Prepared by Beacon Economics, LLC
Presented by Bridge Bank

SOUTH BAY REGIONAL INTELLIGENCE REPORT

Spring 2023

UNITED STATES OUTLOOK

Highlights

Banking Industry Turmoil Won't Drive a Recession

The recent bank failures are not a sign of an unhealthy U.S. economy. While these sudden crosscurrents make the forecast fuzzier, the stress in the banking system is unlikely to rise to the level of causing a near-term recession—cash is still king in the U.S. economy.

Is Fed Policy Responsible for SVB's Failure?

The U.S banking system has become the unwitting victim of quixotic and rapid changes in Federal Reserve policy over the last three years. Indeed, the Fed is largely responsible for creating the stressors that ultimately caused Silicon Valley Bank to fail.

The Fed's Next Move...

If the Fed continues to tighten in its quest to slow inflation it will do more damage to the bank credit industry and trigger negative consequences for the health of the overall economy. Higher interest rates imply more stress on the system.

Why Silicon Valley Bank Went Down, and Why It Doesn't Change Our U.S. Outlook… Mostly

THE FAILURE TO STICK TO THE (SOFT) LANDING…

This past week, the rosy picture was upset by the failure of Silicon Valley Bank, along with two smaller banks—Silvergate Bank in San Diego and now Signature Bank in New York City. Federal regulators moved quickly to announce that depositors will have full access to their holdings—preventing what could have been a nasty contagion in banks that might have led to more failures. Still, the market continues to swoon and some banks are finding themselves in a bind. All of this has set off the standard "sky is falling" headlines, as it is being wrongly viewed by some as a harbinger of the phantom recession that has otherwise not shown up.

Indeed, the failure of these banks is not a reflection of an unhealthy U.S. economy. Rather, the banking system overall is the unwitting victim of quixotic and rapid changes in Federal Reserve policy over the last three years. This body—which is supposed to be the wise shepherd of the nation's banking system—is largely responsible for creating the stressors that ultimately caused SVB to fail. Moreover, if it continues to tighten in its quest to slow inflation it will do more damage to the bank credit industry and trigger negative consequences for the health of the overall economy. The past week of banking craziness began with the Jerome Powell speech cited above. Higher interest rates imply more stress on the system. Queue the run.

Admittedly, these sudden crosscurrents make Beacon Economics' forecast significantly fuzzier. The stress in the banking system will eventually begin to show up in the broader economy as credit tightens farther. But we still don't believe it will rise to the level of a recession—cash is still king in the U.S. economy today. What is especially intriguing about this entire episode is that some of the big investment banks (e.g., Goldman Sachs) now think the Fed will have to back off their plan to continue raising the federal funds rate, thus reducing stress on the banking system, but also reducing rate pressures, which will lower the chance of a broader recession anytime soon. On net, Beacon Economics is sticking with our slow growth/no recession outlook, although we believe the margin of error has increased given the policy uncertainty that now has to be factored in.

BUY LOW, SELL HIGH…

To really understand what has happened we have to start with a brief refresher on how the banking system operates. The game they play is one of liquidity. Banks borrow money in the short run (deposits) to make long run investments—typically, but not always, loans. Because interest rates paid on short run deposits are lower than the interest rates received on long run loans, a bank can make a profit. But at the same time, that bank is in a precarious liquidity position and thus can be subject to a condition called a 'run.' If a large portion of a bank's depositors demand their cash back from that bank in a short period of time, it's unlikely the bank will be able to unwind its less liquid long-run loans quickly enough to meet those demands.

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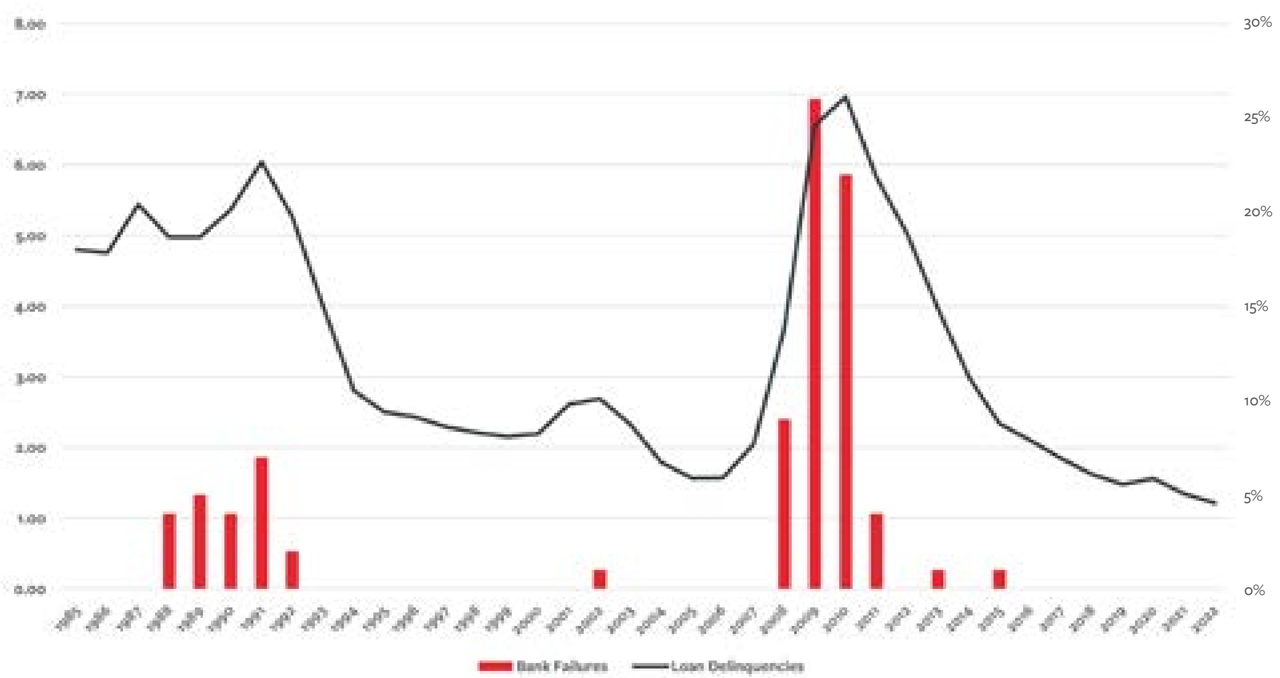
BANK FAILURES AND LOAN BASE QUALITY



Source: Federal Reserve Economic Data; Analysis by Beacon Economics

Another critique is the assertion that the failure of SVB was driven by the tech bust that is currently afflicting Silicon Valley more broadly. The problem with this theory? There is no tech bust. Yes, some of the larger companies that dominate tech industry headlines have been laying off workers in recent months, but those displaced workers have had no problem finding employment elsewhere. The unemployment rate in San Jose dropped below 2.5% in the second quarter of 2022 and has remained under this threshold ever since. That is the tightest labor market ever seen in the region. Tech industries accounted for almost 40% of the 48,000 new jobs created in the area in 2022. And while VC funding fell sharply from $750 billion in 2021, at almost $500 billion, 2022 saw the second largest haul in capital ever for the industry (up from $380 billion in 2020). It is 2021 that stands out as the odd year.

The heart of innovation is alive and well, regardless of the headlines. And a bank in the middle of such prosperity would not be thought of one on the verge of insolvency because of losses, for example, in its loan portfolio.

MISERABILISM AND THE STIMULUS HANGOVER

So, what did happen to SVB? The bank appears to be collateral damage from rapid changes in Federal Reserve policy, changes that seem to fly in the face of what the Fed is supposed to do. The Federal Reserve's own website explains that their duties include:

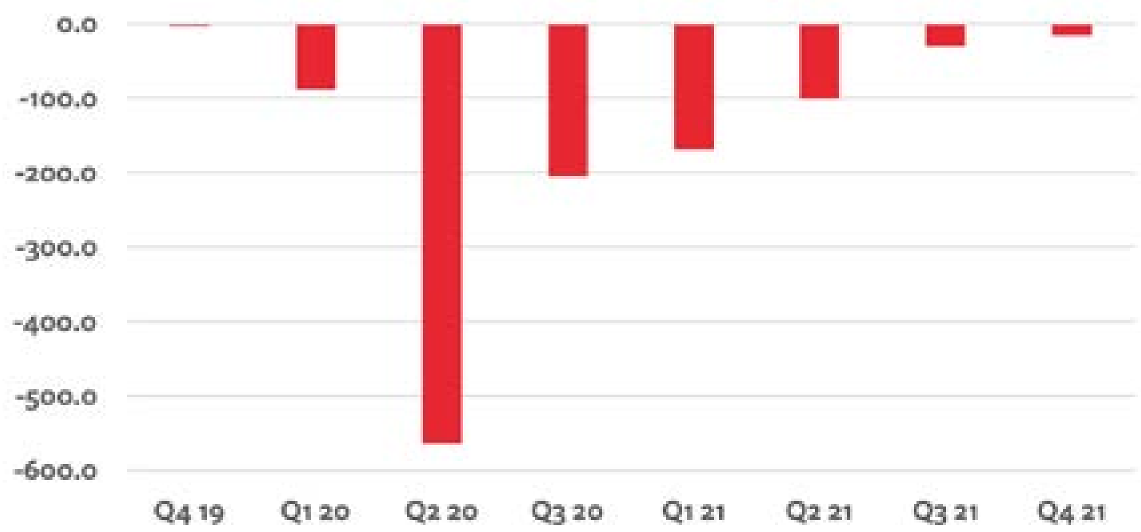
- Conducting the nation's monetary policy by influencing money and credit conditions in the economy in pursuit of full employment and stable prices.
- Supervising and regulating banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers.[2]

