thursday March 9th and contagion fears caused a rush to the exits across the entire banking sector. When the markets opened on Friday March 10th, trading in SVIB and SBNY shares was halted. The FDIC took control shortly after.

Because neither bank is a systemically important financial institution (SIFI), the US Treasury Department made it clear it would not provide a bail out. A SIFI bank is one in which US federal regulators determine would pose serious risk to the economy and as such, is "to-big-to-fail."

However, in an unprecedented move, the FDIC decided to guarantee the total value of all deposits held at SVB and SBNY. Considering that the bulk of deposits held at both institutions was well above the US \$250,000 FDIC insured limits, that was a significant decision that may have unintended consequences down the road. But in this case, it allowed tech startups and crypto businesses to meet payroll and hopefully, it will calm markets and prevent further bank runs.

Contagion Fears

The main question haunting investors is whether SVB and SBNY were unique outliers, because their loan portfolio was concentrated in specific sectors and financed by an outsized insured deposit base. That's very different from traditional banking models where loans are spread across many sectors and are financed by a large base of smaller deposits well below the US \$250,000 insured limit.

Notwithstanding the differences, contagion fears prompted a sell-off in the thirty SIFI banks which led Morgan Stanley analyst Manan Gosalia, in an attempt to assuage investors, to issue a statement that "we [Morgan Stanley] do not believe there is a liquidity crunch facing the banking industry, and most banks in our coverage have ample access to liquidity." Gosalia added that the current downward spiral in SVB and SBNY is "highly idiosyncratic and should not be viewed as a read-across to other banks."

Our concern is that these comments are eerily similar to what we heard from analysts after Bear Stearns collapsed in 2008. We are mindful of the trust and confidence sentiment that permeates through the financial sector. We suspect that depositors – particularly large depositors - will re-examine their relationship with a smaller bank and many will opt to move their funds to a larger institution. We suspect that trend is underway which is wreaking fallout across all smaller regional banks, most notable at the sharp edge of the knife, coming from the sell-off in the shares of First Republic Bank of San Francisco (symbol: FRC) which has lost nearly 70% of its market value. Also noteworthy is the impact on the shares of PacWest Bancorp (PACWP, 30% + decline) and a 50% sell-off in Western Alliance Bancorp (WALA).



Ten of the largest money center banks have attempted to stem this tide of redemptions by adding US \$30 billion in liquidity to FRC rather than stepping up and buying the bank as occurred during the financial crisis. Buying a weak bank has its own challenges. In the aftermath of the financial crisis, the buyouts of Bear Stearns and Merrill Lynch took years to assimilate into J P Morgan's and Bank of America's risk models. So far, the results of the FRC liquidity infusion have been mixed and has infused an enhanced level of volatility across all sectors. Make no mistake, fear is a fickle emotion, and strategies that are meant to assuage anxiety can add to the problem.

Despite the initial selling, we think a broader contagion is unlikely, although smaller banks that are disproportionately tied to cash-strapped industries like tech and crypto will be challenged. We see little risk to the thirty largest SIFI banks and the big-six Canadian banks as they are well capitalized – more than was the case during the financial crisis – and any significant threat to their business model is tied more to housing which tends to be supported by long term mortgage commitments supported by a broad insured depositor base.

The Macro-Impact

Clearly these failures denote a watershed moment for tech startups. New business models will be difficult to finance, venture capital firms will be more reluctant to invest and many tech companies on the bubble will fail. That means more job losses in Silicon Valley and New York, limited development of new disruptive technologies and widespread damage across the tech sector.

Tech giants (i.e., Microsoft, Apple, Amazon, Meta, Alphabet and Netflix) should benefit from the carnage as they can make investments in new technology that can be easily assimilated into their business models. However, the investment thesis of the big names will be propelled by profitability which is very different from the way venture capitalists empower startups.

