The Failed Regional Banks

What Lessons Can Be Learned?

July 2023

About GPS Global Advisors

GPS Global Advisors provides strategic advice on corporate governance and ESG matters.

Founder Geof Stapledon held senior governance and ESG roles with global mining company BHP for 14 years. Before that he was managing director of ISS's Australian office, and co-founder of the Australian governance advisory firm that ISS acquired: Proxy Australia.

Geof was also previously a professor of corporate law and corporate governance at Melbourne University.

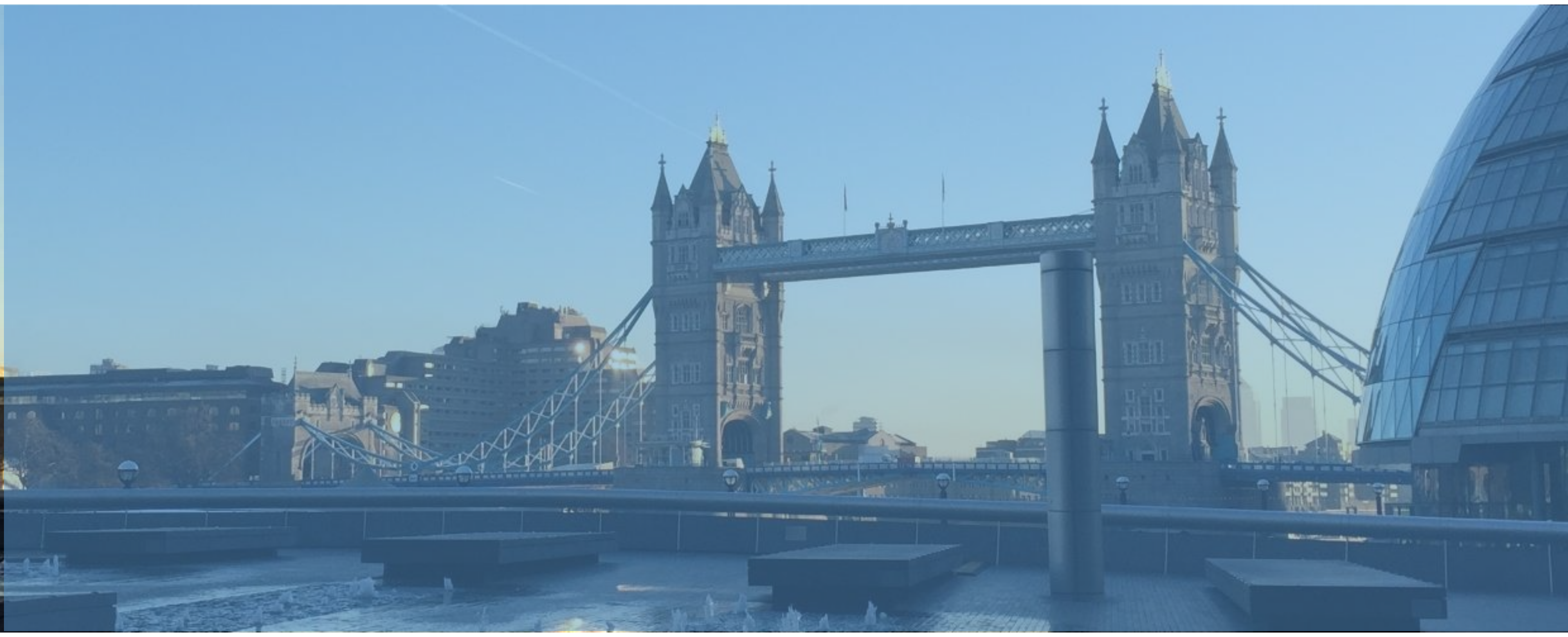
www.gpsglobaladvisors.com

info@gpsglobaladvisors.com

Acknowledgement

GPS Global Advisors thanks consultant Jeff Lawrence who made a major contribution to the financial analysis in this report.

ISBN 978-1-80517-200-0



CONTENTS

Executive summary

The failures of Silicon Valley Bank (SVB), Signature Bank of New York and First Republic Bank between March and May 2023 rank as the **second, third and fourth largest U.S. commercial bank failures**.

There were several **management shortcomings** in the lead-up to these banks failing

- Over-reliance on uninsured deposits from a concentrated customer base.
- Particularly at SVB, making large investments in fixed-income securities the value of which was exposed to rate hikes by the U.S. Federal Reserve.
- In relation to interest-rate risk:
  - not hedging (in First Republic's case)
  - putting some hedges in place but then removing them at almost the worst possible time (in SVB's case).
- Rapid growth without commensurate risk-management practices.
- At First Republic: doubling down on a high-risk strategy.

In terms of **financial and operating performance** over the decade prior to failure

- First Republic and Signature Bank exhibited variable Return on Equity (ROE) and Return on Assets (ROA) performance, relative to the average FDIC-insured bank.
- While SVB was a consistent ROE outperformer for most of the decade, this changed in late 2021 when it became a relative underperformer and in absolute terms it shifted from ROEs in the high 20% range to single-digit ROE.
- Net interest margin was, with very few exceptions, lower than the average FDIC-insured bank peer.
  - In effect, these banks were "buying" market share by under-pricing their competitors; by a combination of making loans at lower interest rates and/or offering higher interest rates to attract depositors.

Two of the failed banks – SVB and First Republic – generated significant **share-price outperformance** over most of the decade.

There are several reasons why this occurred despite some problematic financial and operating performance:

- Some reasons are "macro" – e.g. First Republic and SVB traded to some extent as a "proxy" for San Francisco Bay Area home prices, a region that experienced 287% house price appreciation over the decade to 2022.
- Some reasons are bank-specific, e.g. revenue per share growth is strongly aligned with the banks' share price performance.

There were some **risk-related aspects of these banks' performance** that should have given investors reasons to question their elevated price multiples.

For example:

- Relatively low net interest margin for significant parts of the decade prior to failure.
- For periods of time, all three failed banks took a more aggressive approach to loan-loss provisioning than the average FDIC-insured bank.

CEO pay was aligned with share price performance … until early 2022

However:

- Built into the share price performance particularly over the period from March 2020 to early 2022 were risky management strategies that ultimately brought down the banks.
- The component of total pay that was driven by return on equity and (for two banks) return on assets cannot unequivocally be described as pay-for-performance.

As for **pay quantum** …

- The amount paid to First Republic's CEO is hard to justify.
- In terms of "realized" pay, he garnered $356 million over the decade – an average of $36 million per year.
    - This is more than 3 times the realized pay of SVB's CEO: $111 million over the decade, or $11 million on average per year.
    - Even though First Republic and SVB were broadly comparable in size.
    - And it puts the realized pay of First Republic's CEO well above that of Bank of America and Citi's CEOs, despite those banks being many times larger and more complex (though admittedly exhibiting weaker share-price performance over the decade to early 2022).

As for **clawback** … In the absence of a financial restatement, or serious misconduct coming to light, there seems only a low probability of a compensation clawback from the senior executives of these banks.

That raises an issue for consideration by the boards and compensation committees of other banks: in the simplest terms, bank failure should be added as a basis for potential clawback.

Several **adverse findings about the board's role in overseeing risk management** were made by the Federal Reserve in its report on SVB, and the FDIC in its report on Signature Bank.

Having compared the **composition of the boards** of the failed banks with the boards of six comparator banks, one thing stands out: they lacked non-executive directors with experience working as bank senior executives during their career or as banking supervisors or regulators.

The non-executive component of a bank's board should include people who have dealt with bank liquidity and risk management issues first-hand over an extended period of time during their careers.

First Republic Bank is abbreviated as **FRB** in the charts in this paper

Signature Bank is abbreviated as **SBNY** in the charts

SVB is used throughout the paper to refer to **SVB Financial Group** or its principal subsidiary **Silicon Valley Bank** depending on the context.

svb

SIGNATURE BANK®

FIRST REPUBLIC BANK

It's a privilege to serve you®

Introduction

The failures of Silicon Valley Bank (SVB), Signature Bank of New York and First Republic Bank between March and May 2023 focused the world's attention on U.S. regional banks that had previously been largely unheard of outside their U.S. operating markets. They were significant financial institutions: their failures now rank as the second, third and fourth largest U.S. commercial bank failures.[1]

Banking supervisors have published findings on the causes of the SVB and Signature Bank failures, with a range of instances of poor management highlighted.

Supervisors haven't yet published their views on what lay behind First Republic's failure.

This paper identifies several areas where First Republic's management pursued strategies that were high-risk and, ultimately, unsuccessful – and also takes a deep dive into some of the problem areas at SVB and Signature Bank.

The existence of sub-optimal management amongst the contributing factors leads to questions of corporate governance. This paper addresses two sets of corporate governance questions:

1) CEO pay: Were these banks' CEOs paid in line with performance, paid at a reasonable level, and was their pay structured to take account of risk?
2) Did the bank boards have the collective skills and experience to deal with the issues these banks faced?

Overview of the bank failures

On 8 March 2023, Silvergate, a relatively small bank with a client focus on crypto businesses, announced its intention to wind down operations and voluntarily liquidate. The company had been under scrutiny for months due to exposure to failed entities in the crypto sector including FTX, and a significant withdrawal of customer deposits.

SVB

The same day, SVB Financial Group, owner of Silicon Valley Bank, announced that it had sold all its Available-for-Sale (AFS) securities portfolio (around $21 billion of mainly treasury bonds) and intended to raise $2.25 billion in equity capital to strengthen its balance sheet. Its customer base was well and truly spooked: they tried to withdraw $42 billion in deposits the next day: Thursday 9 March. Even with the cash raised through the sale of the AFS securities SVB wouldn't have had enough cash to honour all those withdrawals given that its balance sheet showed cash and cash equivalents of only $13.8 billion at its 31 December 2022 reporting date. On the morning of Friday 10 March the bank went into Federal Deposit Insurance Corporation (FDIC) receivership.

Signature Bank

The same Friday SVB failed, Signature Bank, a mid-sized bank that had focused on the crypto sector, experienced a 20% decline in deposits. It was closed by banking regulators over the weekend.

First Republic Bank

At this time, First Republic Bank suffered significant deposit withdrawals and a collapse in its share price. It was stabilised to some degree a week later when JP Morgan, Citi and nine other large banks made uninsured deposits totalling $30 billion. In late April it reported that deposits had fallen by $102 billion (or 58%) in the first quarter, excluding the deposits by the large banks. It was closed by regulators a few days later, going down as the second-largest bank failure in U.S. history.

Contributing factors

A range of factors contributed to the failure of these three banks. Three key factors are outlined in this section.

Concentrated depositor case

An area of media focus in the SVB case was the concentration of its depositor base: the bank was integrally connected with the start-up tech company and venture capital tech-focussed investing community in Silicon Valley. This accelerated the rush to withdraw deposit funds once confidence in the bank started to diminish.

First Republic also had a comparatively concentrated depositor base. Management portrayed this as a virtue in a January 2023 investor presentation: *"First Republic has only approximately 1/5th the number of deposit accounts compared to the average $100–250 billion U.S. bank."*[2]

A similar situation existed at Signature Bank: Crypto-related deposits reached 27% of total deposits at the end of 2021, and a mere 60 clients accounted for 40% of total deposits.[3]

Substantial uninsured deposits

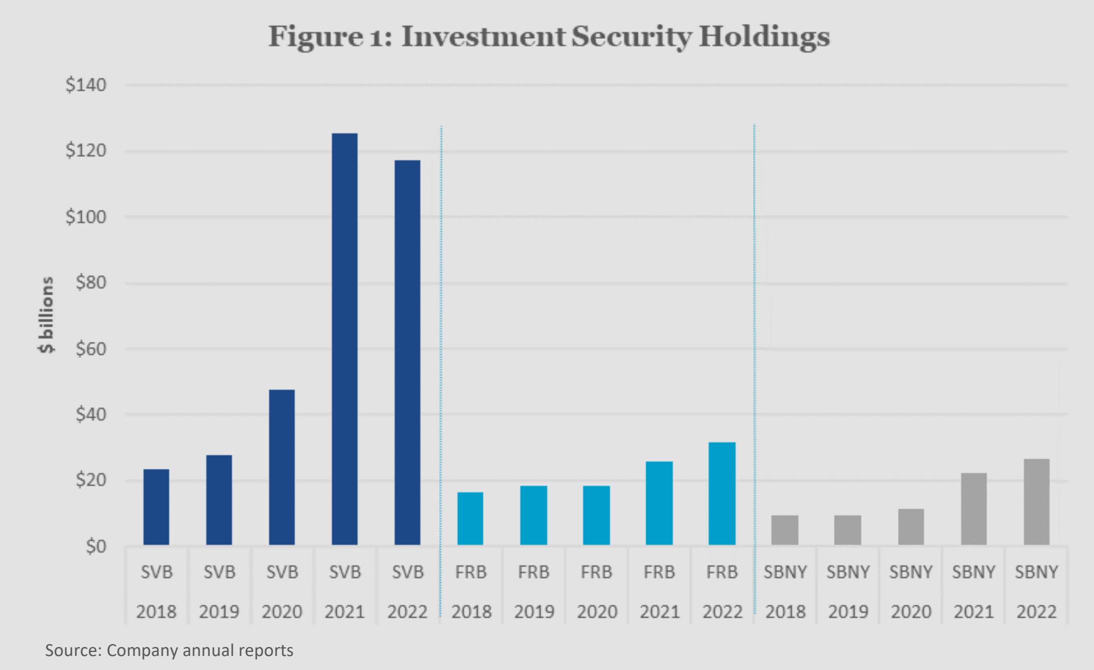
The FDIC guarantee limit is $250,000 per depositor, per commercial bank, but 96% of SVB's deposits were larger than that – i.e. they were "uninsured" deposits. The level of uninsured deposits was also very high at Signature Bank (90%) and comparatively high at First Republic (68%).[4]

It is not surprising that those whose deposits are not government-insured are more likely to seek to withdraw their funds when negative news begins to circulate about their bank or during times of financial market stress.

Moreover, financially sophisticated uninsured depositors – such as at venture capital firms or in the treasury department of a tech start up – are more likely to review a commercial bank's financial disclosures and become aware of a number of the issues raised in this paper before they become headline news. In other words, uninsured depositors may be more prepared to move their funds on short notice, having already informed themselves of the potential "red flags".

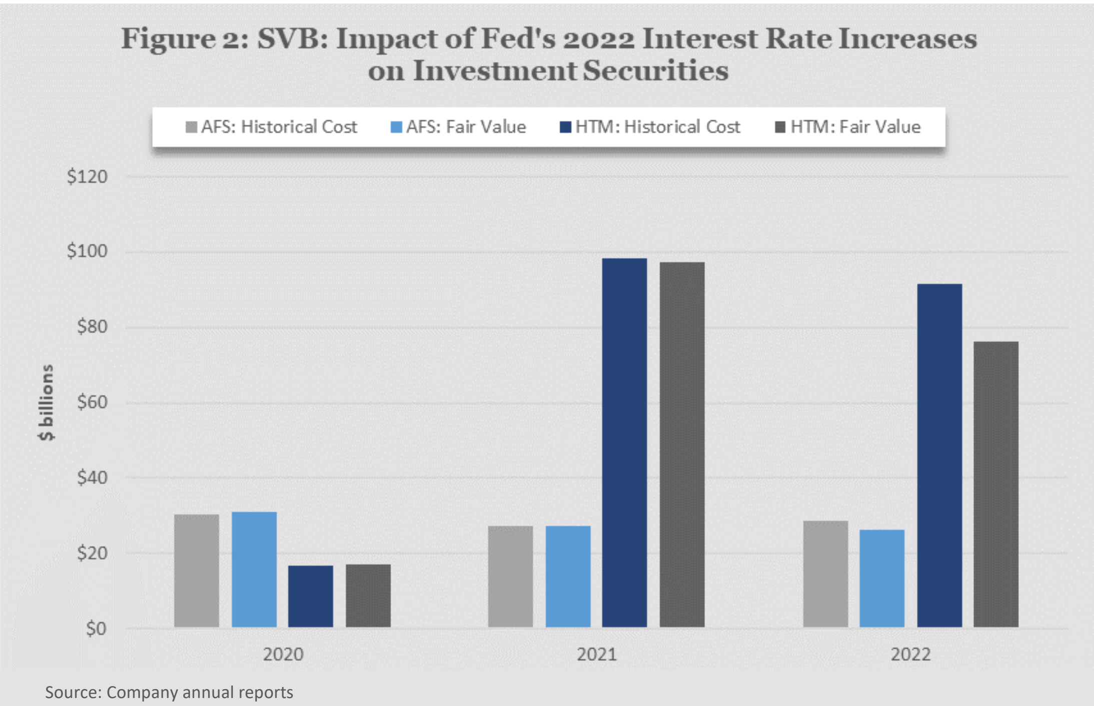
Losses on investment portfolio

At all three banks, but especially at SVB, actions management took when deposits swelled during 2020 and 2021 came back to bite. The covid pandemic led to a surge in bank deposits. This was partly due to government cash payments to citizens and, in the case of SVB, due to its client base (tech firms) generating large volumes of cash during lockdowns as people consumed more technology products and services. The three failed banks did not lend out all of the additional deposits. In fact, at SVB, only a small portion was loaned out. As highlighted in Figure 1, a significant majority was invested in fixed income securities: treasury bonds and other government-backed securities.