As many economists have noted, these goals contain some inherent contradictions, given that maintaining full employment and price stability may be mutually exclusive in some scenarios. Equivalently, an error in pursuing one goal can have significantly negative implications for other objectives. This is exactly what has played out over the last three years. In their existential panic over full employment, the Fed destabilized prices. In their existential panic over price instability, they are now destabilizing the banking system. Such a comedy of errors would seem to be the stuff of a farcical comedy—if we were not currently living with the repercussions.

The first step in the sequence of events that ultimately put SVB into receivership starts way back with the excessive panic over the potential impact that the COVID-19 pandemic was going to have on the U.S. macro economy (Beacon Economics has discussed why these dire predictions had little basis in reality in past editions of this outlook and other publications). Ultimately, Congress opened up the stimulus floodgates like never before, borrowing over $6 trillion in 24 months and spreading this cash across the economy through the CARE Act, the Payroll Protection Act, and other government programs. Since the United States saw a loss of less than $1.2 trillion in output as a result of the pandemic, it means that Congress used $5 in stimulus for every dollar of lost output.

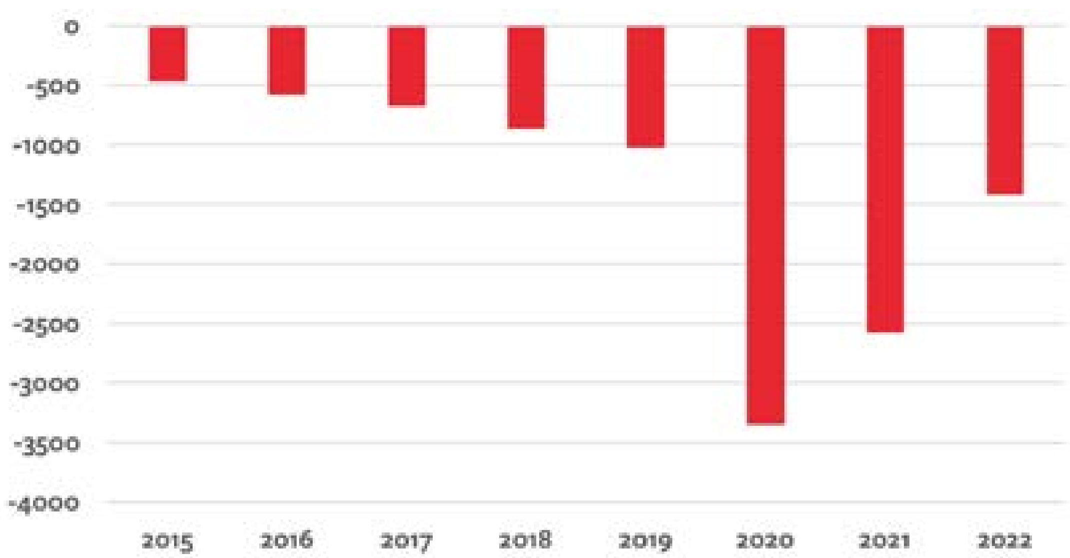
[2]https://www.federalreserve.gov/faqs/about_12594.html

DIFFERENCE BETWEEN ACTUAL AND POTENTIAL GDP (SA, $BIL, FED CALCS)



Source: Federal Reserve Economic Data; Analysis by Beacon Economics

FEDERAL SURPLUS CALENDAR YEAR ($BIL)

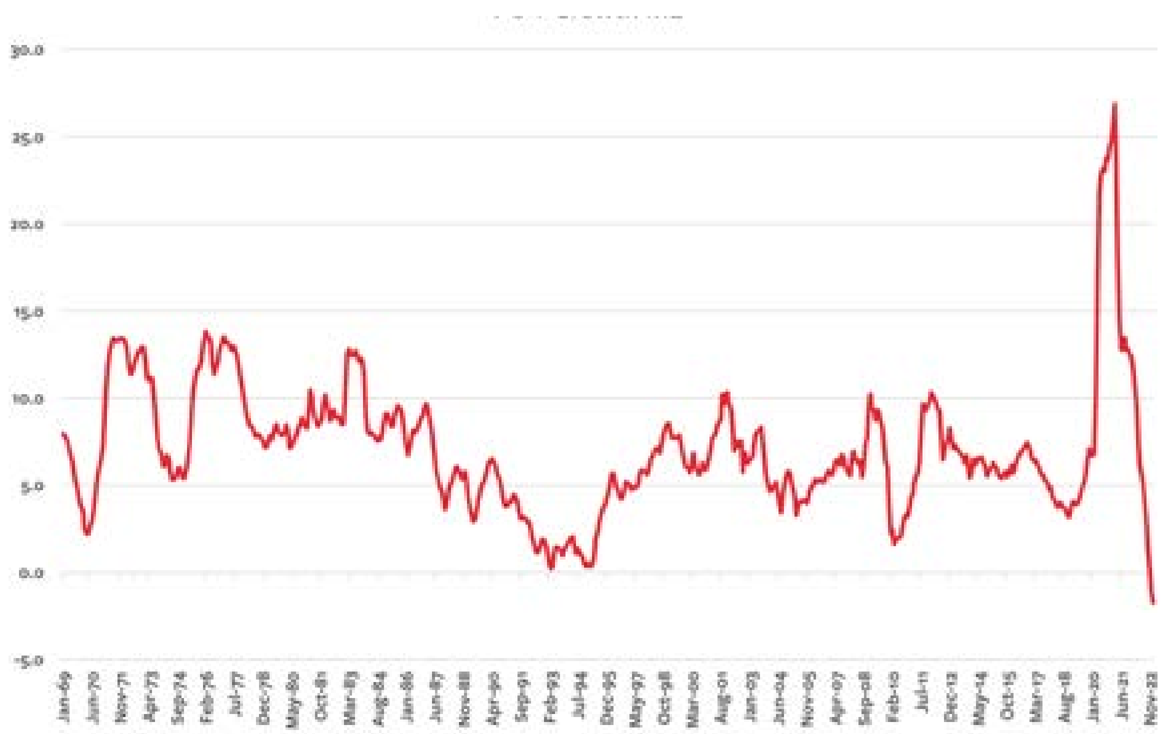


Source: Federal Reserve Economic Data; Analysis by Beacon Economics

Congress's willingness to indulge in such a spending surge is hardly surprising; the debt myopia driven by the 2-year election cycle is well understood. But Congress could not have gotten away with this level of overspending unless they were enabled by the very body that is supposed to be the adult in the room—the Federal Reserve. Deficit spending at this magnitude implies that Congress would have needed to borrow $6 trillion over 2 years—three times the annual level of need in the nation in 2019. Keep in mind that overall debt levels in the United States grew by a total of $3.5 trillion in 2019. Had Congress been forced to rely on the debt market to supply this deficit spending, their effort would have fizzled spectacularly. They simply would not have been able to sell the necessary amount of treasury bills. Additionally, they would have driven up interest rates wildly amid the pandemic recession.

Luckily for Congress, they did not have to worry about going to the bond markets, they only had to go to Federal Reserve, who happily supplied the needed cash and more with $5 trillion in quantitative easing—a process by which the Fed injects cash into the economy by purchasing government securities. In short, collectively speaking, the Federal Government printed $5 trillion in brand new money and Congress transferred that new money directly into the nation's economy (as opposed to using it for a government program such as building infrastructure). The impact on the money supply was truly historic. To illustrate, some context is helpful. The M2 measure of U.S. money supply showed it to be slightly less than $16 trillion in the months leading up to the pandemic and had been growing at roughly 6% per year for over two decades. The surge in new money in 2019 grew the nation's money supply by 40%, with annual growth peaking at 27% in 2021, the greatest short run expansion in the money supply ever recorded in the United States since the creation of the Federal Reserve board over a century ago.