On a macro level, we think the fallout will have an impact on the future direction of interest rates. Goldman Sachs was the first to declare that the US Federal Reserve (Fed) will not likely raise rates at their next meeting. Our view, given the ECB has raised rates by 0.50%, is that the Fed will raise rates by 0.25%, if for no other reason than to demonstrate their confidence in the system. We suspect the Fed will pause after that hike which is in stark contrast to recent projections and may mark the beginning of a Fed pivot.

That is most likely why the financial markets, despite the volatility, have not collapsed, as traders weigh the impact of a Fed pause / pivot on the economy. It may be that the pain inflicted by SVB, SBNY and the potential fallout from FRC will ameliorate the hawkish tone that has permeated the thinking of central bankers.

Time will tell!

SECURITY OF ASSETS IN YOUR BROKERAGE ACCOUNTS

We think it is important for you to understand that funds and securities in your brokerage account are not part of the custodians' (in our case National Bank Financial) assets. Any potential problem with the big six Canadian banks, which we do not envision, has no impact on your brokerage account.



The funds in your brokerage accounts are separate and apart of the bank’s asset base and are covered up to \$1 million per account by the Canadian Investor Protection Fund. The only impact on the financial position in your brokerage account rests in the value of the securities held in the account and owned by you. From this perspective, your brokerage account may be the safest haven for your financial assets in the current environment.

THE CHANGING TERMINAL RATE OF INTEREST

The terminal rate for interest is the level which central banks believe will mitigate inflationary pressures allowing for a pause in rate hikes. This level is data dependent based on inputs for economic growth projections, wage pressures, employment trends, sector driven inflationary pressures and the black swan events we have been experiencing.

With so many inputs working at cross-purposes (i.e., higher rates dampen economic activity negatively impacting employment opportunities that represent half of most central bank’s dual mandate), predicting the actual terminal rate is difficult. Additionally, the terminal rate is impacted by idiosyncratic events that are beyond the control of central banks including the Ukraine war, geo-political developments, financial markets impact on the wealth effect and unintended consequences propelled by black swan outcomes (i.e., bank failures).

Interestingly, there has been a shift in the way many central banks – most notably the Fed – are targeting inflation. The latest salvo being a recently adapted policy framework known as average inflation targeting. The underlying principle is that the average inflation rate may be allowed to run moderately above policy for prolonged periods to balance economic growth and longer-term inflation expectations. While this may be appropriate policy, it makes predicting a reasonable terminal rate more difficult than in the past.

The latest inflation challenge is the hotter than anticipated numbers in the personal consumption expenditures (PCE) index (see table), the Fed’s preferred inflation gauge. The PCE index measures the total amount of money spent by households and individuals on goods and services produced within the economy during a given period. PCE is an important measure of economic activity, as it accounts for a large part of Gross Domestic Product (GDP), which is the total value of all goods and services produced in a country.

	Change From Month One Year Ago
Jan-23	5.4%
Dec-22	5.3%
Nov-22	5.6%
Oct-22	6.1%

PCE includes both durable goods (such as cars, furniture, and appliances) and nondurable goods (such as food, clothing, and gasoline), as well as services (such as healthcare, education, and entertainment). PCE does not include spending on housing, as this is already accounted for in a separate measure called Gross Private Domestic Investment (GPDI).

PCE is often used as an indicator of the strength of consumer spending, which is a major driver of economic growth and inflation. Trying to rein in consumer spending patterns is difficult in a normal environment, in a post-covid setting, it is nearly impossible to predict.



When PCE increases, it can signal that consumers are feeling more confident about their financial situation and are willing to spend more on goods and services, which in turn can stimulate economic growth. We are seeing this payout in the service sector (i.e., restaurants, entertainment, travel) which represents 70% of all consumer spending. Conversely, when PCE decreases, it can indicate a slowdown in consumer spending and a potential economic downturn.

The Fed pays attention to the Personal Consumption Expenditures (PCE) index for several reasons. First, the PCE index is a key measure of inflation, which is a critical consideration for the FED in carrying out its monetary policy mandate. The Fed aims to keep inflation stable and low, typically targeting a 2% annual inflation rate as measured by the PCE index.