When the Fed began tightening monetary policy in 2022, the value of SVB's newly expanded fixed-rate investment portfolio decreased. For its Available-for-Sale (AFS) securities this decrease in value was reflected in the company's balance sheet and income statement, while for Held-to-Maturity (HTM) securities it did not impact the financial statements (per accounting rules) but was recorded for analysts to see in the notes to the financials. As at 31 December 2022, SVB had unrealized losses of $15.2 billion on its HTM portfolio (versus only $1.3 billion a year earlier) (Figure 2).[5] Staggeringly, this was equivalent to 123% of its common stockholders' equity ($12.4 billion). Not surprisingly, this had been noticed by equity research analysts.[6]

Importantly, unrealized losses became realized losses when deposit withdrawals forced management to start selling investment securities from the AFS portfolio.



Management deficiencies

Former senior management of these banks might seek to argue – and some have already started claiming – that external factors drove the downfall of their institutions. However, on closer inspection, even things like the impact of the Fed's quick pace of interest-rate rises during 2022 (Figure 23) should not be categorised as exclusively an external factor with no bank management culpability.

This section outlines key areas where management actions and inactions contributed to bank failure.

In the cases of SVB and Signature Bank, the analysis is informed by banking supervisors' reports. Such reports have not yet been made public for First Republic Bank, but we have conducted our own analysis and identified some important deficiencies.

Overreliance on uninsured deposits from a concentrated customer base

Something that SVB saw as a strength – a client base concentrated in the Silicon Valley technology start-up world – ultimately became a weakness. It appears that, once confidence in the bank had been shaken among a few key players (e.g. venture capital firms whose clients banked with SVB), the highly networked nature of the tech community caused an acceleration in an already-speedy bank-run process.

Not only were SVB's clients concentrated in the tech sector, they also had comparatively large deposit balances.

Similarly, at Signature Bank, just 60 clients accounted for 40% of total deposits.

As noted earlier, at the end of 2022, 96% of SVB's deposits were uninsured as were 90% of Signature Bank's. By comparison, uninsured deposits were a much smaller percentage of total deposits at:

- JP Morgan Chase: 59%
- Bank of America: 37%
- Wells Fargo: 37%
- a group of peer banks to the failed regional banks: 31 to 41%[7]

There are precedents for banks, whose insured deposits comprised only a small proportion of total liabilities, running into serious problems. Notably Continental Illinois, which suffered a run on deposits in the 1980s and avoided failure only through a government bail-out.

It is a reasonable expectation that highly paid bank executives should have a strong awareness of the lessons of history in their sector.

Further, this matter had been brought to the attention of SVB's management by banking supervisors. Federal Reserve Bank of San Francisco staff:

> *"identified issues related to the concentration of SVB's deposits and funding structure as early as 2018. In particular, [supervisors'] documents note the potential volatility of SVB's deposits could pose liquidity risks. Additionally, in 2021, [supervisors] identified key deficiencies in liquidity risk management for SVB, including modelling of its deposit outflows during stress and testing of its contingent funding plan."*[8]

Unhedged, large investment in fixed-income securities

Perhaps the clearest managerial failure at SVB is the huge investment in government-backed fixed income securities at a low point in the interest rate cycle and the removal of the company's hedging strategy to address interest-rate risk (hedging is discussed in a separate section, below).

When the Federal Reserve's interest rate tightening began in 2022, the value of SVB's bond investments started to fall. There are analogous historical precedents of which all bank senior executives should be aware, such as the savings and loan (S&L) crisis of the 1980s and early 1990s. Then, S&L institutions were caught holding long-term fixed rate loans on their balance sheets when Paul Volcker's Federal Reserve increased interest rates to tackle inflation – which led to short-term funding costs moving above the returns being generated on the fixed rate loans.

It is reasonable to expect a bank executive to envisage – and take steps to mitigate the consequences of – a material change to Federal Reserve interest rate policy. Yet, in his written testimony to the Senate banking committee, SVB's former CEO Greg Becker said:

> *"throughout 2020 until late 2021, the messaging from the Federal Reserve was that interest rates would remain low and that the inflation that was starting to bubble up would only be 'transitory.' Like SVB, many other banks invested in their securities portfolios. Indeed, between the start of 2020 and the end of 2021, banks collectively purchased nearly $2.3 trillion of investment securities in this low-yield environment created by the Federal Reserve."*[9]

Regardless of messaging from the Federal Reserve, ongoing low interest rates was not the only plausible outcome. One aspect of basic risk management is planning for different scenarios. Other outcomes were clearly plausible – even without hindsight bias. A multitude of inflation risks were clearly to the upside:

- increasing velocity of M2 money stock since the fourth quarter of 2021;[10]
- the unemployment rate was below the Noncyclical Rate of Unemployment from the fourth quarter of 2021;[11]
- the size of the Covid-pandemic fiscal stimulus;
- real interest rates being negative; and
- higher energy prices.

This is just a selection. Table 1 contains a more comprehensive list.

Table 1: Contributors to increased inflationary expectations

Increases Inflationary Expectations	Applicable to 2021/22?	Observations
Higher energy prices	✓	Can also feed into core inflation if no monetary/fiscal tightening
Higher inflation rate last quarter	✓	~90% correlation between last period's inflation and next period's inflation (i.e. inflation is sticky)
Western war / military conflict	✓	Ukraine invasion is diverting material Western resources to war funding
Large fiscal deficit	✓	Some of the largest outside of world wars (as % of GDP)
High sovereign debt to GDP ratios	✓	Historically high by most metrics
Central banks publicly stating that they "want" inflation	✓	See US Federal Reserve Board statements
Central banks adjusting a [2]% target to a "band over the cycle"	✓	See US Federal Reserve Board statements
QE (or M2) increases exceeding any reduction in money velocity	✓	M2 x V provides a sense of scale
Pandemics (with or without lockdowns)	✓	Historically high correlation for various reasons (e.g. worker productivity, reduced trade, etc)
Supply chain disruptions	✓	Most material outside of world wars
Negative "real" (inflation-adjusted) interest rates	✓	Inflation adjusted rates were deeply negative and continue to be low by historical standards
Exchange rate depreciation	✗	Minor variations
Frequent media reports of higher wages (minimum or average)	✓	Both laws increasing minimum wages and the highest unit labour cost growth since early 1980s
Emerging from a recession	✓	Historically correlated
Unemployment < Noncyclical Unemployment Rate	✓	Since Q4, 2021, when adopting the Fed's relatively low hurdle

Federal Reserve Bank of San Francisco staff concluded that *"SVB did not effectively manage the interest rate risk of the securities or develop appropriate interest rate risk-management tools, models, or metrics"*.[12] And, in a supervisory letter to the bank, the Fed stated that *"SVB's interest rate simulations were not reliable and called into question the effectiveness of its risk-management practices"*.[13]

Ironically, in determining return on equity performance for executive pay purposes, the SVB compensation committee had the discretion to *"adjust for out of the ordinary or non-recurring items, or other items that are subject to factors beyond management's control, **such as investment securities gains and losses**"*.[14] This is discussed further in the CEO pay section below.

Signature Bank & SVB: Rapid growth without commensurate risk management practices

The FDIC concluded that, while the primary cause of Signature Bank's failure was illiquidity precipitated by contagion effects following Silvergate's closure and SVB's failure, the root cause was poor management. In addition to the overreliance on uninsured deposits discussed above, the FDIC highlighted that Signature Bank's board and management *"pursued rapid, unrestrained growth without developing and maintaining adequate risk management practices and controls appropriate for the size, complexity and profile of the institution"*.[15]

SVB's growth over its final few years was even more pronounced than that of Signature Bank.

Table 2: Growth in assets, 2018 to 2021

Bank	Total Assets: 2018	Total Assets: 2021	Change
SVB	$57 billion	$211 billion	+271%
Signature Bank	$47 billion	$118 billion	+150%
First Republic Bank	$99 billion	$181 billion	+83%

Source: Company annual reports

The U.S. Government Accountability Office found that the growth in total assets of SVB and Signature Bank over the two years to 2021 (198% and 134% respectively) far exceeded that for a group of 19 peer banks (33% growth in median total assets).[16]

The FDIC also found that Signature Bank's management:

> *"failed to understand the risk of its association with and reliance on crypto industry deposits or its vulnerability to contagion from crypto industry turmoil that occurred in late 2022 and into 2023."*[17]

And, risks related to rapid growth and control weaknesses had been brought to Signature Bank management's attention:

> *"FDIC had repeatedly identified weaknesses related to the bank's liquidity management framework and contingency planning since 2018. In 2019, FDIC found planning and control weaknesses prevented the bank from adequately identifying, measuring, and controlling liquidity risk."*[18]

The Federal Reserve also found risk-management deficiencies at SVB:

> *"Silicon Valley Bank managed interest rate risks with a focus on short-run profits and protection from potential rate decreases, and removed interest rate hedges, rather than managing long-run risks and the risk of rising rates. In both cases, the bank changed its own risk-management assumptions to reduce how these risks were measured rather than fully addressing the underlying risks."*[19]

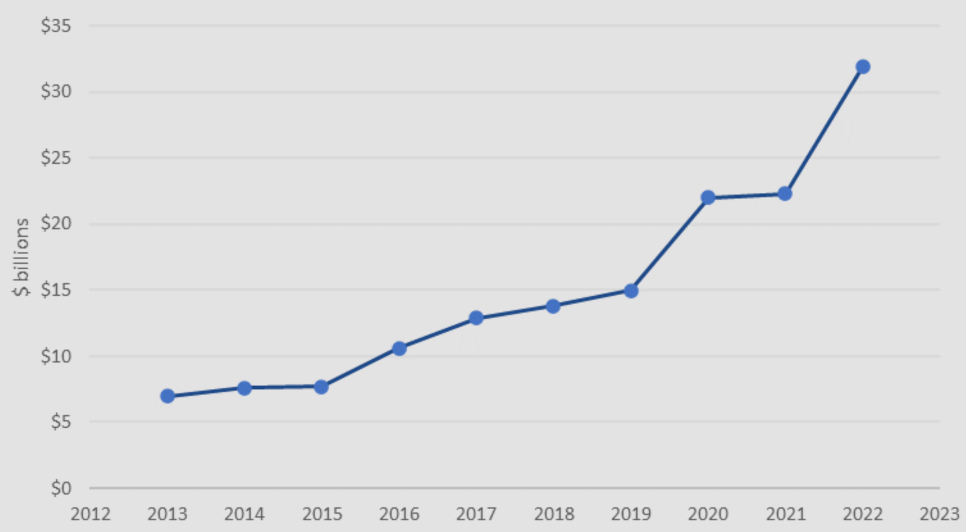
First Republic Bank: Doubling down on high-risk strategy

While First Republic increased its holdings of investment securities during 2021-22, the increase was fairly modest compared to SVB as shown in Figure 1. Nonetheless, it had $4.8 billion of unrealized losses on its HTM securities portfolio at the end of 2022, equivalent to 35% of its common stockholders' equity. By March 2023, however, analysts were estimating that unrealized losses on the bank's investment securities and loan portfolios, combined, would leave it with around $13 billion of negative common stockholders' equity should those assets need to be booked at fair value, through a rescue merger for example.[20]

The narrative of First Republic's failure is one of a bank caught between higher funding costs and fixed rate loans.[21] This is, however, just one dimension of the bank's failure. As the external environment – particularly the Fed's interest rate raises – was unfolding, the bank's management team appears to have doubled down on a risky strategy.

First, they accelerated their lending into the fixed-rate mortgage market with massive loan growth and little loan diversification. As shown in Figure 3, loan originations jumped from $22.3 billion in 2021 to $31.9 billion in 2022: a 43% increase. A majority of the new lending occurred in the first half of 2022,[22] meaning the 2.75% of interest-rate tightening by the Federal Reserve in the second half of the year would have diminished the fair value of newly issued fixed-rate loans within months of their origination.

Figure 3: FRB - Loan Origination

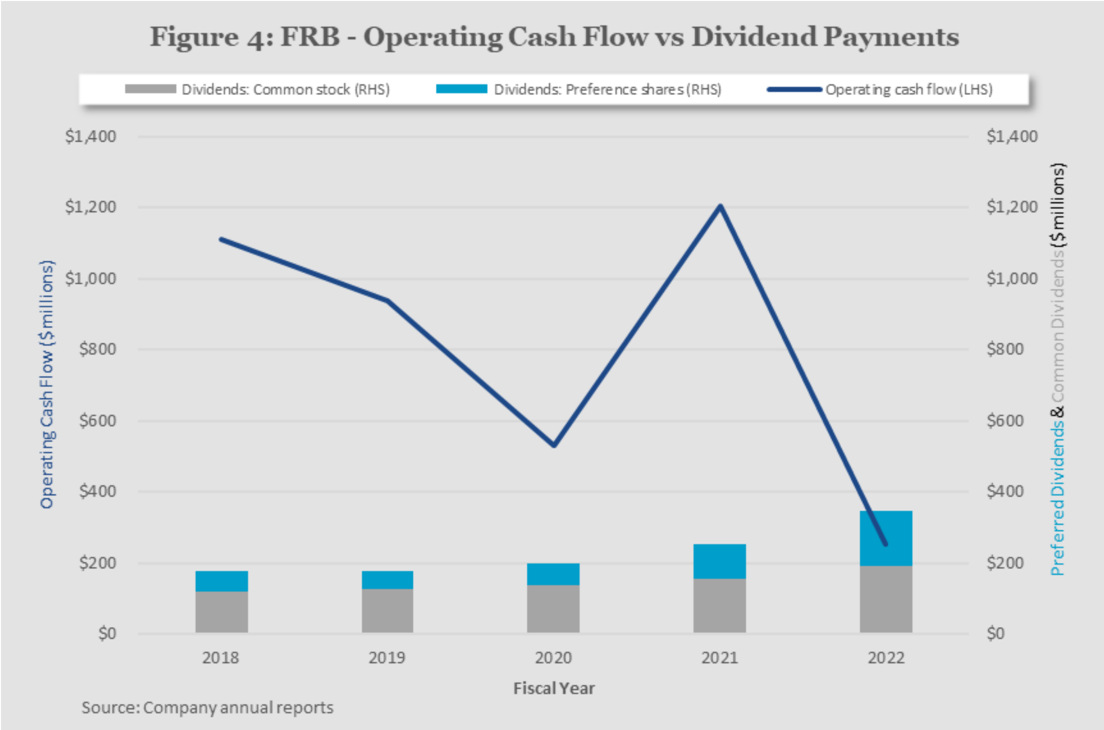


Source: Company annual reports

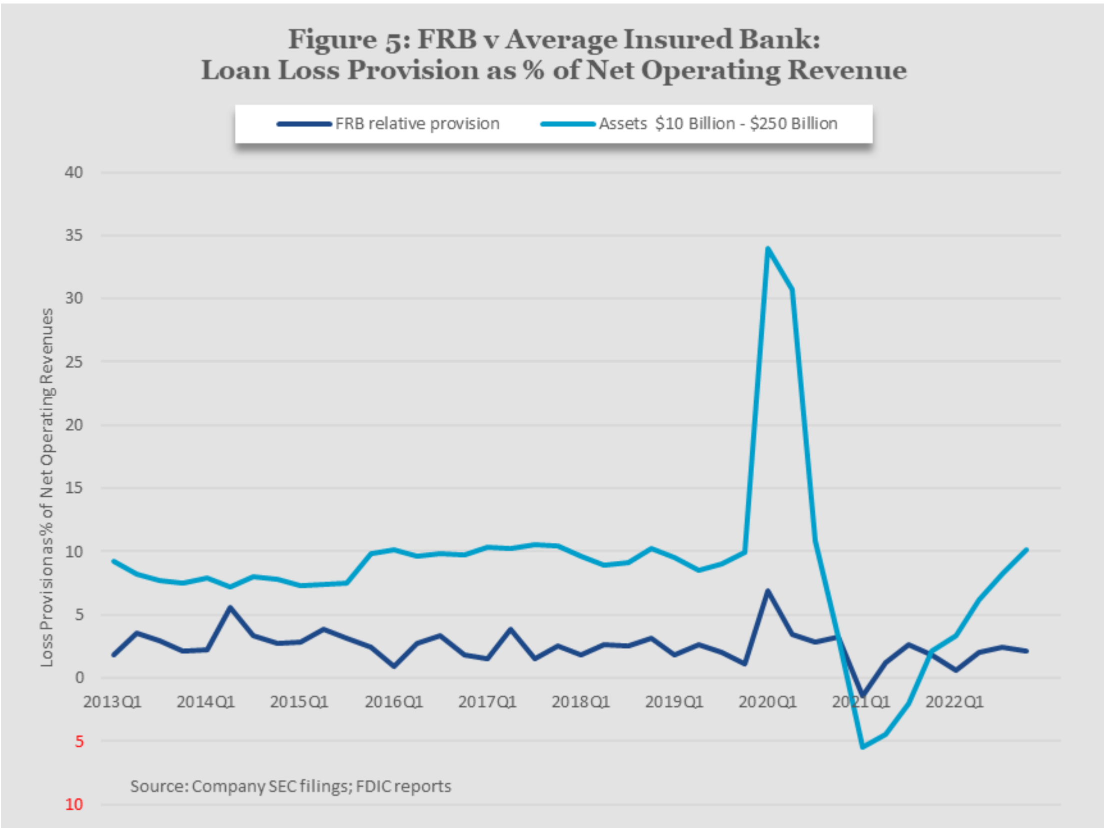
In terms of diversification – or lack of – First Republic's lending was narrowly focused on residential and commercial real estate properties. Residential property loans accounted for 75% of the bank's loan portfolio at the end of 2022, with the lion's share (59%) being single family loans[23] – described by Reuters as *"difficult to offload"*.[24] The Annual Report also confirms that a significant portion of the property loans relate to the San Francisco Bay Area[25] – a region that experienced 287% house price appreciation over the decade to the second quarter of 2022, after which prices started to fall notably.[26]