Y-O-Y GROWTH M2 MONEY SUPPLY



Source: Federal Reserve Economic Data; Analysis by Beacon Economics

FEDERAL RESERVE ERROR #1:
THE PURSUIT OF FULL EMPLOYMENT AT THE EXPENSE OF PRICE STABILITY

At its peak, the U.S. money supply had expanded by 40% since the start of the pandemic. This, combined with full employment, is an obvious recipe for inflation. The only real surprise regarding the surge in prices over the last year is that anyone should be surprised. Even the most cursory look at the rich dataset of global monetary history will indicate that any nation experiencing such a steep increase in their money supply will quickly experience inflation. Money supply remains excessive in the U.S. economy, and inflation will continue to run hot. The asset markets have also been impacted. Home prices surged 45% in two years according to Case Shiller figures, and the equity markets hit record peaks. Moreover, the money showed up in the investment markets. Venture capital funding in the United States doubled from 2020 to 2021, reaching unheard of levels even as there were a slew of tech related IPOs. Looking at the numbers, you might wonder why inflation has been as tame as it has been. The economy has been running white hot.

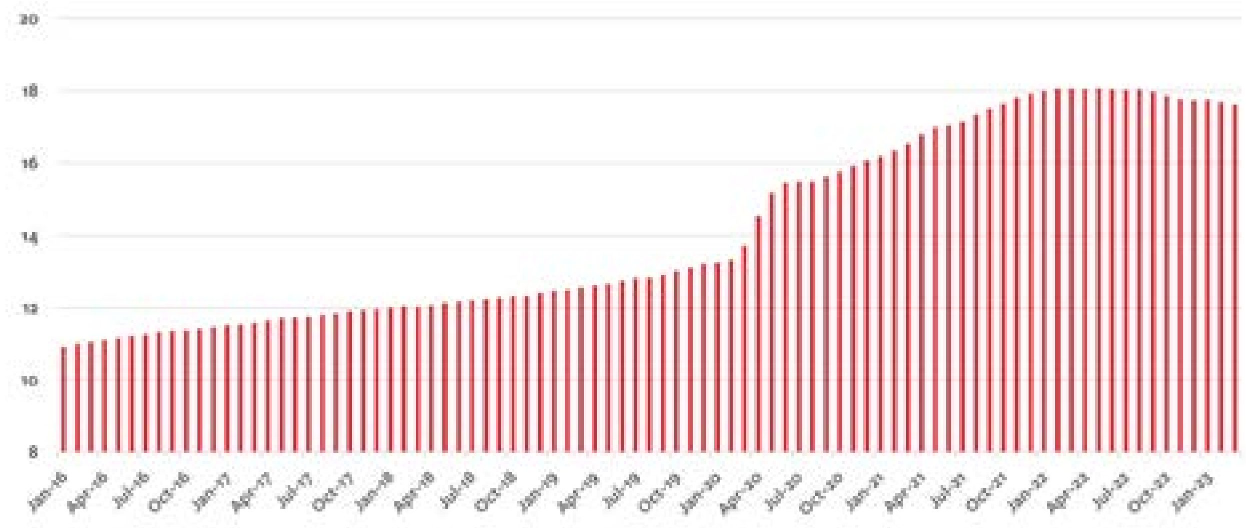
Of course, the Federal Reserve has responded to inflation with a well telegraphed series of interest rate hikes. During the pandemic, the Federal Funds Rate was functionally zero. It is now between 4.5 and 4.75 and the Fed has been clear that they will continue to hike over the next few meetings. Chairman Powell recently stated that there would be more rate hikes than the market anticipated. The Fed has also begun the process of quantitative tightening—selling off some of the bonds they purchased during the pandemic stimulus. To date, they have sold roughly two-thirds of a trillion dollars off a peak of $9 trillion in government debt that the Federal Reserve has on its balance sheet. The money supply is starting to shrink and has contracted by 2%. Inflation is slowing, albeit not as fast as hoped by regulators.

FEDERAL RESERVE ERROR #2:
THE PURSUIT OF PRICE STABILITY AT THE EXPENSE OF THE BANKING INDUSTRY

So, what happened to the banking industry? While the economy has been cooling over the past year, there remains little sign of a recession. The U.S. banking system has even managed to expand its loan portfolio despite rising interest rates. Outstanding loans and leases in the U.S. commercial banking system grew almost 12% over the last 12 months. And as noted, loan delinquencies in the banking system are at record low levels. There is also every indication that the banking system is starting to put on the lending brakes. The Senior Loan Officer Opinion Survey from the Federal Reserve shows banks are tightening their standards rapidly. The signs of stress are clear. And now we have seen the failure of two banks, and prices for many others are cratering quickly.

The problem is the shift in monetary policy and how it has impacted banks' balance sheets. The cash injected into the economy may have gone through many channels—401K programs, venture capital funding, bitcoin, housing down payments, and so on. But it all inevitably must end up in a bank deposit somewhere. Unsurprisingly, deposits in the U.S. commercial banking system have surged from $13.4 trillion to $18 trillion in just two years. The problem for the banking system is the way in which they are limited in what they can do with their funds. They either lend them out or they invest in a limited set of financial securities. Because the pandemic and pre-pandemic recession jitters had slowed borrowing, the net result was that the commercial banking system ended up using their deposits to buy $2.3 trillion in securities but only expanded their loan base by $1.2 trillion.

U.S. COMMERCIAL BANK DEPOSITS ($, TRIL)



Source: Federal Reserve Economic Data; Analysis by Beacon Economics

ASSETS AND LIABILITIES IN THE U.S. COMMERCIAL BANKING SYSTEM ($, BILLIONS)

DATE	SECURITIES	LOANS	DEPOSITS
3/7/18	$3,393	$9,179	$12,010
3/6/19	$3,548	$9,690	$12,563
3/4/20	$3,948	$10,113	$13,464
3/3/21	$4,911	$10,394	$16,480
3/2/22	$5,818	$10,909	$18,088
3/1/23	$5,450	$12,088	$17,610
CHANGE FROM ONE YEAR EARLIER	**SECURITIES**	**LOANS**	**DEPOSITS**
3/6/19	$155	$511	$553
3/4/20	$400	$423	$901
3/3/21	$963	$281	$3,016
3/2/22	$907	$515	$1,608
3/1/23	-$369	$1,179	-$477

Source: Federal Reserve Economic Data; Analysis by Beacon Economics

The sharp reverse course from the Fed—from a panicked reaction to maintain full employment to an equally panicked fight against the inflation they caused—led to the problem. Consider the two actions by the Federal Reserve Board over the past year in response to rising prices. One policy lever they have to fight inflation is to increase the Federal Funds Rate—an obscure overnight lending rate between banks that nevertheless guides short-term interest rates for the broader economy and has some influence over longer term rates. The other is in the form of quantitative tightening—selling off some of the bonds the Fed purchased in recent years. The sale of $660 billion in bonds has been an attempt to shrink the money supply (note the decline in M2 discussed above) and hence the banking systems deposit base from $18 trillion to $17.7 trillion, still vastly higher than it was in 2020 at the start of the pandemic.

These two efforts have put the banking system between a proverbial rock and a hard place. Despite the increased interest rates, bank lending has started to pick up. Loan balances grew by $1.2 trillion over the past year—more that the three previous years combined—despite the increase in interest rates. The problem is with the other side of the ledger. The deposit base has fallen by slightly under a half trillion dollars over the last year. With loan balances up and reserves down, banks are suddenly scrambling to find the funds to meet loan demand.

The cost of external funds is rising rapidly, and new funds require a larger equity base—hard to find in a market where equities have cooled sharply. The other option for banks is to sell off securities. But here also the banks have a problem. The increase in interest rates driven by Federal Reserve policy is exactly the same as a decline in the price of the bonds that banks bought with their excess deposits. Of the $2.2 trillion in new securities purchased by commercial banks from 2020 to 2022, it is fair to suggest a loss of 4% or more on that portfolio. While this only amounts to $100 billion or so in losses, it is enough to put banks in a tough position relative to their Fed mandated balance sheet ratios. That said, banks are understandably loathed to sell these securities and realize those losses.

This brings us back to Silicon Valley Bank. SVB had the (mis)fortune of sitting in the heart of Silicon Valley—one of the richest and most entrepreneurial economies in the world. It is also the center of the venture capital industry, and a huge share of venture money continues to be spent on tech ventures in the region. Risky asset markets always cycle more than the broader economy—they represent the ‘tip of the whip,’ as the saying goes. The surge in the asset markets, driven by quantitative easing, caused venture capital investments to double from 2020 to 2021. Realistically, there was simply no way for the recipients of this funding to scale up at a pace that would match the surge in funding. Unsurprisingly then, no small amount of these funds ended up being stored at banks—particularly Silicon Valley Bank. Its deposits surged from $80 billion to $180 billion in two years, outpacing the broader commercial banking system by a factor of four.