Second, the PCE index is considered a more accurate measure of inflation than other measures such as the Consumer Price Index (CPI) because it considers changes in the mix of goods and services purchased by consumers over time. Note the explosion of expenditures for travel, leisure and eating out. This is particularly relevant when looking at the service sector, because consumer behavior can shift dramatically over time. From the Fed's perspective, the PCE index adjusts most quickly to these changes.

Third, the PCE index is often used as a benchmark for measuring the overall health of the economy. The Fed uses PCE data to assess consumer spending trends, which are a critical component of overall economic growth. By tracking changes in PCE, the Fed can gauge the strength of the economy and make policy decisions accordingly.

Overall, the PCE index provides important information for the Fed to make informed decisions about monetary policy, including setting interest rates, adjusting the money supply, and taking other measures to promote economic stability and growth.

FOCUS ON WAGE GROWTH

Currently, the Fed's main concern is wage inflation – particularly in the service sector - for which there are several factors that can lead to higher wages for workers, including:

Labor market conditions: When the demand for labor is high and the supply is low, workers may be able to negotiate higher wages due to the scarcity of available workers. Think about restaurant staff.

Education and skill level: Workers with higher levels of education and specialized skills are often able to command higher wages due to their unique abilities and expertise. We are seeing some mitigation in this space, as tech companies are laying off workers.

Inflation: Inflation can lead to higher wages as workers demand higher pay to keep up with the rising cost of living. This reflects the worrisome wage-price spiral. As prices rise, wages need to increase to keep pace.

Collective bargaining: Collective bargaining agreements between workers and employers can lead to higher wages as workers negotiate for better pay and benefits. This is less of a concern in modern economies as the role of labour unions has weakened since the Reagan administration.

Government policies: Government policies such as minimum wage laws, labor protections, and tax policies can impact wages by setting minimum wage levels, providing incentives for businesses to pay higher wages, or supporting workers in various ways. In the US, as democrats control the white house and the senate, minimum wage laws have been fortified.

Productivity gains: When workers become more productive or efficient, they may be able to negotiate higher wages due to their increased value to their employers. This is the most serious concern as productivity has not kept pace with higher wages.

The main role of central banks in the current environment, is to prevent a wage-price spiral. The wage-price spiral is a term used to describe a phenomenon where wages and prices rise in a self-reinforcing cycle, with each increase in wages leading to higher prices, and each increase in prices leading to demands for higher wages. This spiral can lead to a sustained increase in the overall level of prices in the economy.



A wage-price spiral can start when workers demand higher wages to keep up with rising prices, which can in turn lead to higher production costs for companies. In response, companies may raise prices to maintain their profit margins, which can in turn lead to further demands for higher wages from workers. This cycle can continue, with each increase in wages leading to higher prices, and each increase in prices leading to demands for higher wages.

The impact of the wage-price spiral on inflation is significant. When wages and prices rise in a self-reinforcing cycle, it can lead to an overall increase in the cost of goods and services in the economy. This can cause inflation to rise, which can have a number of negative effects on the economy, including reduced purchasing power for consumers, decreased investment, and decreased economic growth.

To control inflation caused by the wage-price spiral, policymakers may use measures intended to squeeze the labour market. These may include raising interest rates to decrease demand, or fiscal policy measures such as reducing government spending or increasing taxes.

Not surprisingly, central banks are working overtime to quash a wage price spiral. This is particularly challenging during a period when labour markets are tight which can only be brought back to equilibrium through a recession. A recession is the lesser of two evils, as a failure to mitigate a wage-price spiral would result in higher inflation for longer.

UNDERSTANDING THE ROLE BANKS PLAY IN A MODERN ECONOMY

Many investors believe that the government controls the country's money press. That's true to a point, but the actual amount of money in circulation is created by commercial banks. I raise the issue because it sits at the heart of many conspiracy theories centered on the view that digital currency will ultimately replace paper currency providing governments with full access to all consumer transactions.