To put it mildly, it was a strange management strategy, in the light of San Francisco Bay Area property multiples in early 2022, to go all-in on mortgage loans.

Second, the dividend on common stock was increased significantly. And this in a year when cash flows from operating activities fell from $1,204 million (2021) to $252 million (2022). (See Figure 4.)



Third, as highlighted in Figure 5, First Republic made provisions for loan losses at a significantly lower level than industry peers (the average FDIC-insured bank with assets of $10 to 250 billion).[27] This had been their practice over the decade, however with their focus on the San Francisco Bay area and the remarkable house-price appreciation experienced by that region, to continue to provide for credit losses at a markedly lower level than sector peers was questionable at the least.



Hedging

SVB

Analysis of SVB's annual reports for 2019 to 2022 shows that the company:

- put interest-rate swaps in place in 2019 – to protect against falling interest rates;[28]
- terminated those swaps by the end of Q1, 2020 – generating a short-term profit;
- put some new interest-rate swaps in place in 2021; and
- removed these in 2022.

The Federal Reserve's report on SVB explained why the last set of hedges were terminated:

> *"Balance Sheet Mismanagement: In early 2022, at a time when rates were rising rapidly, SVBFG became increasingly concerned with decreasing [net interest income] if rates were to decrease, rather than with the impact of rates continuing to increase. This was based on observed yield curve inversion that could be an indication of an impending recession and a subsequent decrease in rates. The bank began positioning its balance sheet to protect [net interest income] against falling interest rates but not rising ones. SVBFG was very focused on [net interest income] and profits and the [net interest income] sensitivity metrics were showing that [net interest income] was exposed to falling rates. Rising rates were seen as an opportunity to take profits on hedges, and* ***the bank began a strategy to remove hedges in March 2022, which were designed to protect [net interest income] in rising rate scenarios but also would have served to constrain [net interest income] if rates were to decrease. Protecting profitability was the focus****. …*
>
> *SVBFG's margins were getting squeezed and the models were not able to keep pace. As SVBFG experienced non-interest-bearing deposit outflows in 2022, it shifted to more costly interest-bearing deposits and wholesale borrowings. In July 2022, firm management stated that this shift in funding mix was actually a good thing because it gave interest expense some room to fall in a down-rate scenario. In July 2022, SVBFG removed the rest of the hedges protecting [net interest income] from rising rates, and management started to think about adding hedges to gain [net interest income] if rates were to decrease. SVB remained steadfast in its commitment to protecting [net interest income] in down-rate scenarios but did not protect against rising rate environments."*[29]

Table 3: SVB net interest income sensitivity table

Change in interest rates (bps)	Estimated Percent Increase / (Decrease) in NII
December 31, 2022:	
+200	3.5 %
+100	1.8
-100	(1.8)
-200	(5.8)
December 31, 2021:	
+200	22.9 %
+100	10.9
-100	(6.4)
-200	(8.6)

Source: SVB, Annual Report 2022, page 90. Net interest income sensitivity exposure related to an instantaneous and sustained parallel shift in market interest rates.

While Table 3, taken from SVB's 2022 annual report, suggests that it would benefit from higher interest rates (which is typically the case for commercial banks), it became apparent from its financial disclosures that its net interest margin continued to decline over 2021 and 2022, both in absolute terms and relative to the average insured bank peer.

The fact that SVB management focused on yield curve inversion and the potential for this to indicate an impending recession and a subsequent decrease in rates is problematic – again, without hindsight bias. As discussed above, many indicators were pointing towards inflation being a serious issue for central banks to address. The regulatory report extracted above paraphrased SVB management's action in this area as balance sheet mismanagement. It is easy to concur with that conclusion.

First Republic

First Republic's annual reports for 2019 to 2022 contain no references to interest rate swaps. The use of derivatives is reported as foreign-exchange contracts.[30] Interest-rate risk is referenced in the Risk Factors section of the annual report, however in the summary section it is couched as a risk to net interest income: *"fluctuations in interest rates may negatively impact our net interest income."*[31]

The experience of 2022 to 2023 is of interest rates negatively impacting the bank's asset and investment values, and consequentially the confidence of its depositors and ultimately its liquidity. The first aspect of this phenomenon was included in the detailed description of interest-rate risk:

> *"our securities portfolio includes long-term municipal bonds with fixed interest rates. The yields on these bonds do not change with prevailing interest rates. In a rising rate environment, the prices of such securities would likely decline, which would likely result in unrealized losses for the Bank."*[32]

The possibility of a consequential impact on depositor confidence was not referenced. Loss of deposits stemming from Federal Reserve policy first appeared in the 2022 Risk Factors section in the passage below, but even then it was depositor migration triggered by higher rates on offer elsewhere. The non-bold wording below appeared in the 2020, 2021 and 2022 annual reports but the words in bold were added only in 2022:

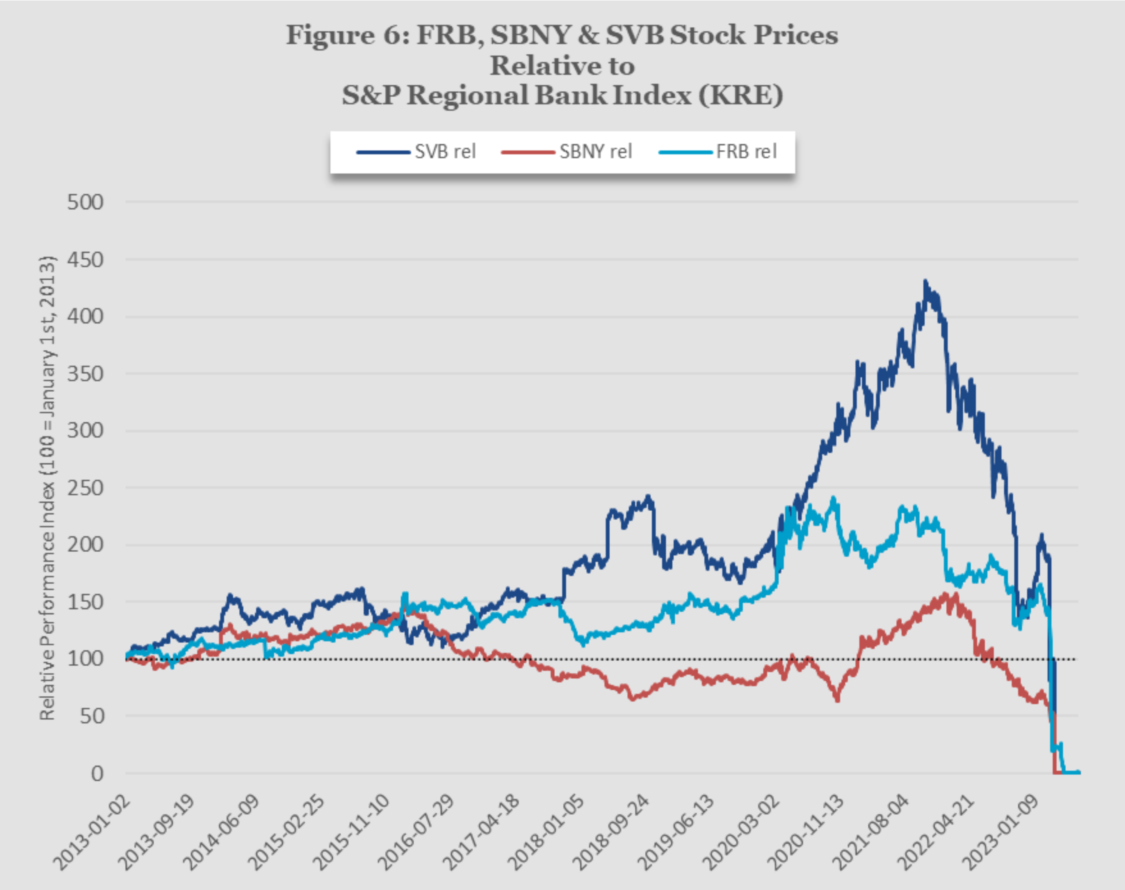
> *"In addition, customers may move money from bank deposits into investments, such as equity markets, federal government and corporate securities, or other investment vehicles that provide higher rates of return than financial institution deposits. This may cause the Bank to lose some of its main source of low cost funding. Customers may also continue to move noninterest-bearing deposits into interest-bearing accounts, thus increasing overall deposit costs. Higher funding costs may continue to reduce the Bank's net interest margin and net interest income.* ***For example, given the significant and rapid increases in interest rates in 2022, we experienced rapid migration of deposits to higher yielding products and asset classes. A prolonged period of high or increasing interest rates may cause us to experience an acceleration of deposit migration, which could adversely affect our liquidity****."*[33]

Performance over the decade before failure

Share price performance

The share price performance of the three banks over the decade prior to their failure is relatively clear. As Figure 6 highlights, SVB and First Republic were strong share-price performers relative to regional-bank peers, while Signature Bank experienced variable performance. For example, Signature Bank had a period of relative underperformance from 2017 through 2020 (related to its exposure to the New York taxi medallions market – which was hit hard by the growth of Uber and other ride-sharing businesses), followed by some relatively strong performance following the onset of the Covid pandemic.

Before endeavouring to unpack this share-price story, we first examine the banks' financial and operating performance across the decade.



Financial and operating performance

The share price performance of, in particular, First Republic and SVB over the course of the last decade needs to be contrasted with their financial performance.

For example, First Republic's return on equity (ROE) underperformed the average FDIC-insured bank (with assets of $10 to $250 billion)[34] since 2018, other than a brief period of ROE outperformance during the early stages of the 2020 pandemic (Figure 7).[35] When measuring financial performance by return on assets (ROA), First Republic consistently underperformed the average insured bank ROA (Figure 8).[36] Starting in 2018 that ROA underperformance was increasingly apparent with many periods of 30 to 50 bps underperformance (which may not sound significant but it is, when considered relative to First Republic's ROA during this period of less than 1%).

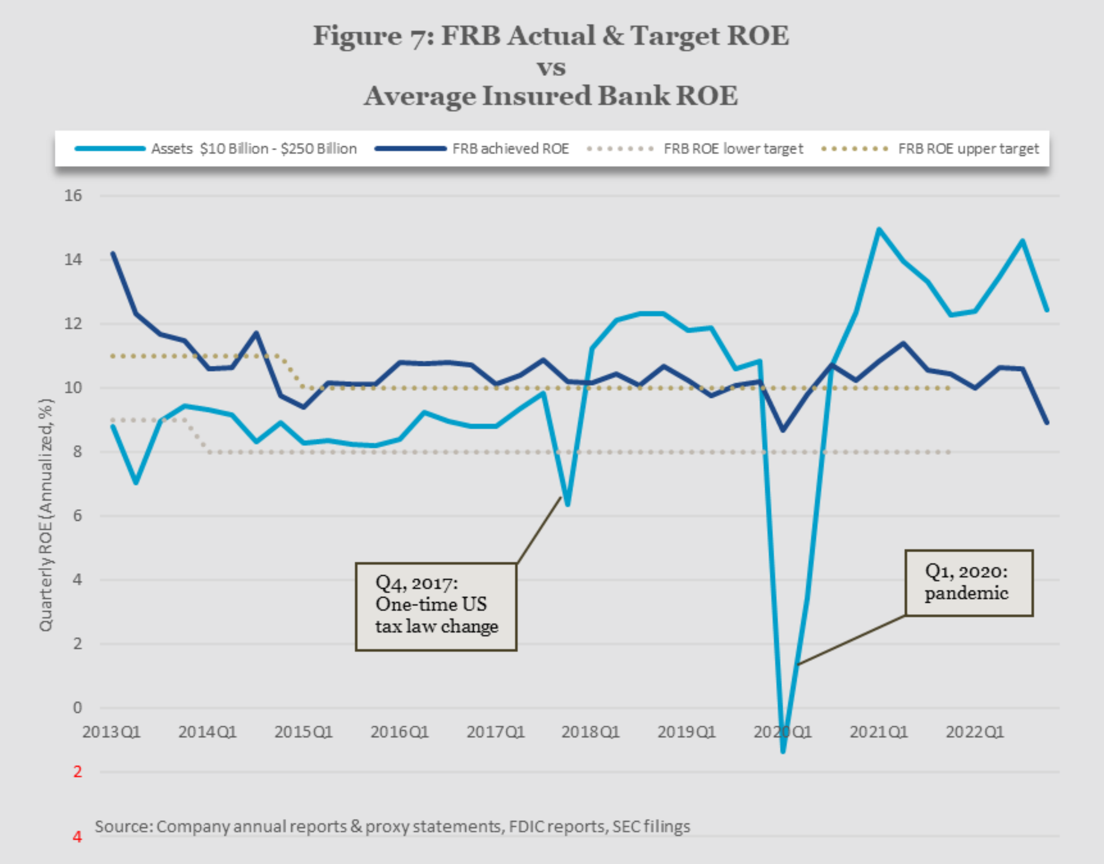


Figure 7: FRB Actual & Target ROE
vs
Average Insured Bank ROE
Assets $10 Billion - $250 Billion
FRB achieved ROE
FRB ROE lower target
FRB ROE upper target
Quarterly ROE (Annualized, %)
Q4, 2017:
One-time US
tax law change
Q1, 2020:
pandemic
2013Q1
2014Q1
2015Q1
2016Q1
2017Q1
2018Q1
2019Q1
2020Q1
2021Q1
2022Q1
Source: Company annual reports & proxy statements, FDIC reports, SEC filings