Indeed, there would be no way for any bank to double its loan base in two years—particularly in a challenging lending environment. As such, a good portion of these funds were necessarily invested in treasuries, which, due to Fed policy, are now reduced in value. The reduction in the money supply and the hike in interest rates has cooled venture capital funding and companies that received the funding in 2021 are looking to get their money and start using it. A vicious cycle ensues. As more depositors withdrew funds from SVB, the bank had to sell securities at a loss putting in out of compliance with capital ratios as dictated by—you guessed it—the Federal Reserve. There was no way out.

SVB represents an extreme version of what is happening across the entire U.S. banking system. Lined up simply, Federal Reserve policy over the past three years:

1. Has filled banks with excess deposits.
2. Has required banks to invest this money in bonds, given weak loan demand.
3. Has reduced the value of those bonds by raising the Federal Funds Rate.
4. Is now shrinking the deposit base through quantitative tightening.
5. Is forcing banks to sell securities at a loss because of Federal Reserve dictated reserve balances.

In the immortal words of Otter to Flounder in the film Animal House, "You f*&@ed up… you trusted us." The Federal Reserve has committed two mortal sins in three years and now the broader U.S. economy will need to deal with the consequences of inflation and banking instability.

How do we explain the bizarre nature of Federal Reserve policy? While initial actions may have been justified given the uncertainty at the start of the pandemic, by the third quarter of 2020 it was obvious that the economy was in rapid recovery and stimulus efforts needed to be scaled back. There was no financial crisis at any level, and nothing compared to the crisis Ben Bernanke faced during his time as Chairman. The Federal Reserve under his helm used quantitative easing for the first time during the financial crisis that erupted after the collapse in the sub-prime mortgage and derivatives markets. This time, the tool was largely unnecessary.

At some level we must acknowledge that the politicization of the Federal Reserve Board has played a major role. Alan Greenspan was famously aloof from Capitol Hill politics—with one of his most famous quotes being: "If I turn out to be particularly clear, you've probably misunderstood what I've said." Ben Bernanke's use of quantitative easing occurred over an extended period of six years, giving the Fed plenty of time to see how their efforts were impacting the economy and maneuver accordingly. Jerome Powell clearly has no such independence—largely doing what Congress and the President have demanded. How a Greenspan would have fared with the same set of board members is one of those historical questions that we might debate but will never be able to answer.

WHERE DO WE GO FROM HERE?

U.S. banks are suffering because the Fed has put them into a squeeze by reducing the value of the securities they hold even as they shrink their deposit base. The Fed itself is now being squeezed between the problem of inflation and the stress on the banking system. How will they react?

The Fed's policies will continue to have little impact on inflationary pressures. The big driver of inflation over the past two years has been wealth, not interest rates. The Federal Reserve's own Flow of Funds show that households still have $4.7 trillion in checkable deposits—up from $1 trillion at the end of 2019. Overall, household net worth is still 30% ($30 trillion) higher than it was pre-pandemic. The data suggests that checkable deposits for the bottom 50% of U.S. households by income is currently at $288 billion up from $80 billion pre-pandemic.

And the tightness in the U.S. labor market continues to push earnings growth. The Atlanta Fed's wage tracker data shows earnings growth continuing to run above 6% for the median worker, with lower income earners seeing even faster rates of growth. Consumer spending will remain strong for the foreseeable future, and so too will inflation. The Fed has tried to control the situation with interest rates, but this can only determine the speed at which prices reach their ultimate level—since it is the supply of money that matters, not the cost of it. Higher interest rates on mortgages may, perversely, be worsening current inflationary pressures by discouraging those who would otherwise be saving for a down payment.

Yet the process by which the Fed can truly reduce inflation, quantitative tightening, could threaten to completely destabilize critical pieces of the nation's capital funding system—namely banks. Can this cause a recession in its own right? Maybe not, but it is not clear we need to test that inclination. Inflation or credit contraction… this is not a choice that any Federal Reserve Board wants to face. Get some popcorn folks, this show is going to be interesting to watch.

CALIFORNIA OUTLOOK

Highlights

Recovery From Pandemic Revised Up

California's recovery from the job losses caused by the pandemic has been found to be significantly stronger and faster than previously estimated. The annual employment revision shows that, compared to pre-pandemic, there are far more people employed in the state today (197,000) than originally estimated (70,000).

California Budget Woes

In a matter of just a few years California has gone from a historic $102 billion budget surplus to a forecasted $22.5 billion budget deficit, calling into question the state's decision to provide billions of dollars in tax refunds to residents in 2022.

Interest Rate Jumps Drive Huge Increase in Home Cost

The cost of a mortgage for a median priced home in California jumped from around $2,400 a month in February 2020 to around $4,100 as of January 2023, a 73% increase. This has caused demand for home purchases to collapse.

A Better Recovery Than We Thought

Each month, the U.S. Bureau of Labor Statistics (BLS) estimates how many jobs have been added to the national and state economies, based on a survey of employers. In March of each year, the BLS releases its annual revision to these estimates, providing a more accurate account of the number of jobs added during the previous year. The BLS's recently released revisions show that California's labor market has recovered significantly better from the job losses sustained at the beginning of the pandemic than the estimates had initially suggested.

Before the revisions, the BLS estimated that the state's economy had added just 70,000 jobs, from February 2020, the pre-pandemic job count, to December 2022. The revisions reveal that there are 197,000 more people employed in California now than there were prior to the pandemic. This means that the state's labor market has tracked the national recovery, rather than lagging it, as the original estimates suggested.

This positive development has not changed the fact that California's recovery has lagged many other parts of the nation. The table below shows the states that have added the most jobs, compared to pre-pandemic levels. While California's economy has added the fourth highest number of jobs of any state in the nation, this is mostly a function of its size (whereby a small percentage increase in job growth will translate into a high number of jobs). In terms of the percentage increase, California's job growth has been about five times slower than job growth in states such as Florida and Texas.

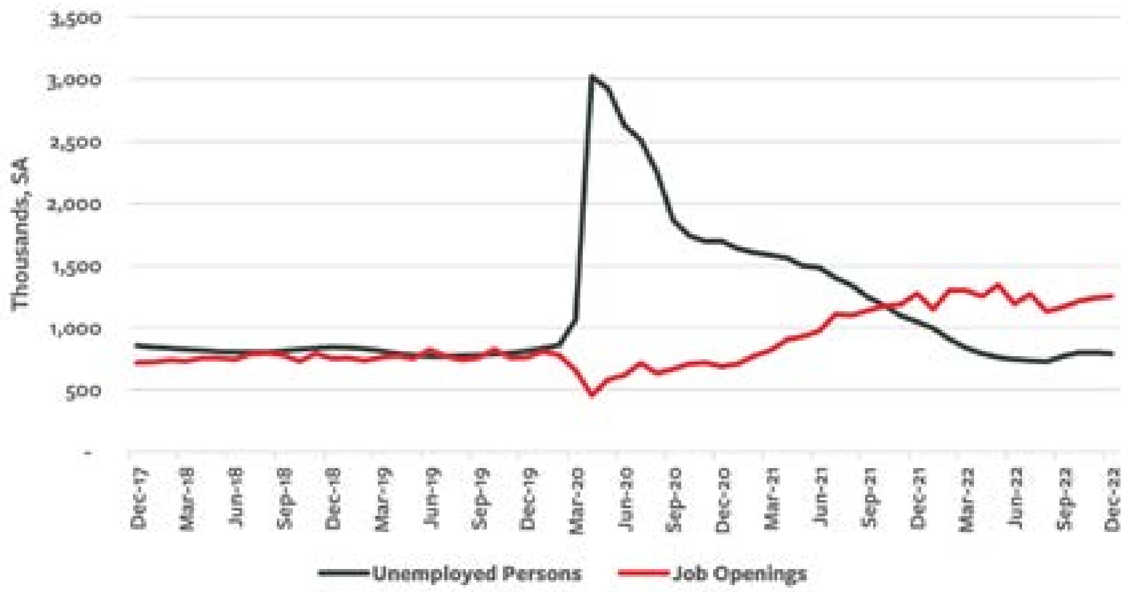
U.S. STATES WITH MOST JOBS ADDED

	CHANGE IN TOTAL JOBS, FEB 2020 - DEC 2022	PERCENTAGE CHANGE IN JOBS, FEB 2020 - DEC 2022
Texas	762,400	5.9
Florida	552,500	6.1
North Carolina	226,600	4.9
California	197,100	1.1
Georgia	179,700	3.8
Tennessee	138,100	4.4
Arizona	128,900	4.3
Utah	122,500	7.8
Nevada	81,700	5.7
Washington	73,800	2.1

Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

California's relative underperformance is not due to any unwillingness among the state's employers to hire workers. As of January 2023, there were 1.25 million job openings in the state, but only 800,000 unemployed workers. In short, there are not enough workers to fill the number of job openings. This is because California's labor force contracted during the pandemic. There are still 320,000 fewer workers in the state's labor force than there were prior to the pandemic, while the national labor force has expanded over the same period.