When you think about it, paper money allows consumers to engage in black market activity that cannot be traced by governments. I'm not talking about big-time criminal activity, but what so many people do to avoid taxes in everyday

transactions. Paying cash for home repairs, buying secondhand furniture without paying HST. And to be fair, a digital currency backed by governments would make such transaction more difficult.

That is the foundation that gave rise to crypto currencies that allowed transactions to occur without government oversight. However, we suspect that in time, greater access to the blockchain will allow governments to follow the money in the crypto world. That this may well be the end game that supports the fear of government prying. However, one could also argue that the scale of tax avoidance schemes directly impacts the amount of taxes paid by the everyday consumer.

Having laid out the conspiracy claims, we felt it was important to understand how modern economies function in the current environment. On that point, we recognize that governments do print the bills we typically think of as currency, but the money supply (actual value of money in circulation) is the result of the multiplier effect that relates to deposits and loans within and from commercial banks.

The multiplier effect is a phenomenon that occurs in commercial banking when banks take in deposits and then use those funds to create new loans. When a bank receives a deposit from a customer, it holds a portion of that deposit as a reserve and lends out the rest. This process of lending out a portion of the deposit is called fractional reserve banking.

The multiplier effect occurs when the borrower who receives the loan then deposits that money into another bank. The second bank receiving the cash, in turn lends out a portion of that deposit, and so on. This creates a chain reaction, where each bank lends out a portion of the deposits it receives, effectively creating new money in the economy.

For example, if a bank receives a deposit of \$100 and holds a 10% reserve, it loans \$90 to a borrower. If that borrower then deposits the \$90 in another bank, that bank is required to hold a 10% reserve which means they can lend out \$81, and so on. As a result, the initial deposit of \$100 can ultimately result in a total increase in the money supply of \$1,000.

The multiplier effect is important because it allows banks to create new money in the economy, which can stimulate economic growth and increase the availability of credit.

However, it can also contribute to inflation if too much money is created too quickly, or if there is a lack of productive investment opportunities for the newly created funds.



More on Fractional Reserve Banking

As referenced above, fractional reserve banking is a banking system where commercial banks keep only a fraction of their deposits as reserves and lend out the rest. This system is used by most modern banking systems around the world.

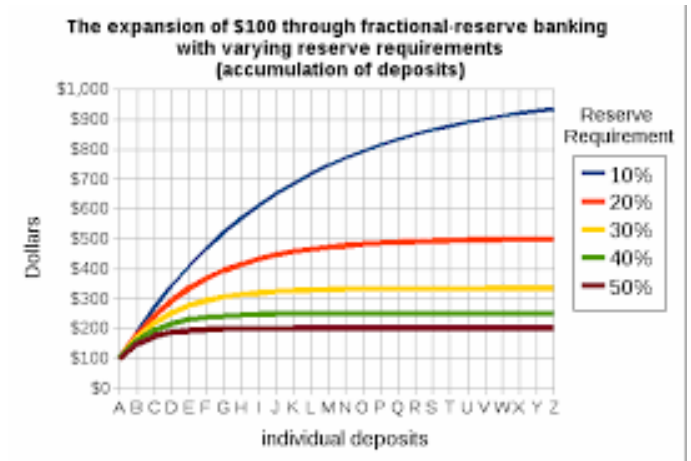
Banks make money by charging interest on the loans they make, which is typically higher than the interest they pay on deposits. That is not the case today, because banks typically loan for longer periods and pay interest to depositors based on current short-term rates. When the yield curve inverts (longer-term rates are less than shorter-term rates), as we are witnessing today, the bank's net interest margin (difference between longer-term and shorter-term rates) is squeezed.

Fractional reserve banking allows banks to create money by lending out more than the amount of their reserves. However, this also means that banks are vulnerable to runs on deposits if too many customers try to withdraw their funds, since the available reserves are only a fraction of the total loan portfolio.