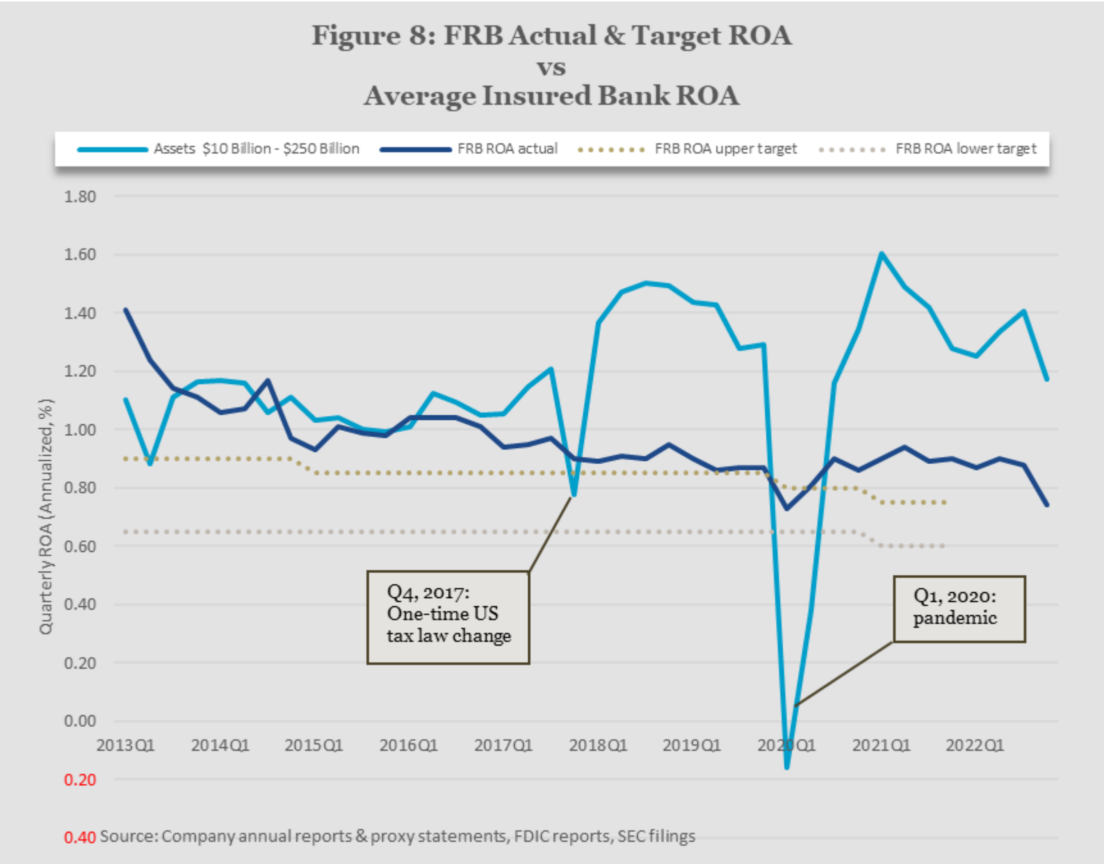
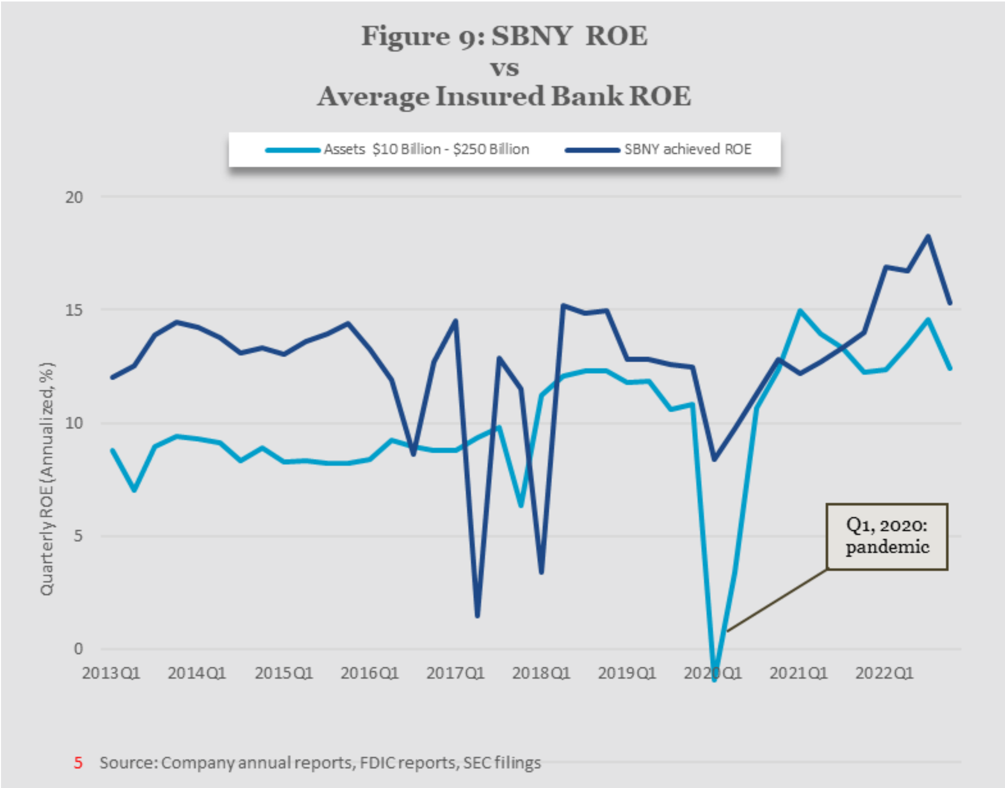
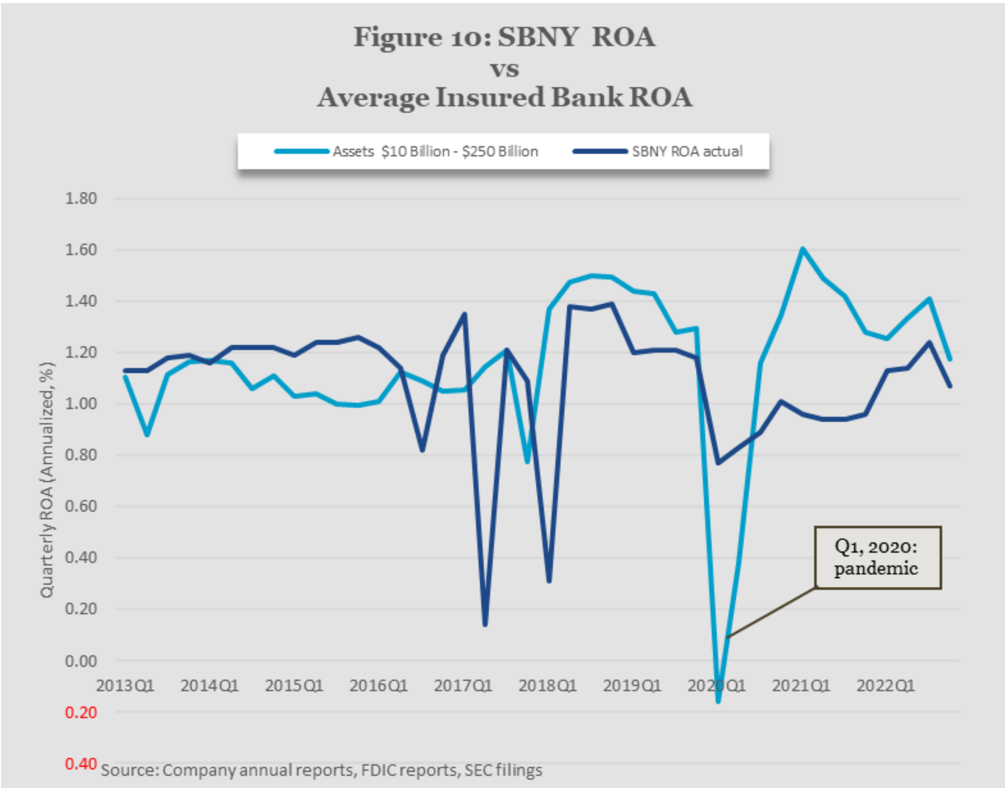


Figure 8: FRB Actual & Target ROA
vs
Average Insured Bank ROA
Assets $10 Billion - $250 Billion
FRB ROA actual
FRB ROA upper target
FRB ROA lower target
Quarterly ROA (Annualized, %)
Q4, 2017:
One-time US
tax law change
Q1, 2020:
pandemic
2013Q1
2014Q1
2015Q1
2016Q1
2017Q1
2018Q1
2019Q1
2020Q1
2021Q1
2022Q1
Source: Company annual reports & proxy statements, FDIC reports, SEC filings

Signature Bank had a mixed track record with its financial metrics being widely variable due in large part to frequent loan write downs (due to taxi medallions, crypto, etc). Outside of these periods of volatility, SBNY tended to generate higher ROE than the average insured bank peer (Figure 9), but this was not true of SBNY's ROA performance. During the last decade SBNY either exhibited a marginally higher ROA than the average ROA of its insured bank peers, or, particularly in the last five years, it underperformed its peers (Figure 10).





SVB demonstrated consistent ROE outperformance over much of the last decade (Figure 11).[37] This ended in late 2021 when it not only started to underperform its insured bank peers, it also down-shifted from ROE outcomes in the high 20% range, to single digit ROE. This would have been a momentous shift for SVB's equity investors, independent of how it compared to the bank's peers.

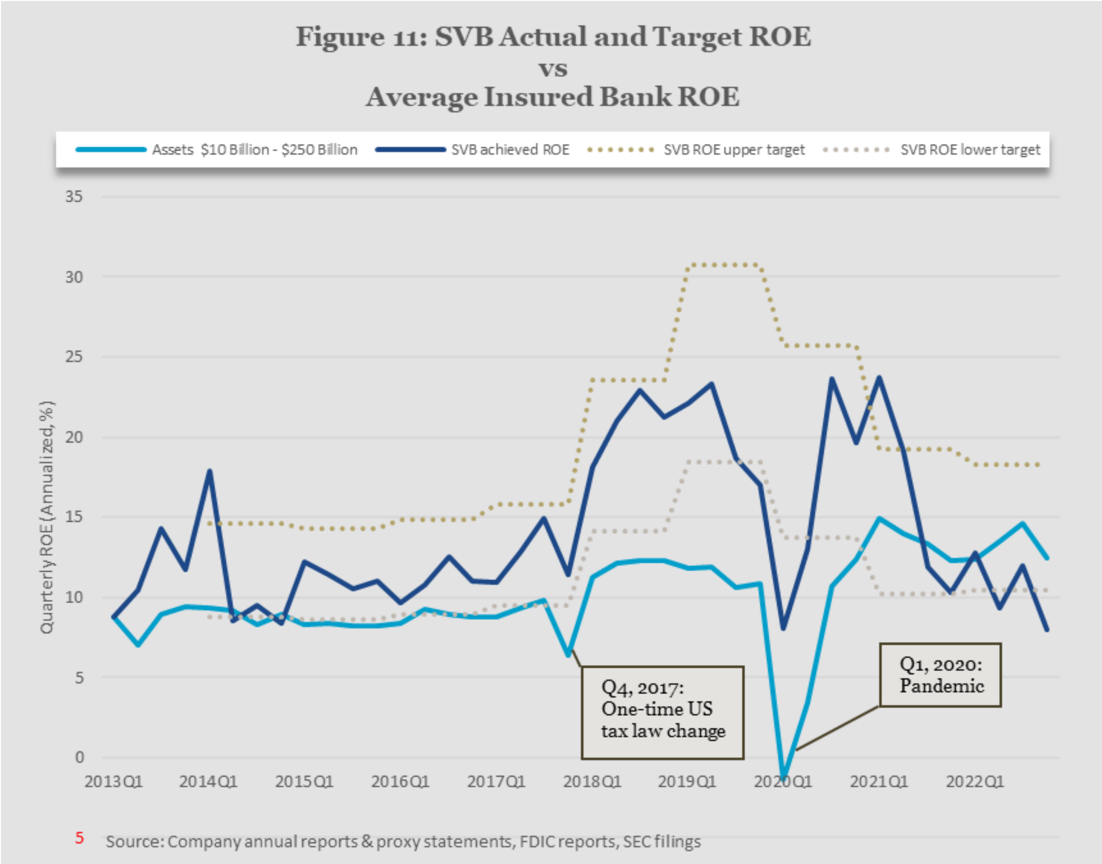
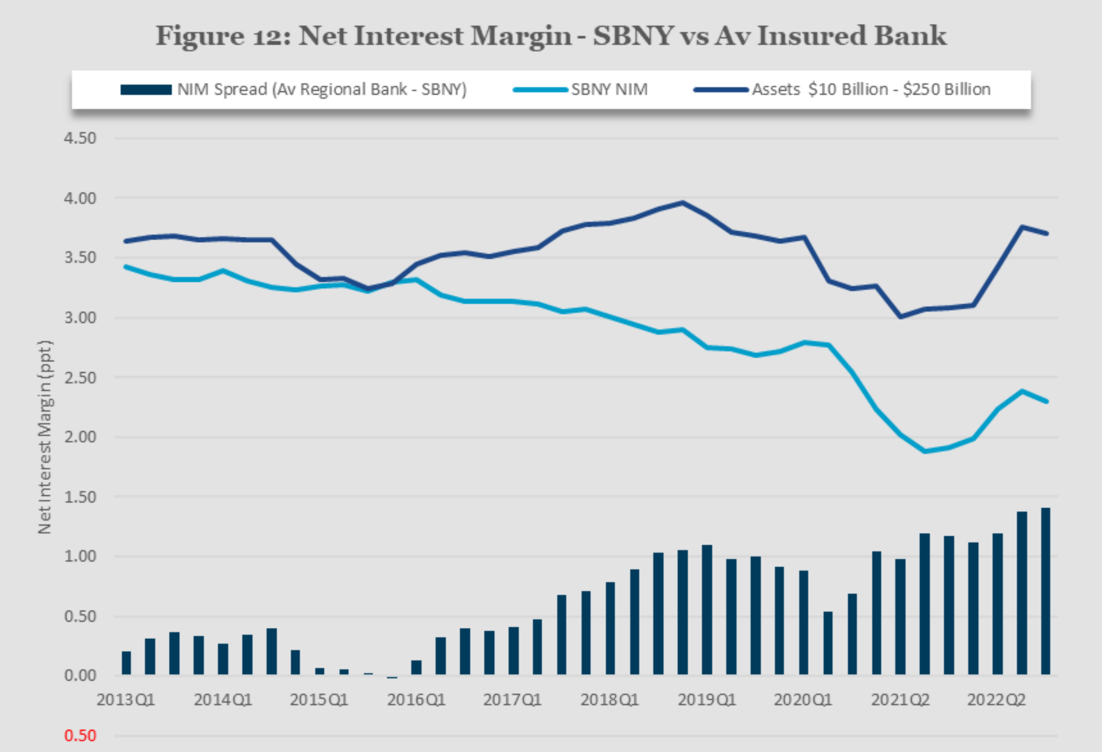


Figure 11: SVB Actual and Target ROE vs Average Insured Bank ROE

Source: Company annual reports & proxy statements, FDIC reports, SEC filings

The other aspect of these banks' underlying operating performance is that their net interest margin was, with very few exceptions, lower than average insured bank peers over the last decade. While some of the failed banks have pointed to higher funding costs after the Federal Reserve started raising interest rates in 2022, the reality is that, in the case of First Republic and Signature Bank, their net interest margin had been on a steady downward trajectory for the entire decade (see for example Signature Bank in Figure 12). There was no such downwards trend over the decade for the average insured bank (Figure 12).



Source: Company SEC filings; FDIC reports

In effect, these banks were "buying" market share by under-pricing their competitors; by a combination of making loans at lower interest rates and/or offering higher interest rates to attract depositors. These relatively low net interest margins might be thought of as evidence of a lack of pricing power.

The spread between the failed bank's net interest margin and that of the average FDIC-insured bank was also frequently relatively large considering that this was mostly a period of low interest rates (by historical standards). For example, Signature Bank's net interest margin was frequently 100 bps lower than its peers, when its peers were only generating an average net interest margin of circa 350 bps.