CALIFORNIA JOB OPENINGS AND UNEMPLOYED PERSONS



Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

These figures reveal a contradiction. The state's economy has added jobs since the pandemic started, but there are fewer workers active in the California economy. The most plausible explanation is that there has been an increase in multiple job holders among the state's workforce, namely, the number of workers holding more than one job.

While there was a surge in real wages at the beginning of the pandemic, a combination of slower wage gains and high inflation have cooled wage growth in California. Real wages have now returned to their pre-pandemic trend. In real terms, wages in the state are above their pre-pandemic level, but elevated inflation has taken a bite out of workers' nominal wage gains.

CALIFORNIA REAL WAGES AND GROWTH

Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

HOUSING WEAKNESS, BUT PRICE DROPS WILL BE LIMITED

All questions surrounding labor supply in California inevitably circle back to the state's housing crisis. House prices in California surged at the beginning of the pandemic, increasing by 41% from February 2020 to April 2022. Higher prices, coupled with higher mortgage rates, caused the cost of home ownership to surge in the state. The cost of a mortgage for a median priced home jumped from around $2,400 a month in February 2020 to around $4,100 in January 2023, a 73% increase. This caused demand for home purchases to collapse and home sales have returned to their pandemic trough, which is around 40% below pre-pandemic levels. Meanwhile, California house prices have fallen to 10% below their pre-pandemic peak. But despite the pullback, house prices remain 27% above their pre-pandemic levels, and since the start of the pandemic, annual house price growth has averaged 11.3% percent, compared to 6.1% percent in the 10 years prior to the pandemic.

SALES OF SINGLE-FAMILY HOMES

Source: Redfin; Analysis by Beacon Economics

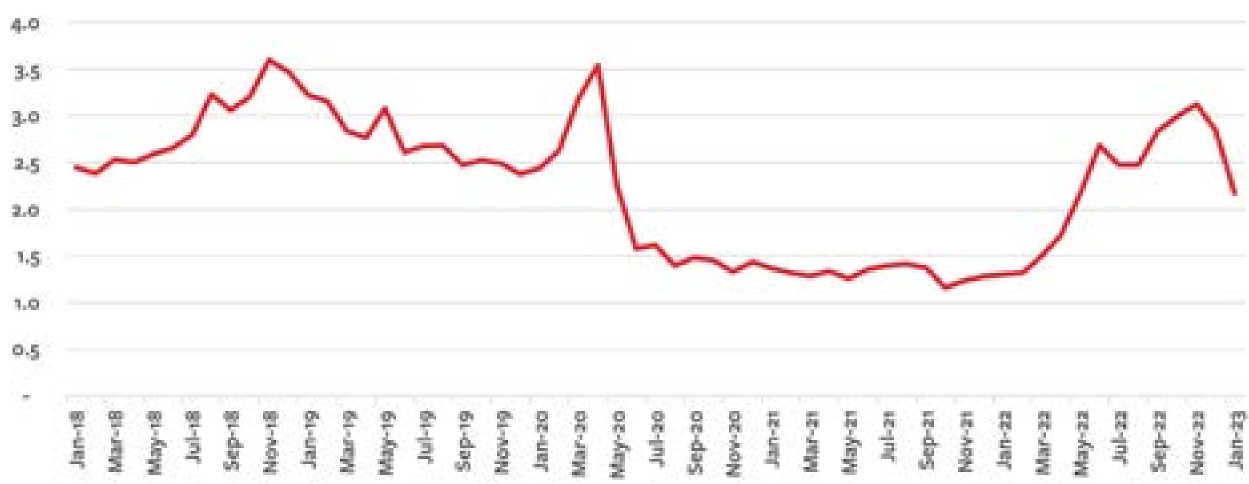
MEDIAN SALE PRICE FOR SINGLE-FAMILY HOMES

Source: Redfin; Analysis by Beacon Economics

While, in a high interest rate environment, there will be further weakness in home prices in 2023, price depreciation will be somewhat limited. Beacon Economics is forecasting house prices to fall 6.3% in 2023. Further house price drops will be limited, especially when compared to the Great Recession, because consumer balance sheets are so much stronger today than they were then, unemployment rates are at all-time lows, and the state has an acute housing shortage.

Despite the decline in home sales activity, there is only two months of housing supply available in California. In other words, if no new units were added to the housing market, based on current sales activity, the number of homes for sale would be exhausted in two months. A healthy housing market is typically considered to be one that has six months' worth of supply. The long-term problem is, of course, that California does not build enough housing. Indeed, despite the supply crisis, the number of permits issued for new housing in the state remains far below historic levels.

MONTHS OF SUPPLY, SINGLE-FAMILY HOMES



Source: Redfin; Analysis by Beacon Economics

CALIFORNIA'S BUDGET:
BOOM AND BUST

In the last two fiscal years, California experienced a historic $102 billion budget surplus. Surging asset prices, which translate into higher capital gains revenues, along with income taxes, were the biggest contributors to the state's recent budget windfall. However, as quickly as the surplus appeared, it is evaporated. Equity prices fell in 2022, reducing capital gains revenues in the current fiscal year. Governor Gavin Newsom has now forecast a budget deficit of $22.5 billion for the current year, although the Legislative Analyst's Office (LAO) believes the deficit will be much greater.

California's current fiscal situation once more calls into question the state's decision to provide billions of dollars in tax refunds to residents in 2022, at a time when the unemployment rate in the state stood at historic lows and household balance sheets were in a position of historical strength.

Overall, despite the coming deficit, gloomy headlines surrounding tech layoffs, bank failures, and the possibility of a recession, California's economy continues to add jobs. In recently announced figures, the state's employers added close to 100,000 jobs in January, which was the highest monthly total in eleven months. While California's economy continues to expand, its growth is increasingly constrained by the state's housing market. While state leaders seem acutely aware of this problem, at this point there is no apparent relief in sight.

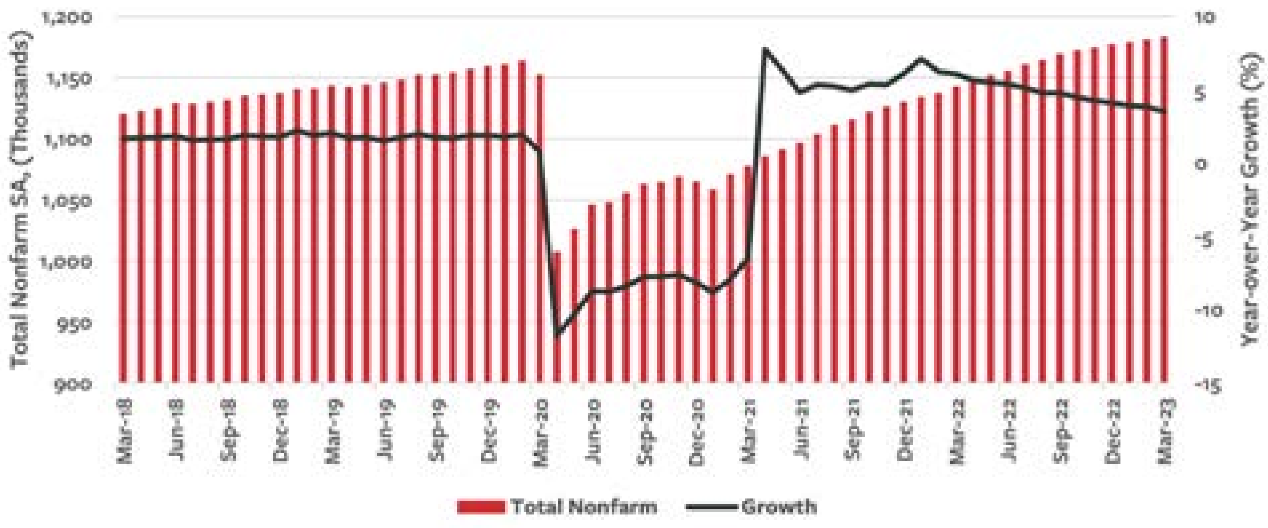
SOUTH BAY OUTLOOK

Highlights

Employment

The South Bay's labor market has fully recovered from the COVID-19 pandemic-led recession and continues to grow. From March 2022 to March 2023, employment growth (+3.5%, or 40,400 workers) outpaced both state (+2.5%) and national (+2.6%) rates. This growth occurred despite tech layoffs and more companies shifting toward remote work. In addition, the South Bay (+1.7%) has matched the recovery in California (+1.7%) since the start of the pandemic. However, both the South Bay and California as a whole have continued trailing growth at the national level (+2.1%) over this same period.