The practice of fractional reserve banking is regulated by central banks to ensure stability and prevent excessive risk-taking by banks. The central bank can adjust the reserve requirement or provide liquidity to banks in times of financial stress or to prevent a bank run during a liquidity crunch.

As we discussed in our commentary about SVB and SBNY, fractional reserve banking carries several risks, including:

Bank runs: Fractional reserve banking assumes that not all depositors will withdraw their funds at the same time. However, if there is a sudden loss of confidence in a bank or the banking system, depositors may rush to withdraw their funds, causing a bank run. If a bank does not have enough cash or liquid assets to meet the demand for withdrawals, the bank is said to be insolvent.



Credit risk: Banks lend out a significant portion of the deposits they receive, and the borrowers may default on their loans, causing the bank to suffer losses. If a bank's loan portfolio is not properly diversified or if it lends to high-risk borrowers, the credit risk can be particularly high.

Interest rate risk: Banks earn a profit by charging a higher interest rate on loans than they pay on deposits. However, changes in interest rates can affect the profitability of the bank. If interest rates rise, the bank's borrowing costs may increase, while the interest it earns on its loans may not increase as quickly. Conversely, if interest rates fall, the bank's interest income may decline while its borrowing costs remain the same.

Liquidity risk: Banks must maintain sufficient liquidity to meet the demands of depositors and borrowers. If a bank is unable to raise enough cash to meet its obligations, it may be forced to sell assets at a loss. This risk is particularly high during times of financial stress, when it may be difficult for banks to access funding.

Systemic risk: Fractional reserve banking relies on the assumption that not all depositors will withdraw their funds at the same time. However, if there is a widespread loss of confidence in the banking system, it may lead to a systemic crisis that can affect the entire economy. In extreme cases, this can lead to a financial crisis and a recession.

To manage these risks, regulators require banks to hold a certain amount of capital as a buffer against losses, limit the amount of risky loans they can make, and conduct stress tests to ensure they are able to withstand adverse economic conditions. In Canada, for example, home buyers must meet a stress test where buyer can prove they can make payments assuming interest rates are 20% higher than the rate they have borrowed at.

Loan Loss Reserves

Loan loss reserves, also known as allowance for loan and lease losses (ALLL), are funds that banks set aside to cover potential losses from loans that may default or become uncollectible. These reserves are typically established as a percentage of the bank's outstanding loans and are intended to protect the bank against unexpected losses.



The loan loss reserve is created by recording an expense on the bank's income statement, which reduces its net income. The reserve is then shown as a liability on the bank's balance sheet, which reduces its net worth. Banks are required to establish loan loss reserves in accordance with regulatory requirements and accounting standards.

The amount of the loan loss reserve is based on the bank's assessment of the credit risk associated with its loan portfolio. This assessment considers factors such as the creditworthiness of the borrower, the type of loan, the loan-to-value ratio, and the economic environment. Banks may use a variety of methods to estimate their loan loss reserves, including historical loss experience, statistical models, and qualitative factors.

If a loan becomes uncollectible, the bank will use the funds from the loan loss reserve to write off the loan and cover the loss. This reduces the bank's net income for the period but helps to maintain its financial stability and ability to continue lending.

In summary, loan loss reserves are an important tool for banks to manage their credit risk and ensure that they can absorb unexpected losses. By setting aside funds to cover potential loan losses, banks can maintain their financial stability and continue providing loans to their customers.

Buying Treasury Securities

Commercial banks can buy government Treasury bills and notes directly or in the secondary market. Treasury securities are bought through an auction process or through a direct purchase agreement.

Once the commercial bank has bought Treasuries, it can hold them as an investment or use them as collateral for borrowing or other transactions. Treasuries are safe and liquid investments, and they are widely used by banks and other investors to diversify their portfolios and manage risk.

Richard N Croft
Chief Investment Officer