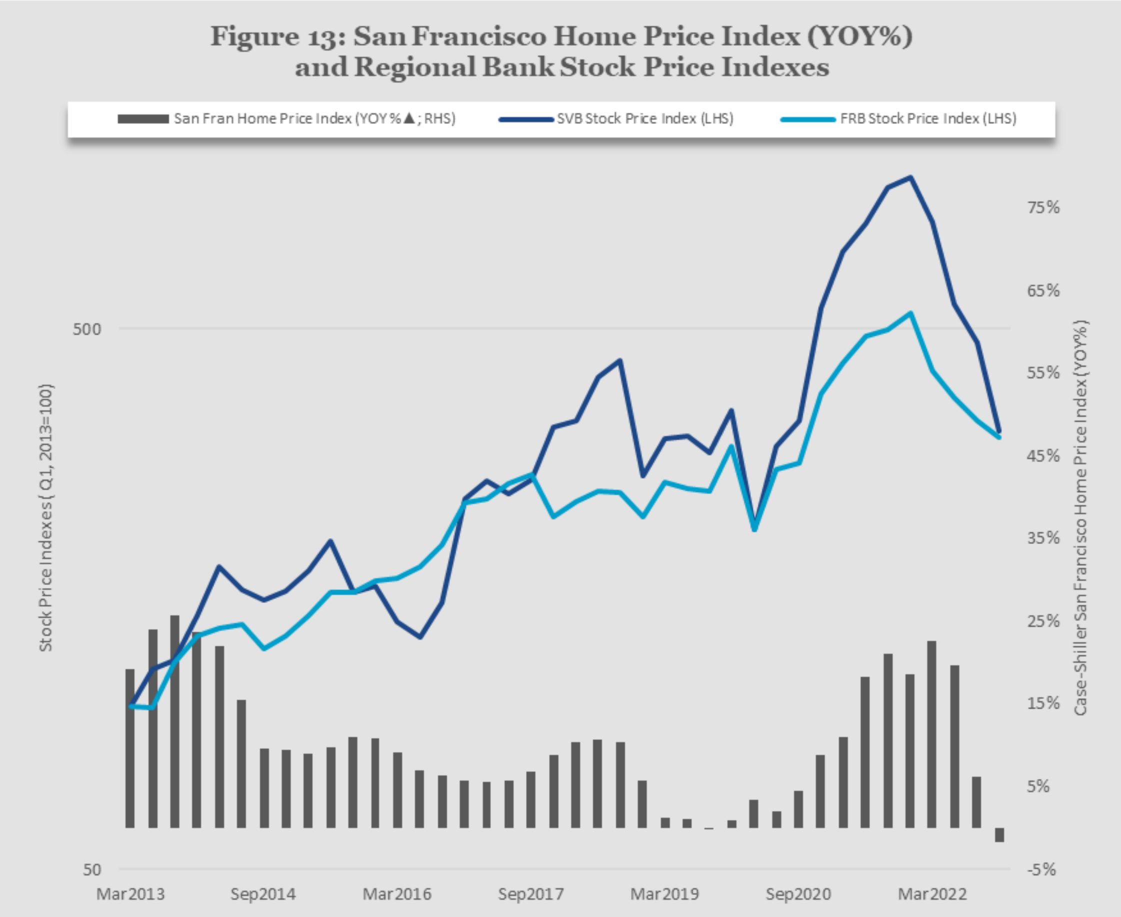
So how does one bridge the gap between the relatively robust stock performance by some of these banks over the last decade, while at the same time they were often experienced deteriorating, or relatively unimpressive, financial metrics?

How to make sense of the share price performance?

There are two broad categories of data which can be used to understand, at least partially, the robust stock price performance of these banks over the last decade. The first category can be thought of macro factors. The second category is items that are more bank specific.

The macro category includes things like trading multiples. In a period of low interest rates, it is not surprising to see bank stocks trade at increasingly inflated multiples of their underlying financial and operating metrics. At the onset of the 2020 pandemic we encountered not only historically low nominal interest rates (and very low real interest rates) but also the return of quantitative easing; on a scale that made 2008 pale in comparison. Market multiples like price / tangible book value not only doubled from their value at the start of the pandemic, but they also reached levels that are seen maybe every other decade (e.g. First Republic's price / tangible book value multiple reached 3x by late 2021).

In addition to very accommodative monetary policy, these stocks also trade in line with their underlying assets and/or related businesses. So, for example, First Republic and SVB traded to some extent as a “proxy” for San Francisco home prices (see Figure 13). SVB, with its concentrated exposure to the tech sector, also traded somewhat as a proxy for tech stocks. Prior to the tech stock sell-off in late 2021, SVB was awarded increasingly high market multiples by virtue, at least in part, to its association with the booming U.S. tech sector.



Source: NYSE, Nasdaq, Federal Reserve Board FRED database

Turning to the second category of company-specific issues, as noted earlier SBV materially outperformed its peers’ ROEs for many years. This factor clearly fed into SBV’s elevated market multiples, but what needs to be highlighted is the headline growth rates. Growth rates are naturally related to ROE but also tend to receive inordinate market focus of their own, from time to time (and particularly during times of expansionary monetary policy). There are several growth metrics that would have fed the stock price outperformance for these banks. From earnings per share growth to dividend per share growth. Revenue per share growth is worth examining in this case.

Markets like relatively high ROEs, they really like relatively high ROEs that are generated by relatively high revenue growth; most investors are not enamoured with high ROEs generated by low growth businesses. While SVB was generating market-beating ROEs it was also delivering revenue per share growth (YOY%) of 20% to 30% on a regular basis. All of which contributed to its material stock price outperformance for much of the last decade. Not coincidentally, when SVB’s revenue per share growth rate started to decelerate rapidly (Q3, 2021), and then eventually turn negative (Q3, 2022), its stock started to lose its glow.

First Republic wasn’t in the same league as SVB in terms of revenue per share growth. However, when its stable circa 10% ROE – not impressive relative to its insured bank peers perhaps, but a stable ROE has its own appeal to certain large investors classes – is combined with its circa 10% revenue per share growth for the last decade, a large degree of its stock price outperformance can be explained. Despite underperforming its peers on financial metrics. After the 2020 pandemic led to monetary policy easing, First Republic’s revenue per share growth rate was consistently 15% to 20% YOY at a time when zero interest rates made growth of that scale even more attractive.

As previously mentioned, Signature Bank was a stock price laggard for much of the decade. However, its stock price did increase 3x from the onset of the 2020 pandemic and a key factor in that market repricing was that its revenue per share growth rate, like First Republic, started growing at 20+% until late 2022.

When both categories of data (macro and bank specific) are combined it may be easier to comprehend why these bank stocks performed so spectacularly for part, or most, of the last decade, despite a number of concerns related to underlying financial and/or operational performance.

Poor (relative and absolute) financial metrics are not the only thing that should have been taken into account by the markets when focusing on growth. It is also important to consider the risk profile supporting the growth.

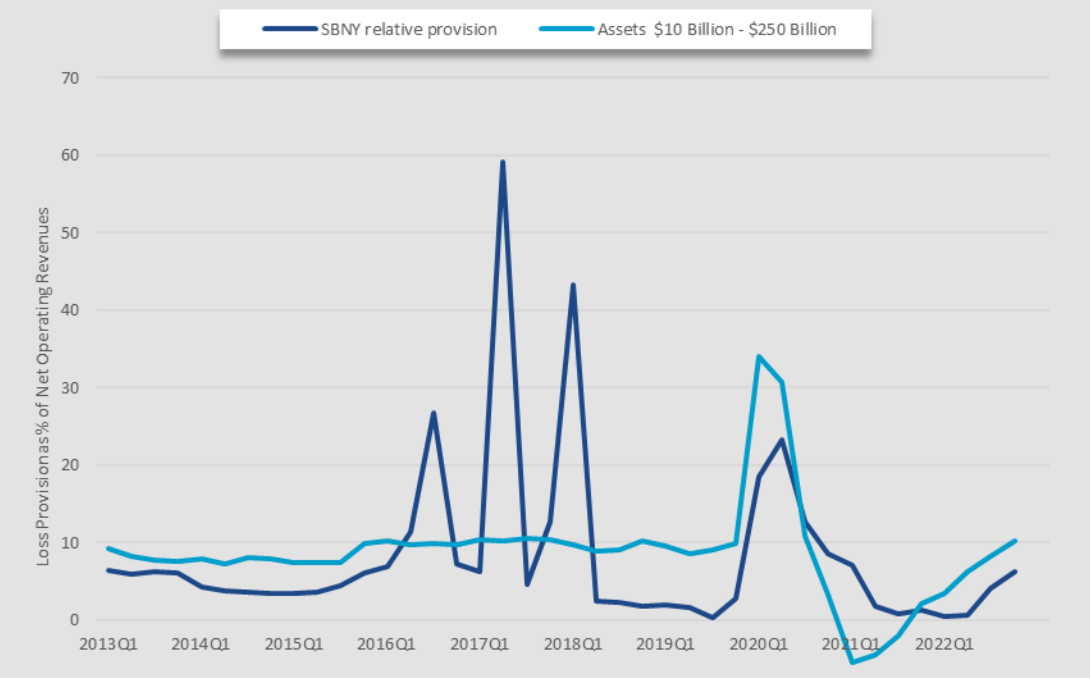
Risk-adjusted performance

The low net interest margins of these banks for much of the last decade was highlighted earlier. This strategy is inherently risky because a portion of the company's growth is directly attributable to its lack of pricing power. If investors start to expect, as they would have in the case of SVB, ROE to continue at above 20%, what happens to your ROE when you start to bring your net interest margin closer to your peers? How much growth will disappear once you stop "buying market share"? And, as discussed above, all three of these banks had, with very few exceptions, materially lower net interest margins than their peers.

The more material risk factor for a commercial bank is its treatment of loan losses. When the relative loan loss provision for these banks is compared to insured bank peers it becomes clear that these failed banks took a more aggressive approach to loan loss provisioning. (All loan losses are measured for this purpose as a percentage of net operating revenue to ensure consistency.)

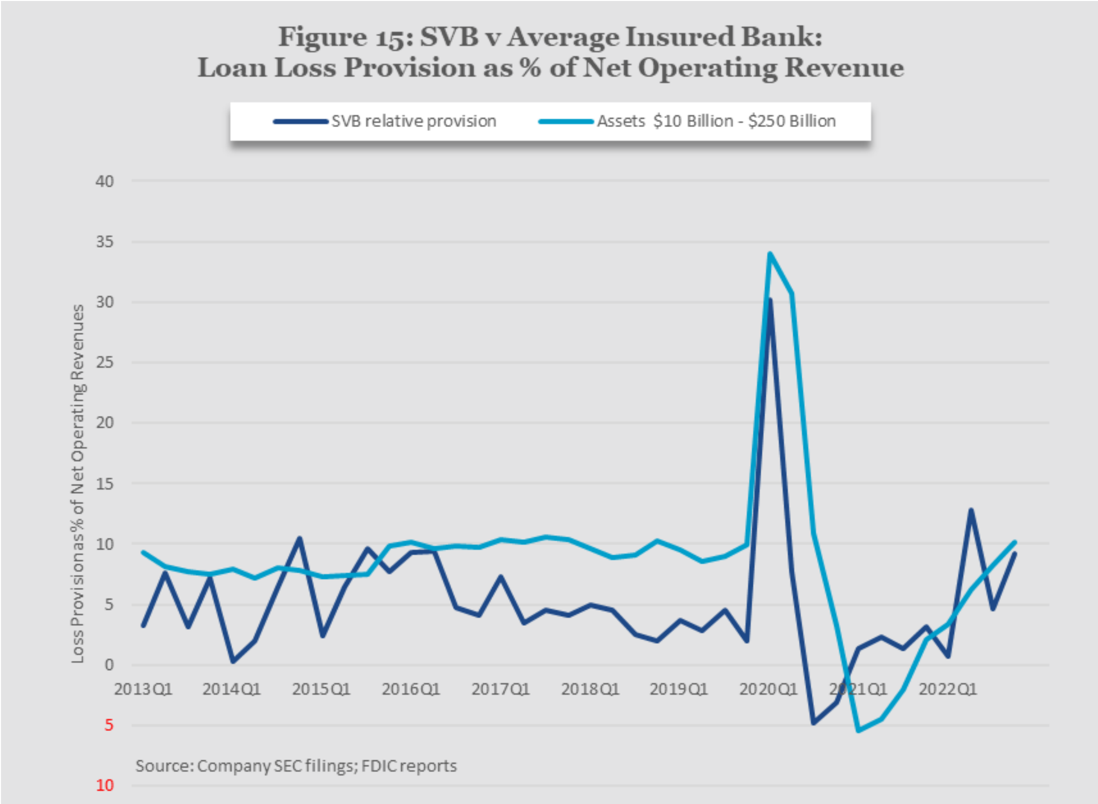
Signature Bank, with its periodic loan write offs, would, as expected, periodically boost its loan loss provisions (again, as a percentage of net operating revenue) to cover the latest losses. However, outside of these periods, it consistently applied a lower loan loss provision ratio than its insured bank peers (see Figure 14). Not the kind of behaviour that might be expected from a bank that frequently encountered actual loan losses.

Figure 14: SBNY v Average Insured Bank: Loan Loss Provision as % of Net Operating Revenue

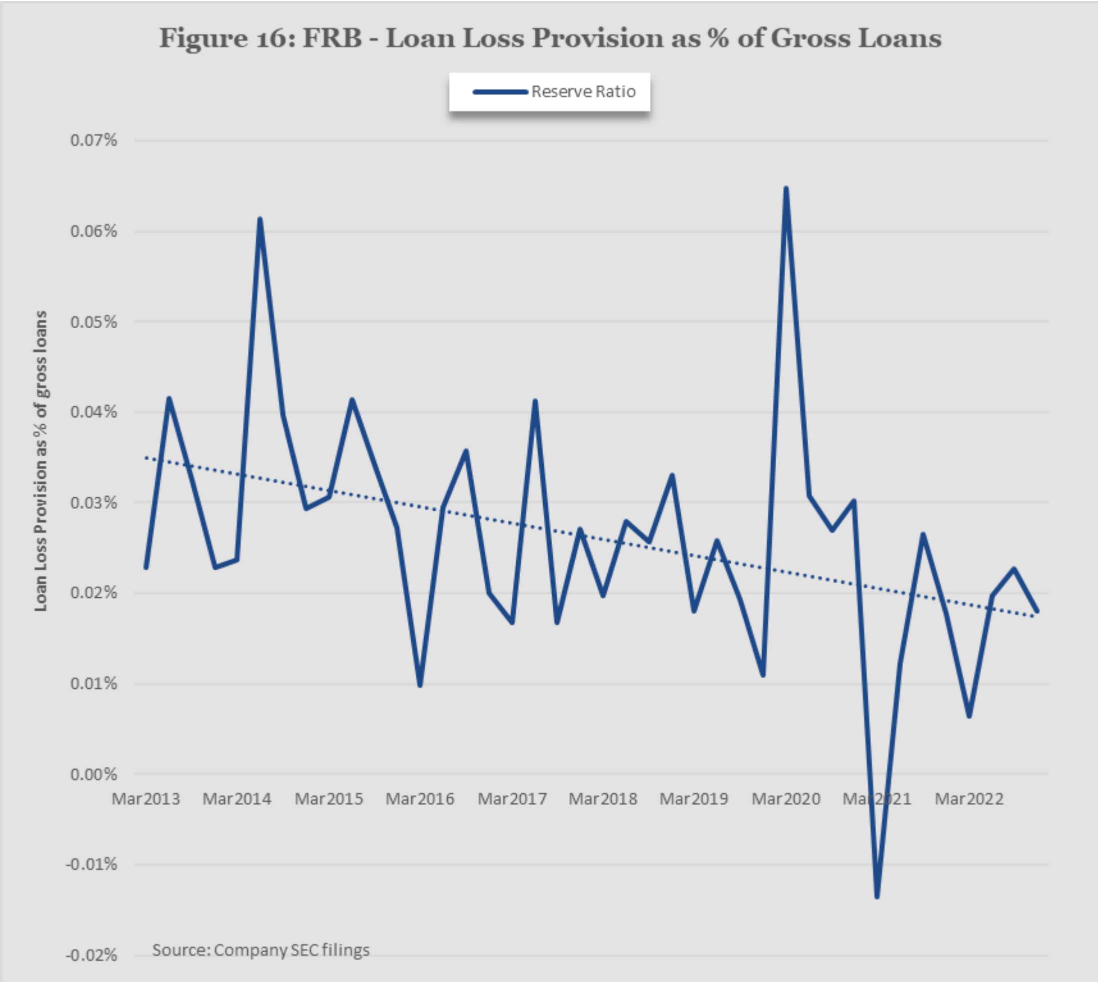


Source: Company SEC filings; FDIC reports

SVB, in contrast, made loan loss provisions that were often comparable to its insured bank peers. However, during the period of its material ROE outperformance – 2017 to 2021 and with a brief exception at the start of the pandemic – it consistently made lower loan loss provisions than its peers (Figure 15). Half or even less than half the size of its peers (again, relative to their net operating revenue). This added to the risk of those ROEs; i.e. if SVB ends up encountering similar loan losses to its peers it would turn out that those ROE figures were, in hindsight, significantly inflated.