SOUTH BAY TOTAL NONFARM EMPLOYMENT AND GROWTH



Source: California Employment Development Department (EDD); Analysis by Beacon Economics

The South Bay's unemployment rate increased to 3.2% in March 2023, a +0.4 percentage-point increase from last year. Despite this increase, unemployment in the region remains well below California's rate (+4.4%) and the national rate (+3.5%).

Although unemployment rates remain low in South Bay cities, these rates have been partly driven by a slump in the region's labor force participation. From February 2020 to March 2023, 3,000 workers left the South Bay's labor force, a -0.3% decline. This decline is less severe than California's overall rate (-1.2%), yet stands in stark contrast to the increase in the national rate (+1.3%).

SOUTH BAY INDUSTRY EMPLOYMENT

SECTOR	MAR-23 EMPLOYMENT (000S)	YOY CHG. (%)	YOY CHG. (000S)
Leisure and Hospitality	106.7	13.6	12.8
Education/Health	194.1	5.3	9.8
Prof Sci and Tech	175.4	4.0	6.7
Manufacturing	181.7	3.5	6.1
NR/Construction	55.9	3.8	2.0
Government	97.1	1.9	1.8
Admin Support	65.8	2.4	1.6
Transport/Warehouse	18.4	7.8	1.3
Management	15.7	4.8	0.7
Utilities	2.0	17.8	0.3
Wholesale Trade	29.0	0.9	0.2
Retail Trade	74.1	0.3	0.2
Other Services	24.8	0.3	0.1
Financial Activities	37.7	-0.6	-0.2
Information	105.1	-2.9	-3.1
Total Nonfarm	**1,183.4**	**3.5**	**40.4**

Source: California Employment Development Department; Analysis by Beacon Economics

At the industry level, the largest jobs gains continue to occur in those sectors hardest hit by the pandemic. For example, Leisure and Hospitality led payroll gains over the last year, with payrolls expanding by 12,800 jobs, or +13.6%. Payrolls in Leisure and Hospitality are nearing a full recovery from the pandemic, with payrolls down -1.4% since February 2020.

Other sectors with significant job gains include Education and Health Services (9,800 jobs, or +5.3%); Professional, Scientific and Technical Services (6,700 jobs, or +4.0%); Manufacturing (6,100 jobs, or +3.5%); Natural Resources and Construction (2,000 jobs, or +3.8%); Government (1,800 jobs, or +1.9%); Administrative Support (1,600 jobs, or +2.4%); and Transportation and Warehous- ing (1,300 jobs, or +7.8%).

Despite overall payroll gains in the South Bay over the last year, a handful of sectors have shed jobs. Job losses have been most pronounced in Information, with payrolls down by -3,100 jobs, a -2.9% decline. These declines should not come as a surprise given the layoffs from major tech companies in the region. Other significant job losses occurred in Financial Activities.

Wages

The declines in the tech industry and pandemic assistance have decreased wages in the region. Average annual wages across the South Bay fell from third quarter 2021 to third quarter 2022, dropping 6.3% to $164,300. However, much of this decline stems from a pullback in those sectors that saw record levels of wage growth, largely due to VC investment and government assistance last year.

Wage declines were sharpest for the Financial Activities sector, with average annual wages falling by -13.4%. However, these declines occurred after wages jumped +24.5% the previous year. Therefore, wages remain well above where they were two years ago. Other sectors posting significant declines over the last year include Trade, Transportation, and Utilities (-11.1%), Information (-6.7%), Professional and Business Services (-6.0%), and Manufacturing (-4.0%). However, all these sectors posted outsized growth the previous year, with Trade, Transportation, and Utilities (+32.9%), Information (+18.2%), Professional and Business Services (+13.60%), and Manufacturing (+19.8%) all growing rapidly.

A handful of sectors saw wages rise significantly over the last year, particularly those lower on the wage spectrum. The Leisure and Hospitality sector led wage growth, with average annual wages growing by +9.9%. Other sectors posting significant gains over the last year include Natural Resources and Construction (+8.3%), Education and Health Care (+4.1%), and Government (+3.2%).

Q3-2022 ANNUAL AVERAGE WAGE BY INDUSTRY, SOUTH BAY

INDUSTRY	Q3-2022 ($)	1-YEAR % GROWTH
Leisure and Hospitality	39,801	9.9
NR/Construction	100,675	8.3
Education/Health	84,528	4.1
Government	94,159	3.2
Other Services	53,043	-0.3
Manufacturing	260,814	-4.0
Professional/Business	198,768	-6.0
Information	378,621	-6.7
Trade, Transportation, and Utilities	92,785	-11.1
Financial Activities	170,790	-13.4
Total Nonfarm	**164,291**	**-6.3**

Source: Quarterly Census of Employment and Wages; Analysis by Beacon Economics

Local Spending

Consumer spending has continued to grow in the South Bay. From fourth quarter 2021 to fourth quarter 2022, taxable receipts in the county increased by +3.0%, and have expanded by +12.8% over the last three years.

SOUTH BAY SALES TAX RECEIPTS BY CATEGORY

INDUSTRY	Q4-22 ($ THOUSANDS)	1-YEAR CHANGE (%)	3-YEAR CHANGE (%)
Restaurants and Hotels	15,689	16.7	11.7
Autos and Transportation	19,581	14.1	20.3
Fuel and Service Stations	7,641	10.3	13.2
County & State Pool	27,667	7.8	17.6
Building and Construction	9,953	6.6	13.6
General Consumer Goods	19,398	4.3	4.8
Food and Drugs	4,899	1.1	5.0
Business and Industry	38,854	-9.5	12.9
Total	**143,800**	**3.0**	**12.8**

Source: HdL Companies; Analysis by Beacon Economics

Restaurants and Hotels had the strongest growth, with spending up +16.7% over the last year. Although one of the hardest hit industries during the pandemic, spending in this category now surpasses pre-pandemic levels.

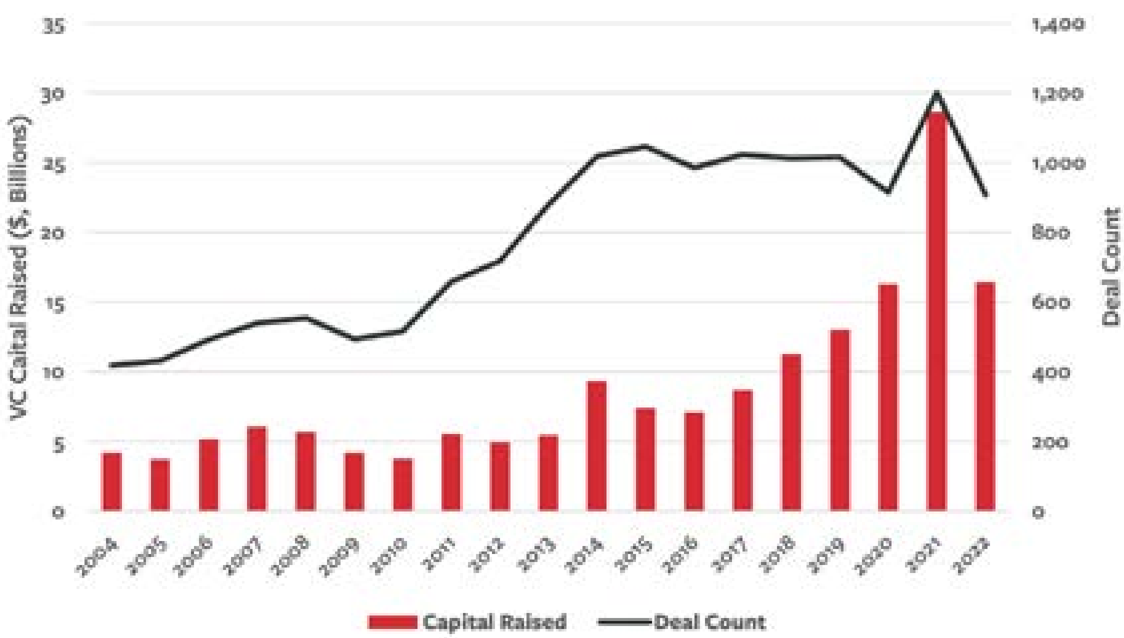
Other categories posting significant gains over the last year include Autos and Transportation (+14.1%), Fuel and Service Stations (+10.3%), the County and State Pool (the category for e-commerce sales) (+7.8%), Building and Construction (+6.6%) and General Consumer Goods (+4.3%). Gains were more modest at Food and Drug Stores, which increased only by +1.1%. With VC investment slowing, Business and Industry spending fell by -9.5% over the last year. However, Business and Industry spending is still up +12.9% over the last three years.