Perhaps the most fascinating of the three banks in this regard was First Republic. Its loan loss provision was fairly consistent for an entire decade. Even when its insured bank peers boosted loan loss provisions to 30+% of net operating revenue during the first quarter of the 2020 pandemic, FRB increased its provision to just under 7%; much the same level it applied in early 2014, a time with no pandemic, no recession and no housing price decline. More concerning perhaps, was that after average insured bank loan loss provisions began to climb quarter by quarter as long-term treasury interest rates commenced their ascent from circa 50 bps to over 200 bps, First Republic went in the other direction (see Figures 5 and 16). Its relative loan loss provisions during this period were consistently lower than before the pandemic.



This section started with an examination of why the stock prices of these regional banks should not have increased as much as they did. There were both macro (e.g. monetary stimulus) and bank-specific (e.g. revenue per share growth rates) reasons why the markets were willing to overlook financial and operating shortcomings and reward the stocks with historically elevated market multiples. However, once the risk-adjusted performance of that growth is taken into account, whether it is the impact of low net interest margins or low loan loss provisions, investors had plenty of reasons to question their elevated market multiples.

CEO pay

Overview

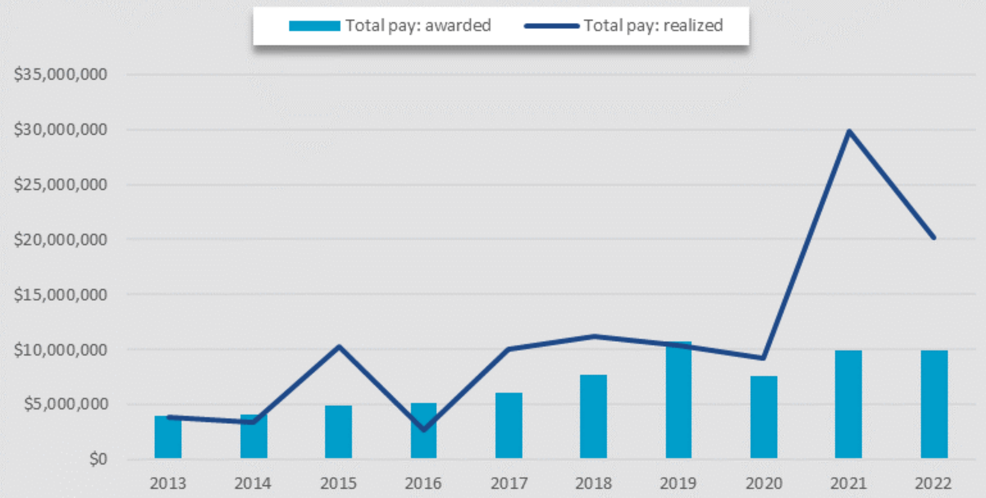
The pay of the three companies' CEOs over the decade prior to failure is shown in Figures 17, 18 and 19.[38]

The bars in these charts represent "awarded" pay while the lines represent "realized" pay. These are two different ways of thinking about how much an executive is paid. Most components of the CEO's compensation package – base salary, annual incentive (or bonus) and benefits – are calculated the same way for both awarded pay and realized pay. The component that is calculated differently is equity awards (share and option awards):

- Awarded pay uses an accounting method ("fair value") to determine the value of share and option awards in the year they are granted – regardless of whether they vest in a later year and regardless of the actual value at the time of vesting. This is the equity value found in the Summary Compensation Table (stock awards and stock option awards columns) in U.S. companies' proxy statements.
- Realized pay uses the value of equity awards realized during the reporting year; that is, the value realized on the exercise of share options, and the value of share (or restricted stock) awards on the day they vest. This is reported in a separate table in U.S. companies' proxy statements, usually titled "Option exercises and stock vested".

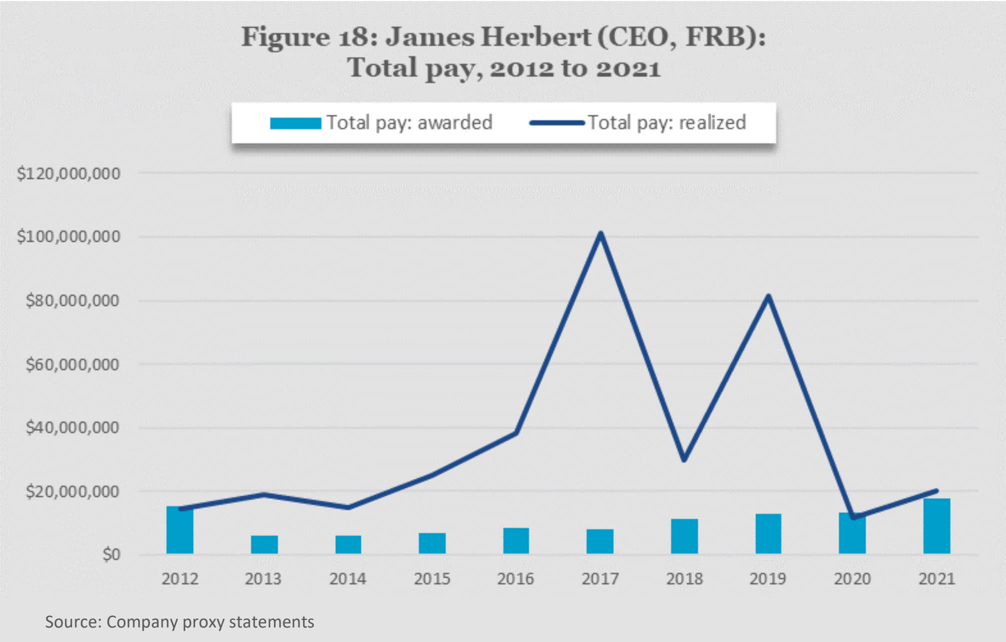
SVB's CEO, Greg Becker, saw his awarded pay increase fairly steadily from $4 million in 2013 to $9.9 million in 2022. Realized pay was generally similar or a bit higher than awarded pay for the first eight years, before spiking in the final two years: $29.9 million in 2021 and $20.2 million in 2022, driven by the vesting of option and share awards that had been granted when the company's share price was much lower.

Figure 17: Greg Becker (CEO, SVB): Total pay, 2013 to 2022

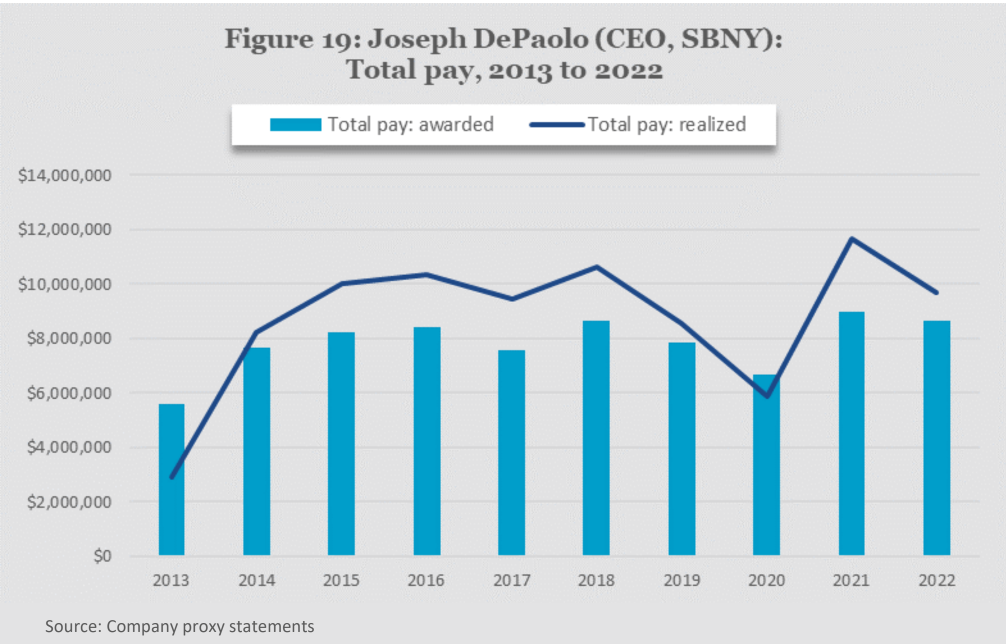


Source: Company proxy statements

First Republic's CEO, James Herbert, had an unusually large total awarded pay in 2012 ($15.1 million) due to a special award of restricted stock as part of extending his employment and non-compete agreements. He was awarded $6.2 million the following year and from there his awarded pay moved upwards more years than not, to $17.8 million in 2021. Mr Herbert's realized pay was, as shown in Figure 18, far higher than his awarded pay from 2013 through to 2019. In fact, his realized pay exceeded $100 million in 2017 and $80 million in 2019. This is discussed further in the Quantum section below.



As shown in Figure 19, Signature Bank's CEO, Joseph DePaolo, experienced the flattest pay profile over the decade. Nonetheless, his awarded pay rose from $5.6 million in 2013 to $8.7 million in 2022: a 54% increase across the decade despite financial and share-price performance that, as explained above, was modest at best for large parts of the decade.



Was pay aligned with performance?

This paper does not attempt quantitative (regression) analysis directed to the pay-for-performance question. It is clear from Figure 6 that SVB and First Republic outperformed their regional-banking peers in share-price terms for most of the decade. The CEOs of those two companies were compensated in line with that strong share-price performance:

- SVB's CEO annual (awarded) pay at the end of the decade was 2.5 times the value at the start of the decade; and
- First Republic's CEO annual (awarded) pay at the end of the decade was almost 3 times what it had been at the start of the decade.

On the other hand, Signature Bank underperformed the sector for almost 5 years until late 2020. And:

- its CEO saw his annual (awarded) pay fall in 3 of those 5 years; and
- his annual (awarded) pay at the end of the decade was "only" 54% higher than at the start.

Pay outcomes were also driven by ROE and, at First Republic and Signature Bank, by ROA. However, the hurdle rates of ROE and ROA performance set by First Republic's compensation committee were not stretching by comparison with ROE and ROA performance across the regulated U.S. banking sector generally (Figures 7 and 8). As another sign that First Republic's ROE and ROA hurdle rates were not particularly stretching: maximum performance was achieved in all 10 years of our study (2012 to 2021). In other words, the company achieved ROE and ROA performance above the upper end of the hurdle range every single year.

So, in summary:

- The component of total pay that was driven by ROE and (for two banks) ROA cannot unequivocally be described as pay-for-performance.
- The component of total pay that was driven by share-price performance was prima facie justified by performance.
- However, built into the excellent share price performance particularly over the period from March 2020 to early 2022 were risky management strategies that ultimately brought down the banks.

What about pay in the context of risk?

There are several examples of pay outcomes being decoupled from risk considerations.

SVB

One example appears in the Federal Reserve's review of SVB's failure, where the report highlights inadequate attention to risk management in SVB's executive pay decision-making:

> *"Supervisors concluded that SVBFG's incentive compensation decisions were primarily based on SVBFG's financial performance, with minimal to no linkage to risk management and control factors. For example, the team found that 'risk management deficiencies, identified by independent risk functions or through regulatory examinations, have not been meaningfully considered by [SVBFG's] incentive compensation decisions.' In relation to the 2021 year-end self-assessment of several executives—including the chief executive officer (CEO) and chief financial officer (CFO)—compensation and incentives remained unchanged with their cash bonuses and equity awards being based on return on equity (ROE), allowing for certain adjustments, and total shareholder return (TSR) despite the executives not achieving the objective of building out the risk-management program to LFI standards."*[39]

A second example appears in SVB's final proxy statement, published in preliminary form only a week before the bank failed. SVB's disclosures appear to indicate that, rather than making *downwards* adjustments to pay outcomes for 2022 to take account of management's strategy of loading up on investment securities just before the Fed started tightening monetary policy, the compensation committee may actually have made adjustments to protect management from the pay consequences of that strategy. This would be the opposite of risk-adjusted performance.

In determining return on equity performance for executive pay purposes, the SVB compensation committee had the discretion to *"adjust for out of the ordinary or non-recurring items, or other items that are subject to* *factors beyond management's control, such as investment securities gains and losses"*. The proxy statements covering 2016 to 2022 confirmed that the committee exercised this discretion to exclude the impact of *"certain gains or losses from the Company's investment securities"*.[40] The proxy statements covering 2016 to 2021 concluded with a caveat like this one: *"The impact of all 2021 exclusions resulted in a lower adjusted ROE that decreased the overall funding of the 2021 [annual incentive plan] pool."*[41] However, the proxy statement related to 2022 omitted the caveat. 2022 was the year when the Federal Reserve increased interest rates by 4.25% with devastating consequences for the value of SVB's investment securities. The omission of the caveat from the proxy statement leaves open the possibility that management's pay outcomes were shielded from this large hit to the value of the company's investment portfolio.

Signature Bank

In 2021 Signature Bank removed return on assets from its annual incentive plan performance measures and replaced it with pre-provision net revenue growth. This type of adjustment would, arguably, increase the risk profile of the business quite considerably. Management is not incentivised to care about how growth is funded (particularly, whether it is over-funded). Moreover, it is pre-provisioning, so the quality of revenue growth is suddenly not so relevant (depending on a manager's time horizon). Of note, Signature Bank's ROA lagged that of other banks starting in 2018.

After consulting with shareholders, ROA was added back to Signature Bank's performance measures for 2022. Albeit at a much lower weighting (11%) than was ascribed to ROA in 2021 and prior years (16.5% to 22% weighting, depending on the year).

Quantum

A Bloomberg article calling for clawbacks from the failed banks' ex-CEOs said that SVB's ex-CEO *"Becker got $38 million in the past four years, nearly $12 million in cash"*.[42] That's correct, in terms of awarded pay. However, if equity awards made in the year in question and which may vest in a future year are ignored, and the focus is instead on realized pay, which as noted earlier includes the value of options exercised and restricted stock that vested during the year, then Becker made almost $70 million in his final four years. Indeed, about 83% of that amount was from options and restricted stock.

On the other hand, James Herbert at First Republic made more than double that amount ($143 million) in realized pay in his final four years.[43]

Joseph DePaolo at Signature Bank made around $36 million in realized pay in his final four years.

Table 4 compares the realized pay of the three failed banks' CEOs, in the decade prior to their failure, with that of three huge global banks (with material commercial banking, asset management and investment banking operations) and three large U.S. commercial banks – all of which are significantly larger than SVB, First Republic and Signature Bank. Strikingly, in this group, the realized pay of James Herbert of First Republic Bank was second only to that of Jamie Dimon of JP Morgan Chase.

Table 4: CEO realized pay: Decade to 31 December 2022[44]

Group	Company	CEO total realized pay
Failed banks	First Republic	355,949,389
Failed banks	SVB	111,238,365
Failed banks	Signature Bank	87,302,346
Global	JPMorgan Chase	617,620,063
Global	Bank of America	216,390,765
Global	Citigroup	145,197,355
Large commercial	Wells Fargo	349,928,756
Large commercial	US Bancorp	214,956,558
Large commercial	Truist	150,306,166

Source: Company proxy statements

A substantial part of James Herbert's realized pay over the decade derived from one grant of share options. In July 2010, Mr Herbert was granted options to purchase 4.9 million shares at an exercise price of $15 per share. Just over two-thirds had performance hurdles; the remaining options were based on continued employment over four years. The exercise price of $15 per share was set by reference to the amount paid by the initial investors in the bank's upcoming stock market listing. The closing share price on the first day of trading on the NYSE (9 December 2010) was $27.92, meaning the options were $12.92 in the money from that day. Over the next nine years, the company's proxy statements disclosed total realized gains of $257 million as Mr Herbert exercised these options.

Some may say it is unfair to focus on realized pay, and that the focus should be on awarded pay, in line with the Summary Compensation Table that companies must include in their proxy statements. However, the equity awards column in that table is not a picture of what an executive has actually received in terms of equity value for the year in question. It is instead based on "fair value" – an accounting concept. Also, we note that companies sometimes themselves choose to highlight realized value over fair value. First Republic did so in its 2013 proxy:

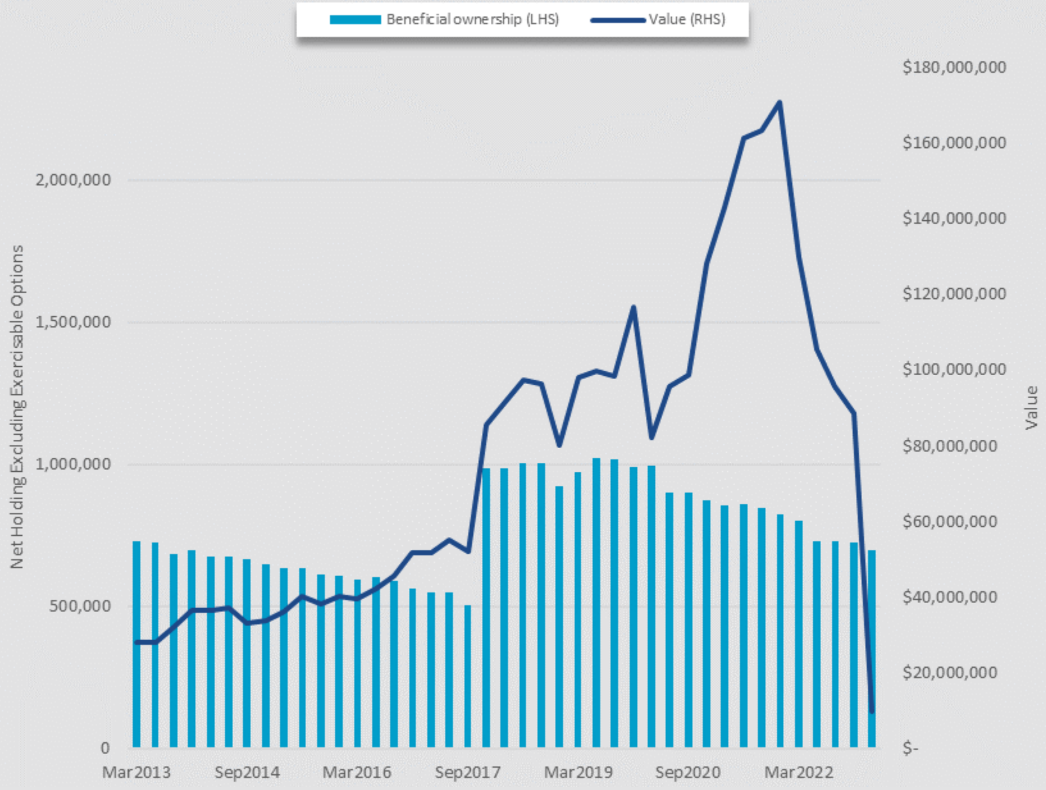
> *"First Republic's Compensation Committee believes that a more meaningful evaluation of the compensation of its senior executives, particularly with respect to the 2012 long-term equity awards, should focus on the value of such equity awards when, and if, they actually vest, and not on the total fair value of such multi-year vesting in the single year of grant."*[45]

But isn't equity-based pay exactly what shareholders want to see?

Yes, it is, but the significant sales of equity awards post-vesting by the CEOs of these banks highlights an issue for investors to consider.

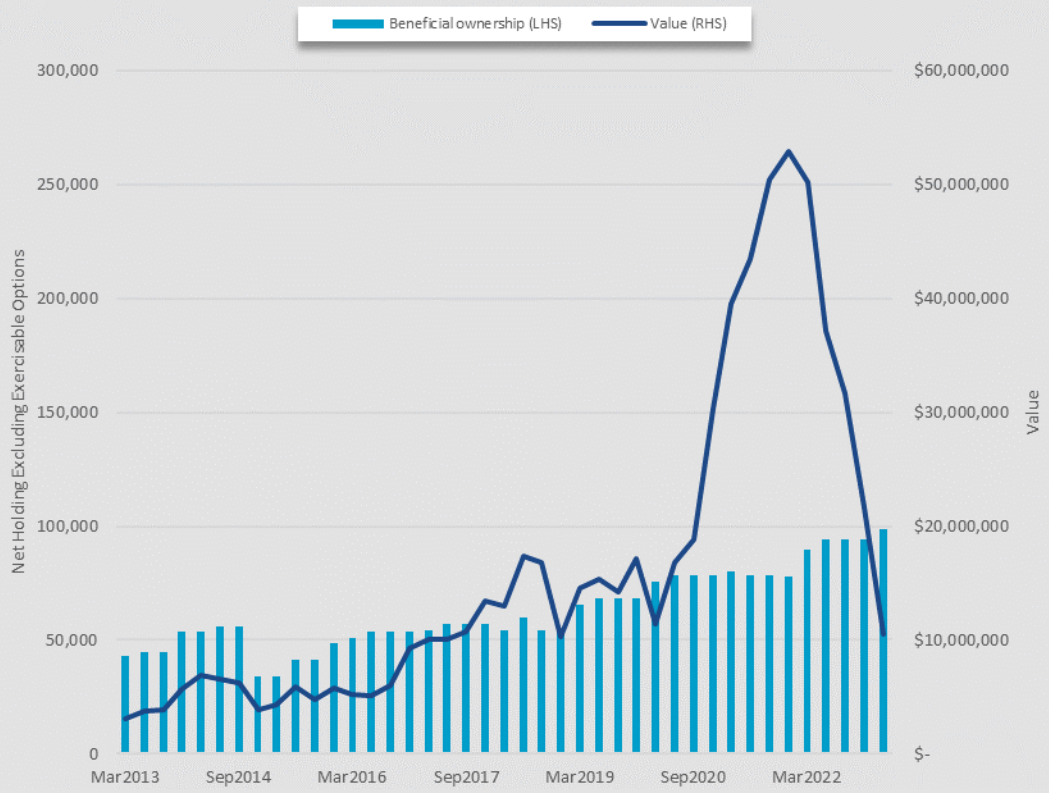
Figures 20, 21 and 22 show the shareholdings of the three failed banks' CEOs over the decade prior to bank failure.[46]

Figure 20: James Herbert (CEO FRB) Shareholding



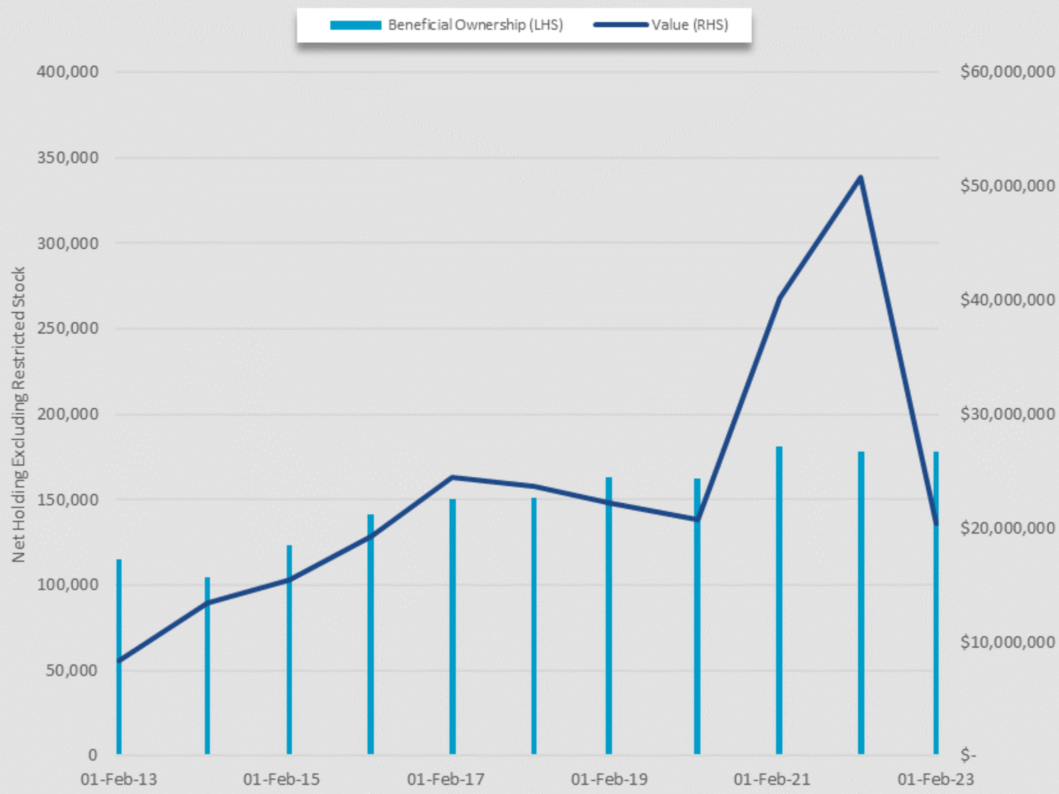
Source: Form 4 filings with SEC, NYSE

Figure 21: Greg Becker (CEO SVB) Shareholding



Source: Form 4 filings with SEC, Nasdaq

Figure 22: Joseph DePaolo (CEO SBNY) Shareholding



Source: Company proxy statements, Nasdaq

The value of the shareholding in each case increased considerably in the period to early 2022 – and most markedly from shortly after the Covid pandemic began – before falling in the final 14 months or so. However:

- for First Republic and SVB, the increase in value in the period to early 2022 was driven much more by an increasing share price than by an increase in the size of the shareholding;
- for example, the number of shares James Herbert owned increased only 10% between March 2013 and March 2022, but the value of his shareholding increased 389% because of a 345% increase in the share price over that period; and
- during that period, Mr Herbert acquired very substantial numbers of shares through the exercise of share options and the vesting of restricted stock awards – but he also sold or otherwise disposed of those shares in large quantities.[47] In total, he acquired 4.3 million shares through the exercise of options and vesting of restricted stock, yet his total shareholding during this period increased by only 72,160. In other words, Mr Herbert sold or otherwise disposed of 4.2 million shares.

This raises a question for investors: Is the current governance mechanism – the minimum shareholding requirement – still fit for purpose? (A minimum shareholding requirement for a CEO is commonly specified as "shares worth six times the value of base salary". That was First Republic's policy, and it translated to shares worth $5.4 million at the date of the company's last proxy statement.)

One of the justifications for making equity awards a significant part of a CEO's annual compensation is to align the interests of the executive with the company's shareholders. However, if a CEO can meet the minimum shareholding requirement relatively early in their tenure, and from that point dispose of most equity awards when they vest – shifting the funds into other assets and/or consumption unrelated to the company – then has the intent of equity-based pay been undermined to some degree?

Investors may wish to consider engaging with companies in relation to minimum shareholding requirements. One potential enhancement would be a requirement that a minimum percentage of each new vesting must be retained, after the shareholding has gone past the six-times-salary mark. Even if this minimum percentage was relatively low (say, 30%), that would still avoid the scenario where almost all additional shares are disposed of.

Clawback

Each of the failed banks had a clawback policy under which incentive compensation could be forfeited or recovered in certain circumstances:

- at SVB – (i) a material financial restatement; (ii) a material miscalculation of a financial metric used to determine the payment of a bonus or incentive award; or (iii) certain misconduct events;
- at First Republic – fraud or misconduct contributing to any financial statement restatements or other irregularities; and violations of non-solicitation or non-competition agreements or other actions adverse to the company; and
- at Signature Bank – compensation based on the achievement of financial results that were subsequently the subject of a material restatement; or if an executive engaged in fraud or serious misconduct which materially and adversely impacted the company's business.

In addition, the Sarbanes-Oxley Act of 2002 enables the SEC to order the reimbursement of bonuses and incentive-based compensation earned by the CEO and CFO in the year following the filing of a financial statement that the issuer is required to restate because of misconduct; and of any profits realized from the sale of securities during that period.

In the absence of a financial restatement, or serious misconduct coming to light, there seems only a low probability of a clawback from the senior executives of these banks. That raises an issue for consideration by the boards and compensation committees of other banks: in the simplest terms, bank failure should be added as a basis for clawback.

Issues related to the board

Inadequate oversight over risk management

A number of adverse findings about the board's role in overseeing risk management were made by the Federal Reserve in its report on SVB, and the FDIC in its report on Signature Bank.

For example, in relation to SVB's board, the Federal Reserve's overall finding was:

> *"The board of directors' … experience and capabilities were lacking for a firm that grew to over $200 billion in assets … SVBFG's growth far outpaced the abilities of its board of directors and senior management. They failed to establish a risk-management and control infrastructure suitable for the size and complexity of SVBFG when it was a $50 billion firm, let alone when it grew to be a $200 billion firm."*[48]

Almost a year before SVB failed, Federal Reserve supervisors had documented and communicated to SVB the following deficiency following an examination of the bank's governance and risk management:

> *"Matter requiring immediate attention (MRIA): Board effectiveness—The board's oversight over the firm's risk-management practices is not adequate and has contributed to an ineffective risk-management program. The lack of an effective risk-management program increases the potential that emerging risks may go undetected or root causes for internal controls deficiencies are not addressed."*[49]

A specific example is provided later in the report:

> *"SVBFG's risk appetite statement (RAS) set by the board, which sets limits within which the bank controls the risk, only included the [net interest income] metric and not the EVE [economic value of equity] metric. Further, the [net interest income] metric was included only as a down 100 bps 12-month ramp instead of a range of plausible shocks. Ramp scenarios gradually adjust rates and are less stressful than an immediate rate shock. The [net interest income] metric is a short-term view of risk. In the 2017 RAS, it states that managing interest rate risk within defined policy limits allows the firm to achieve a level of profitability that enhances shareholder value. It is clear that [net interest income] and profitability were the focus for SVBFG.*
>
> *As EVE was not part of the risk appetite, there is no evidence that the full board was aware of the status of the EVE metric or that it was breaching limits for years. Communication of the EVE limit breaches did, however, go to the Risk Committee of the board. The board of directors is responsible for overseeing the establishment, approval, implementation, and annual review of [interest rate risk] management strategies, policies, procedures, and risk limits. The full board should understand and regularly review reports that detail the level and trend of the institution's [interest rate risk] exposure."*[50]

In relation to Signature Bank, the FDIC report found:

> *"SBNY's management and board reaction to the bank's liquidity risk profile in 2018 provides one example of SBNY's failure to be proactive. SBNY's 2018 risk appetite statement indicated the board had a 'low' risk appetite as it related to liquidity. However, examiners identified several ongoing breaches in board-approved risk metrics. In one case in 2021, SBNY breached a 10 percent key risk indicator for digital assets-related deposit growth. Instead of curbing growth, SBNY increased the limit to 35 percent of total assets. The board should have ensured that SBNY was in compliance with its liquidity risk appetite and risk tolerance, and to the extent noncompliance was noted or identified, the board should have ensured appropriate actions were taken to return SBNY to the approved risk appetite. In addition, the board should have ensured other actions were taken to control and appropriately manage and monitor SBNY's increasing liquidity risks."*[51]

Not enough banking experience

In the light of the supervisory findings outlined above, we examined the boards of directors of the three failed banks and compared them with the boards of three U.S.-based global banks and three large U.S. commercial banks. We looked at board composition as at early 2022 – intentionally to capture the board skills and experience as the banks entered the critical year when the Federal Reserve hiked interest rates by 4.25%.

Table 5: Selected board characteristics

Board feature	SVB	First Republic	Signature Bank	Bank of America	Citi	JPM	Truist	US Bank	Wells Fargo
Board size	11	10	9	14	12	10	21	12	14
No. of Exec directors	1	2	2	1	1	1	1	1	1
Average NED age	64.9	64.7	61.7	68.3	63.3	62.6	66.2	59.3	64.0
NEDs aged 75+	1	3	1	0	0	0	0	0	0
Average NED tenure	8.3	15.1	6.6	8.7	6.7	8.6	8.7	6.3	3.0
Percentage female NEDs	50%	50%	43%	36%	55%	44%	35%	45%	38%
Includes racial diversity	✓	✓	✓	✓	✓	✓	✓	✓	✓
Includes NEDs with experience of bank's customer sectors	✓	✓	✓	✓	✓	✓	✓	✓	✓
Includes NEDs with risk management experience	✓	✓	✓	✓	✓	✓	✓	✓	✓
Includes NEDs with finance experience	✓	✓	✓	✓	✓	✓	✓	✓	✓
No. of NEDs with executive experience in banking	0	1*	0	3	2	1	1*	1	3
No. of NEDs with bank supervisor / regulator experience	0	0	0	0	3	0	0	1	0

Source: Company annual reports

* These NEDs' executive banking experience was gained at the bank in question (First Republic and Truist, respectively). i.e. Each remained on the board as an NED after retiring from their senior executive role at those banks.

As Table 5 shows, the boards of the failed banks were broadly similar to the boards of the larger banks across a number of dimensions including board size; executive / non-executive director split; gender and other diversity; average age; financial knowledge; and skills and experience relevant to the bank's customer base and to risk management generally.

The failed-bank boards did include some directors in the 75+ age demographic (including three over the age of 80) while the comparator banks' oldest directors were either in their 60s (JP Morgan and Citi) or 70-74.