Venture Capital

As Silicon Valley is home to some of the world's most prominent technology company headquarters, venture capital (VC) plays a vital role in the South Bay economy. Over the past few years, the region experienced massive increases in capital raised across various industries and verticals. However, 2023 is proving a difficult year for companies seeking VC investments. From 2021 to 2022, total capital raised in the South Bay decreased by -42.6% to $15.4 billion. However, despite this decline, that was still the second largest amount ever raised in the region. The total number of deals in 2022 was 908, a -24.4% decline compared to 1,201 in 2020. Indeed, VC investment declined further in the first half of 2023. Only $2.8 billion has been raised in VC investment so far in 2023, and VC investment in the South Bay is on pace to sit at its lowest level in a decade.

Information Technology deals had another strong year in 2022. Uniphore and Aptos Labs completed deals totaling $400 million each, which accounted for 4.9% of all VC raised in 2022. Other companies receiving a large amount of VC investment deals in 2022 were Turntide ($305 million), Navan ($304 million), Branch ($300 million), Mysten Labs ($300 million), Inxeption ($275 million) and Inflection ($265 million).

SOUTH BAY VC CAPITAL RAISED AND DEAL COUNT



Source: Pitchbook; Analysis by Beacon Economics

As we enter the second quarter of 2023, significant deals have already been completed in the South Bay. As of early May, Netskope, which is involved with cybersecurity, completed a deal for $401 million. Other companies receiving a large amount of VC investment so far in 2023 include HeartFlow ($215 million), inDrive ($115 million), Celestial AI ($95.9 million), Artera (Decision/Risk Analysis) ($90 million), and Vannevar Labs ($75 million).

Q3-2022 ANNUAL AVERAGE WAGE BY INDUSTRY, SOUTH BAY

COMPANY NAME	DEAL DATE	DEAL SIZE, $ MIL	PRIMARY INDUSTRY CODE	HQ LOCATION
Uniphore	Feb-22	400.00	Information Technology	Palo Alto, CA
Turntide	Jun-22	305.00	Business Products and Services (B2B)	Sunnyvale, CA
Navan	Oct-22	304.00	Information Technology	Palo Alto, CA
Branch	Mar-22	300.00	Information Technology	Palo Alto, CA
Mysten Labs	Aug-22	300.00	Information Technology	Palo Alto, CA
Inxeption	Feb-22	275.00	Business Products and Services (B2B)	Cupertino, CA
Inflection	Apr-22	265.00	Information Technology	Palo Alto, CA
Clari	Jan-22	225.00	Information Technology	Sunnyvale, CA
Delfi (Biotechnology)	Jul-22	225.00	Healthcare	Palo Alto, CA
Binance.US	Mar-22	216.77	Financial Services	Palo Alto, CA
Aptos Labs	Mar-22	200.00	Information Technology	Palo Alto, CA
Aptos Labs	Jul-22	200.00	Information Technology	Palo Alto, CA
CommerceIQ	Mar-22	200.00	Information Technology	Palo Alto, CA
DNAnexus	Mar-22	200.00	Healthcare	Mountain View, CA
SiFive	Jan-22	175.00	Information Technology	Santa Clara, CA

Source: Pitchbook; Analysis by Beacon Economics

2023'S TOP 15 DEALS YEAR-TO-DATE (MAY), SOUTH BAY

COMPANY NAME	DEAL DATE	DEAL SIZE, $ MIL	PRIMARY INDUSTRY CODE	HQ LOCATION
Netskope	Jan-23	401.00	Information Technology	Santa Clara, CA
HeartFlow	Mar-23	215.00	Healthcare	Mountain View, CA
inDrive	Jan-23	150.00	Consumer Products and Services (B2C)	Mountain View, CA
Celestial AI	Apr-23	95.85	Information Technology	Palo Alto, CA
Artera (Decision/Risk Analysis)	Mar-23	90.00	Information Technology	Palo Alto, CA
Vannevar Labs	Jan-23	75.00	Information Technology	Palo Alto, CA
EdgeQ	Apr-23	71.63	Information Technology	Santa Clara, CA
Graphiant	Mar-23	65.50	Information Technology	San Jose, CA
Ethernovia	May-23	64.00	Information Technology	San Jose, CA
Alto Neuroscience	Jan-23	60.00	Healthcare	Los Altos, CA
FarmWise (Electronic Equipment and Instruments)	May-23	51.37	Information Technology	Santa Clara, CA
Acceldata	Feb-23	50.00	Information Technology	Campbell, CA
Arrcus	Feb-23	50.00	Information Technology	San Jose, CA
Evommune	Apr-23	50.00	Healthcare	Palo Alto, CA
Forward Networks	Jan-23	50.00	Information Technology	Santa Clara, CA

Source: Pitchbook; Analysis by Beacon Economics

Residential Real Estate

The housing market in the South Bay is beginning to show signs of weakness. Housing supply across the region remains constrained. The tight supply of homes will have two consequences. First, when interest rates begin falling, the consequent increase in buyers will place upward pressure on house prices. Second, while prices may decline in the interim (they have already begun decreasing in the South Bay), there is not enough supply in the market to provide the overhang that might lead to steep price cuts.

Against this backdrop, home prices in the South Bay remain well above their pre-pandemic levels. However, there has been a decline in prices in recent quarters. From the first quarter of 2022 to the first quarter of 2023, the median single-family home price in the South Bay fell -9%. This is a more modest decline compared to San Francisco (MD) (-9.5%) and the East Bay (-13.5%), but a steeper decline compared to California as a whole (-3.3%). Despite the decline in prices over the last year, home prices in the South Bay are still +18.4% above their levels in the first quarter of 2020.

The rapid rise in median home prices and high interest rates continues to put home ownership out of reach for many residents in the region. As of the first quarter of 2023, only 21% of local households in Santa Clara County can afford to purchase a median-priced home, a +20% increase from the first quarter of 2022. This makes the region slightly more affordable than California as a whole (20%), but significantly less affordable than the United States overall (40%). This lack of affordability is pushing households toward the more affordable markets of inland California and even into other states.

SOUTH BAY SINGLE-FAMILY HOMES

Source: CoreLogic; Analysis by Beacon Economics

With rising mortgage rates and the lack of available inventory limiting potential buyers, the number of homes sold in the South Bay has declined. Existing single-family home sales declined -41.8% in the South Bay from the first quarter of 2022 to the first quarter of 2023. This was a steeper drop compared to San Francisco (MD) (-40.7%) and California as a whole (-40%), but a more modest decline compared to the East Bay (-42.9%).

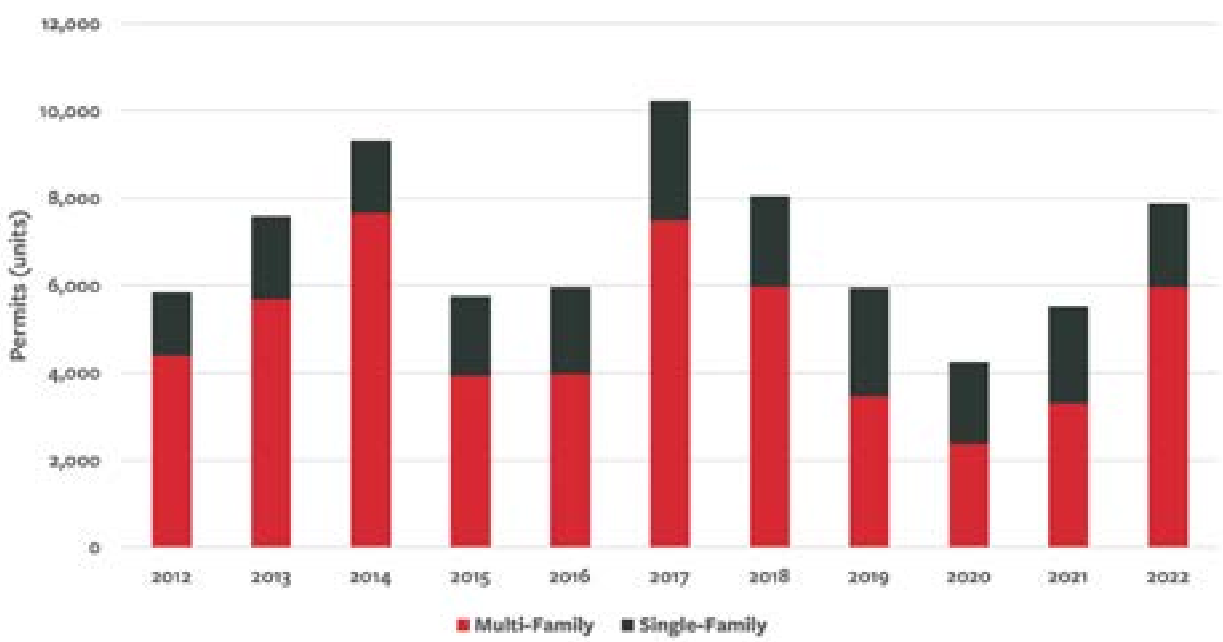
Home inventories throughout the state remain low. In March 2023, there were just 1.4 months of supply in Santa Clara County, unchanged from March 2022. A balanced market typically includes six to seven months of supply; a buyer's market is seven months of supply and above; a seller's market is six months of supply and under.[1]

The apartment market in the South Bay had a strong year. Vacancy rates fell to 4.8% in the first quarter of 2023, a -0.4 percentage-point decline from a year earlier. Asking rents grew a sizable 10.3% to $2,996 per-unit per month, but that still leaves the South Bay more affordable than San Francisco (MD) ($3,205), yet more expensive than the East Bay ($2,686). However, with the recent tech layoffs and slowing growth in the United States overall, we anticipate asking rents in the South Bay to level off in the coming months.