First Republic's board also exhibited particularly long average tenure.

The boards of all three failed banks stand out compared to the other banks in one area: they lacked non-executive directors with experience working as bank senior executives during their career or as banking supervisors or regulators.[52]

The banks' proxy statements indicate that a number of non-executive directors had some experience in banking earlier in their careers, but not at senior executive level; some had experience as advisers to banks (e.g. law firm partners) or in audit firms with bank clients; others had significant finance experience through being chief financial officer for a large company, through venture-capital work or through a finance professor role; while one had extensive financial-sector knowledge as a legislator. None of this is equivalent to having former bank executives or former bank regulators on the board. People who have dealt with bank liquidity and risk management issues first-hand, either as a senior bank executive or a senior bank regulator, over an extended period of time.

All three bank boards exhibited gender, racial and other diversity. Some have said this indicates a distracting focus on ESG. Our point about insufficient non-executive directors with banking experience should not be construed as buying into that debate. To use an example, the former Group Treasurer of a global mining company was born in India and is female. She also held senior treasury roles at a major bank for almost a decade before joining the mining company. Her skills and experience suggest she would add considerable value as a non-executive director on a bank board while *also* adding to the board's diversity.

Or, to make the point more bluntly, the lack of executive-level banking skills and experience among the non-executive directors on these boards was evenly distributed among white male non-executive directors, white female non-executive directors and non-white non-executive directors.

Did the compensation committee take supervisor's adverse findings into account?

The U.S. Government Accountability Office report on SVB's failure confirms that the Federal Reserve Bank of San Francisco *"identified issues related to the concentration of SVB's deposits and funding structure as early as 2018"* and *"in 2021, [supervisors] identified key deficiencies in liquidity risk management for SVB, including modeling of its deposit outflows during stress and testing of its contingent funding plan"*.[53]

However, it is not clear from SVB's proxy statements for 2018 to 2023 that the compensation committee took these supervisory concerns into account in making executive pay decisions.

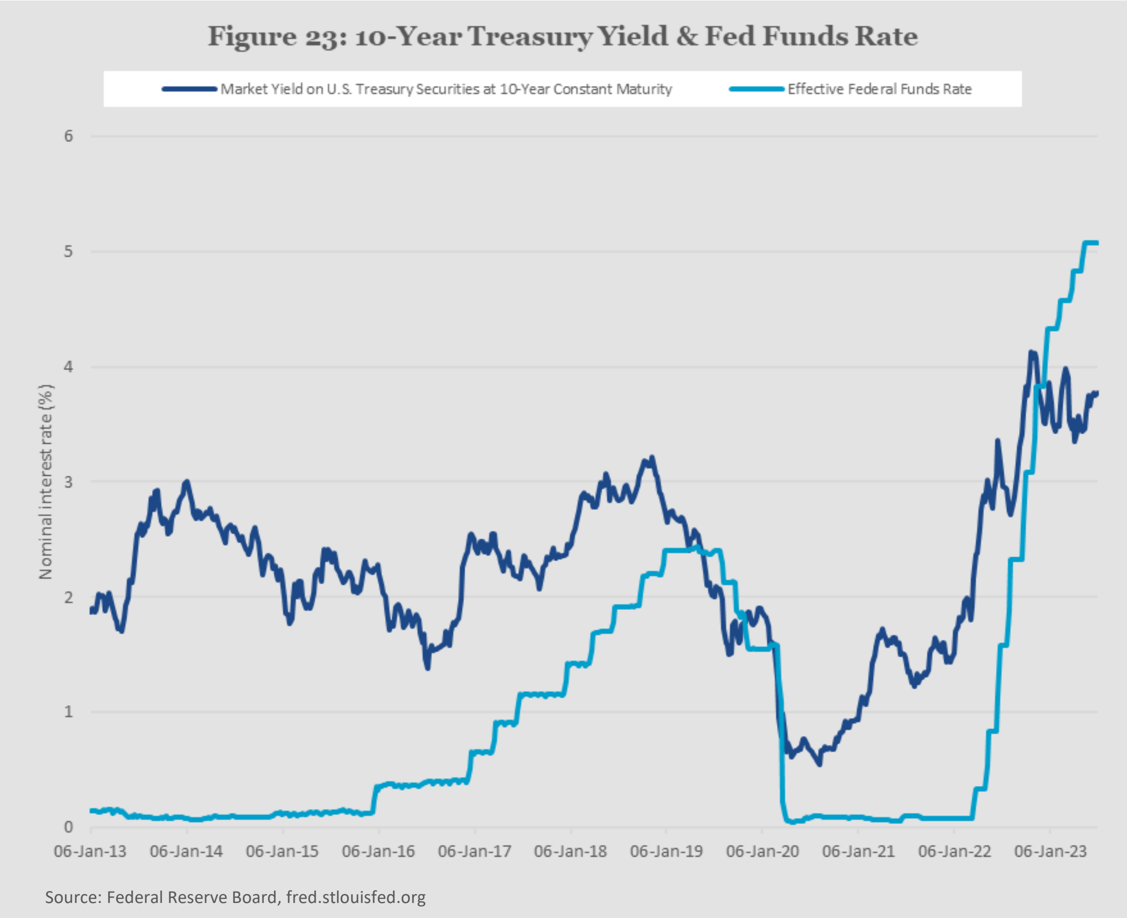
Conclusion

This paper has highlighted several matters that should have given investors pause, well before these three banks began hitting the headlines in March 2023. These range across aspects of financial and operating performance to risk management, executive pay and board composition.

The banks exhibited a relatively low net interest margin for significant parts of the decade prior to failure. And, for periods of time, all three banks took a more aggressive approach to loan-loss provisioning than the average FDIC insured bank. Aspects of executive pay could have been used as "flags" by investors to take a deeper dive into the risk profile of these businesses. And the boards of each bank were lacking in non-executive directors who, in their own careers, had experienced the complexities and nuance of banking either as senior bank executives or banking regulators.

Appendix

U.S. Federal Reserve interest rate changes



What performance measures drove CEO pay at the failed banks?

Each of the banks had tailored performance measures for determining CEO pay. There were some areas of commonality, such as a focus on ROE hurdles. However, even in this regard, the use of that financial measure varied greatly.

First Republic utilised relatively stable ROE and ROA hurdle rates in its compensation design (though, as mentioned earlier, these hurdle rates were exceeded 10 years in a row), while Signature Bank adjusted its target range with each new proxy filing. SVB was even more of an outlier with its primary focus on absolute ROE performance based on its own internal budget (including, for example, a number of noticeable adjustments to GAAP ROE definitions to exclude the impact of changes in Federal Reserve rate policy and changes in the value of its investment security assets) and ROE relative to its proxy peer group. Further differentiating these banks is the fact that they all assigned different relative weightings to their ROE and ROA hurdles when calculating executive compensation.

With these extensive differences in mind, SVB clearly prioritized ROE over other compensation measures while Signature Bank, for example, placed more emphasis on growth metrics (e.g. net revenue growth, EPS growth, deposit growth, loan growth and earnings growth). When you consider that Signature Bank gave express weightings to these growth metrics, as well as including several growth metrics in its "qualitative factors" for determining pay outcomes it was, in effect, giving significant emphasis to growth over returns.

As mentioned above, SVB utilised ROE measures both in relation to its internal non-GAAP budget and relative to its peer group. Even then, the compensation committee could adjust incentive pay outcomes taking into account a range of other aspects of performance during the year. Many of these other factors were growth related (e.g. in the 2022 SVB proxy statement, discussing the CEO's pay outcome for 2021, the list of factors taken into account by the committee included asset growth, loan growth, and client funds growth).

While Total Shareholder Return (TSR) is an almost ubiquitous concept in executive compensation design, it was not part of First Republic's criteria. And, at Signature Bank, it found a role only indirectly by virtue of:

1) its inclusion in a list of qualitative factors – which had a total 34% weighting in short term incentive payment awards, although TSR was only one of many factors to be considered in that set of factors; and
2) the use of a "relative TSR modifier" when determining long term incentive payment awards (essentially, if Signature Bank's TSR placed it in the 75th percentile of its proxy peers then the executive compensation award could be increased by 20%, while on the downside a 35th percentile TSR outcome would reduce the award by 20%).

SVB did adopt a more TSR-centric approach to performance metrics whereby, in recent years, 50% of long-term incentive payment awards were determined by relative TSR performance.

Clearly, there are some similar performance measures across these banks, although in practice their relative weighting and their method of application meant that each bank was very different. Even when applying traditional metrics like ROE and TSR.

Changes to performance measures and hurdle rates over time

Signature Bank and SVB had a predilection for modifying their performance hurdles every year. Often the adjustments were quite extensive.

Signature Bank, for example, modified both its ROE and growth targets and the relative weighting applied to each of its financial measures, every year from 2019 to 2023. It also modified its payout target (as a percentage of base salary) every year until 2021.

Similarly, SVB adjusted its TSR- and ROE-relative-to-proxy-peers ranking system almost every year. This meant that the slope of its relative TSR performance curve and relative ROE performance curve was shifting regularly. Changes made between 2016 and 2021 made it easier for executives to achieve a maximum outcome:

- From 2013 to 2016, SVB had to rank in the top 3 of its peer group for an executive to achieve the maximum pay outcome under the TSR / ROE relative performance measure;
- This changed to top 4 for 2017 to 2020;
- It changed again to top 5 for 2021; and

- It changed back to top 4 for 2022.

The company's proxy statements did not provide an explanation or justification for the changes.

While updating performance hurdles to take account of recent performance and future potential to ensure bank executives are appropriately incentivized with realistic and achievable targets, a number of the changes went beyond mere "updating".

For example, in 2021 Signature Bank removed ROA from its annual incentive plan performance measures and replaced it with pre-provision net revenue growth. This type of adjustment would, arguably, increase the risk profile of the business quite considerably. Management is not incentivised to care about how growth is funded (particularly, whether it is over-funded). Moreover, it is pre-provisioning, so the *quality* of revenue growth is suddenly not so relevant (depending on a manager's time horizon). Of note, Signature Bank's ROA lagged that of other banks starting in 2018.

After consulting with shareholders, ROA was added back to Signature Bank's performance measures for 2022. Albeit at a much lower weighting (11%) than was ascribed to ROA in 2021 and prior years (16.5% to 22% weighting, depending on the year).

Endnotes

[1] Federal Deposit Insurance Corporation (FDIC), *Bank Failures in Brief – 2023* https://www.fdic.gov/bank/historical/bank/bfb2023.html

[2] First Republic Bank, *Investor Presentation*, 13 January 2023, slide 17.

[3] FDIC, *FDIC's Supervision of Signature Bank* (April 2023) page 11.

[4] Figures as at 31 December 2022.

[5] The HTM unrealized losses are shown by the difference in height of the dark blue and dark grey bars.

[6] 'JPMorgan analysts warned about Silicon Valley Bank's $16B in 'unrealized losses' in November', *New York Post*, 12 March 2023.

[7] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 13.

[8] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 15.

[9] Written Testimony before the U.S. Senate Committee on Banking, Housing, and Urban Affairs by Gregory W. Becker, 16 May 2023.

[10] Federal Reserve Bank of St. Louis, *Velocity of M2 Money Stock*, https://fred.stlouisfed.org/series/M2V

[11] Federal Reserve Bank of St. Louis, *Unemployment Rate*; *Noncyclical Rate of Unemployment* https://fred.stlouisfed.org/series/UNRATE; https://fred.stlouisfed.org/series/NROU

[12] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 15.

[13] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 15.

[14] See, e.g., SVB, *2023 Proxy Statement*, page 55. From 2017 to 2020, the company's proxy statement said the Compensation Committee excluded the impact of changes in Federal Reserve interest rates.

[15] FDIC, *FDIC's Supervision of Signature Bank* (April 2023) page 2.

[16] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 11.

[17] FDIC, *FDIC's Supervision of Signature Bank* (April 2023) page 2.

[18] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 16.

[19] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) page i.

[20] 'Rescuing First Republic May Leave Bank Stockholders Stranded', *Bloomberg*, 22 March 2023.

[21] See, e.g., 'Why First Republic Bank Collapsed', *Wall Street Journal*, 1 May 2023.

[22] First Republic Bank, 10Q reports for quarters ending 31 March 2022 and 30 June 2022.

[23] First Republic Bank, *Annual Report 2022*, page 101.

[24] 'Explainer: Why First Republic Bank Failed and What JPMorgan's Deal Means', *Reuters*, 1 May 2023.

[25] First Republic Bank, *Annual Report 2022*, pages 40, 44.

[26] American Enterprise Institute, *National and Metro Housing Market Indicators*, https://www.aei.org/national-and-metro-housing-market-indicators

[27] Net operating revenue in Figures 5, 14 and 15 is calculated in line with FDIC methodology: net interest income plus non-interest income: *FDIC Quarterly*, 2023 Volume 17, Number 2, page 2.

[28] SVB, Annual Report 2019, page 93: "interest rate swaps that are part of our macro hedging strategy initiated in 2019 as part of the effort to reduce the impact of decreasing rates on [net interest income]".

[29] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) pages 63-64. (Emphasis added.)

[30] First Republic's 2019 and 2020 annual reports include reference to interest-rate lock commitments: "The Bank originates certain mortgage loans with the intention of selling these loans to investors. The Bank enters into commitments to originate the loans whereby the interest rate on the loan paid by the borrower is set prior to funding. The Bank's interest rate risk exposure to these commitments is not significant as these derivatives are economically hedged with forward commitments to sell the loans to investors." *Annual Report 2020*, page 179. There is no reference to these arrangements in the company's 2021 or 2022 annual reports.

[31] First Republic, *Annual Report 2022*, page 38.

[32] First Republic, *Annual Report 2022*, page 45.

[33] First Republic, *Annual Report 2022*, page 45.

[34] The average FDIC-insured bank figures used in the charts in this paper are not necessarily representative of the performance of the peer banks against whose performance SVB, FRB and SBNY compared themselves, e.g. for executive compensation purposes. Each used a bespoke peer group of around 15 companies which varied over the decade.

[35] In Figure 7, lower and upper target ROE figures are the threshold and maximum ROE levels that First Republic's compensation committee set for executive pay purposes.

[36] In Figure 8, lower and upper target ROA figures are the threshold and maximum ROA levels that First Republic's compensation committee set for executive pay purposes.

[37] In Figure 11, lower and upper target ROE figures are the threshold and maximum ROE levels that SVB's compensation committee set for executive pay purposes.

[38] The period covered by the First Republic chart is 2012 to 2021 (compared to 2013 to 2022 for the other two banks), because First Republic did not public a proxy statement covering 2022 before it failed.

[39] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) page 74.

[40] Indeed, for the years 2016, 2017 and 2018, the compensation committee also exercised discretion to exclude the impact of "changes in Federal Reserve interest rates (other than any changes already included in the annual budget)": see, e.g. SVB, *2017 Proxy Statement*, page 36. In other words, the committee exercised discretion to exclude the impact of Federal Reserve interest-rate changes not only as they impacted the value of investment securities but also other aspects of the company's financial performance.

[41] SVB, *2022 Proxy Statement*, page 32.

[42] 'SVB Pay Clawbacks Are Just. Now Try Collecting the Money', *Bloomberg*, 22 May 2023.

[43] Based on years 2018, 2019, 2020 and 2021. First Republic did not publish its proxy statement for 2022 before it failed and so the last year of executive pay data is for 2021.

[44] For First Republic Bank, the period covered is the decade to 31 December 2021 because the company did not publish its proxy statement for 2022 before its failure.

[45] First Republic, *Proxy statement 2013*, page vi.

[46] The data for James Herbert's and Greg Becker's shareholdings was obtained from SEC form 4 filings, with quarterly totals used in Figures 19 and 20. The method Signature Bank used to populate its form 4 disclosures made it difficult to use that data source, so annual shareholding totals were obtained from proxy statements.

[47] In terms of disposal other than a sale, Mr Herbert made some donations.

[48] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) pages 45-46.

[49] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) pages 47-48.

[50] Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (April 2023) page 62.

[51] FDIC, *FDIC's Supervision of Signature Bank* (April 2023) page 9.

[52] First Republic's board did include one non-executive director with prior senior executive banking experience; this NED had obtained her banking experience with First Republic and had been on the board since 1988.

[53] U.S. Government Accountability Office, *Bank Regulation: Preliminary Review of Agency Actions Related to March 2023 Bank Failures* (April 2023) page 15.