Residential construction in the region has increased over the last year. The South Bay issued 5,967 multi-family permits in 2022, an +81% increase from 2021. There were 1,909 single-family permits issued in 2022, a -14.4% decrease from 2021. Overall, residential permitting in the South Bay totaled 7,876 permits issued in 2022, a +442.5% increase from 2021. Continuing to add units to South Bay's housing stock will be essential to sustaining economic growth in the coming years.

[1]National Association of Realtors (NAR)

SOUTH BAY RESIDENTIAL PERMITS

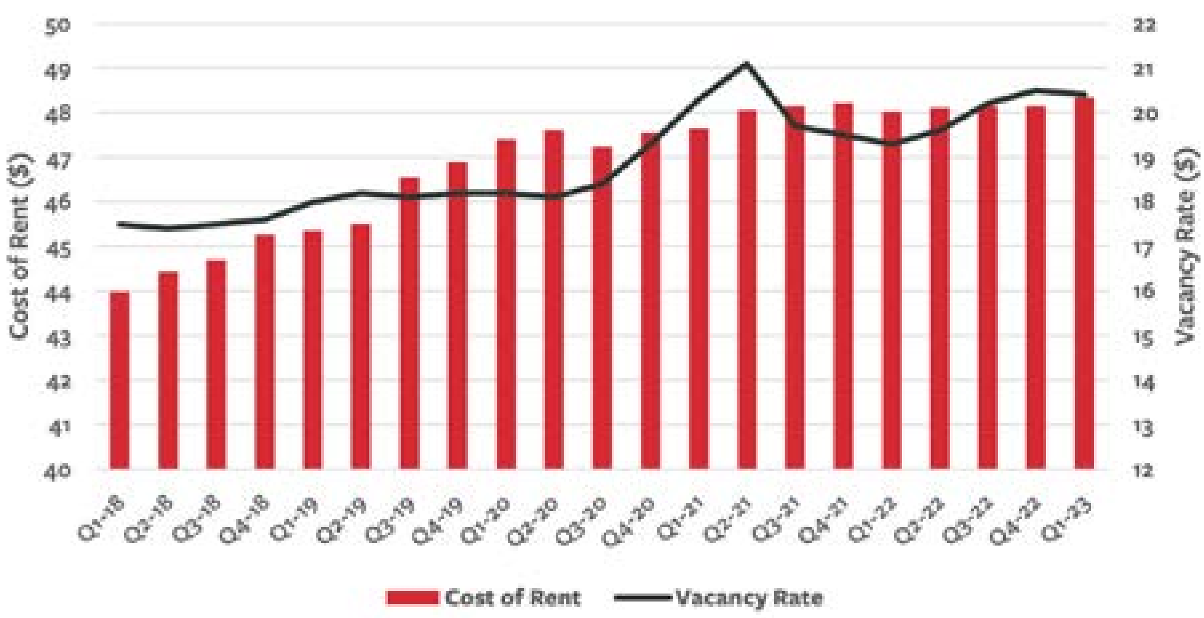


Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

Commercial Real Estate

The South Bay office market has high levels of available stock due to reduced demand, particularly in the technology sector. The vacancy rate grew to 20.4% in the first quarter of 2023, a +1.1 percentage-point increase from the previous year. The cost of rent grew a modest 0.7% over the last year to an annual rate of $48.34 per square-foot, keeping office space in the South Bay more affordable than San Francisco (MD) ($64.47), but more expensive than the East Bay ($35.10).

SOUTH BAY OFFICE MARKET



Source: REIS; Analysis by Beacon Economics

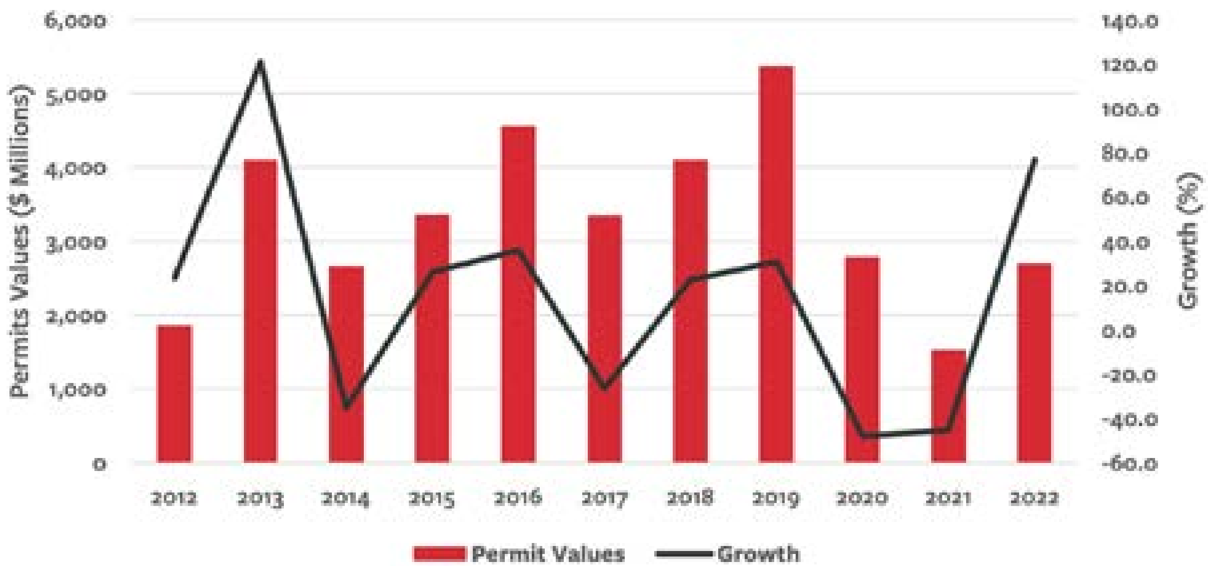
Demand for retail space has declined in the South Bay over the last year. The vacancy rate grew to 5.8% in the first quarter of 2023, a +0.3 percentage-point increase from the previous year. The cost of rent grew 0.9% over the last year to an annual rate of $38.10 per square-foot, keeping retail space in the South Bay more affordable than San Francisco (MD) ($40.99), but more expensive than the East Bay ($31.90).

Despite falling demand for office and retail space in the South Bay, warehouse demand remains strong. The vacancy rate for warehouse properties in the South Bay fell to 3.0% in the first quarter of 2023, a -2.7 percentage-point decline from a year earlier. The cost of rent increased 9.1% over the last year to an annual rate of $10.08 per square-foot, keeping warehouse space in the South Bay more affordable than San Francisco (MD) ($13.13), but more expensive relative to the East Bay ($8.59).

The vacancy rate for flex/R&D properties in the South Bay fell to 8.3% in the first quarter of 2023, a -2.4 percentage-point decline from a year earlier. The cost of rent grew 5.7% over the last year to an annual rate of $19.82 per square-foot, keeping flex/R&D space in the South Bay more af- fordable than San Francisco (MD) ($21.29), but more expensive relative to the East Bay ($14.08).

Non-residential permitting has expanded, growing 76.7% from 2021 to 2022. The largest increase was in retail permitting, which totaled $231 million during 2022, a substantial increase from 2021's $25.9 million. Office permitting totaled $365 million, over double the total from 2021. Permitting for non-residential alterations and additions totaled $1.4 billion, 74.3% higher than in 2021.

SOUTH BAY NONRESIDENTIAL PERMITS



Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

About Beacon Economics

Founded in 2007, Beacon Economics, an LLC, and certified Small Business Enterprise with the state of California, is an independent research and consulting firm dedicated to delivering accu- rate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas in- clude sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis they need to understand the significance of on-the- ground realities and to make informed business and policy decisions.

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