Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

Bank Turmoil Creates Compelling Investment Opportunities in Reg Cap

April 2023

Overview

Banks are under pressure from market forces, liquidity strains, and rising interest rates.

Seer expects growth in reg cap issuance -- at wider spreads and with improved credit protections.

Recent banking turmoil, including runs on deposits, liquidations, and forced mergers, has increased focus on banks and put severe pressure on the market for bank shares and debt instruments. In addition, rising interest rates have created mark to market pressure on longer duration assets while also increasing competition for bank deposits, straining bank liquidity. As a result, Seer expects over the coming 12-24 months:

1. Marked increase in issuance of Bank Regulatory Capital Relief ("reg cap") transactions[1] from an estimated $20 billion in 2022 to $25-30 billion or more for 2023 and 2024
2. Significantly wider pricing relative to the risk transferred
3. Increased structural protections for investors including:
   a. Thicker tranches
   b. Higher quality assets referenced
   c. Shorter replenishment periods and tighter criteria
   d. Structures including SPVs and other enhancements to protect investors from bank risk
4. Stronger alignment of interests between issuing banks and investors. In times of stress, banks rely on partnership with investors to meet their capital and risk management needs

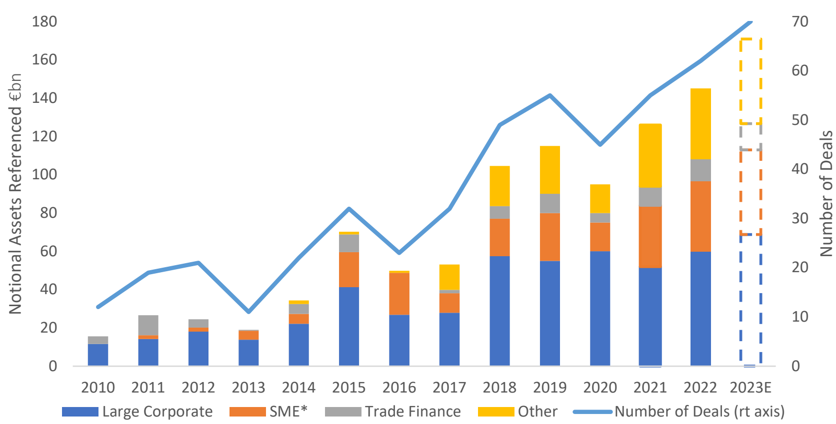
[1] Sometimes referred to as "Significant Risk Transfer" or "SRT", we will use the term "reg cap".

Reg Cap Market Poised for Continued Growth

The reg cap market saw record issuance in 2022, with estimated total risk placed of $20 billion, up from $15 billion the year prior. Banks globally seek the myriad benefits of reg cap transactions including capital relief, risk relief, freeing up credit lines to large clients, and establishing capital market benchmarks for pricing loans.

The reg cap market transfers risk on over €150 billion in loans annually (notional assets referenced) and is growing rapidly.

Figure 1: Reg Cap Referenced Asset Growth



** Small and Medium Enterprises*
Source: European Banking Authority, Seer Capital Research

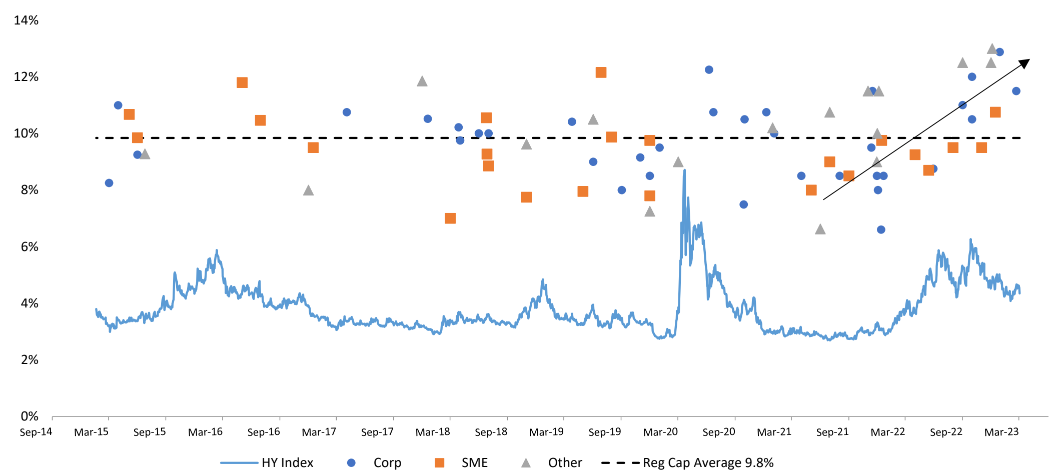
Growth in issuance can be self-perpetuating, for two reasons. One, first-time issuers spend considerable time developing systems and processes that can be easily repeated. Two, as banks in previously inactive jurisdictions such as Germany and Canada begin issuance programs, competing banks may feel pressure to follow suit.

Wider Pricing Trends

4Q 2022 already saw wider spreads for less risk (thicker tranches, shorter replenishment periods, and better portfolios).

As of the end of 2022, spreads were already 200-300 bps wider YOY, partly in sympathy with other credit products (the high yield index widened by 190 bps over the same period). Reg cap deals are floating rate, and coupled with the increase in LIBOR and SOFR rates, all-in yields reached mid-teens for many transactions. Banks usually have a hard limit on the spread they are willing to pay on a reg cap deal, as capital above a certain cost is not accretive. To stay under that limit, banks often make deals less risky by implementing more conservative structures and/or by tightening constraints on credits that can be included in the underlying portfolios. In 4Q 2022, we not only saw thicker tranches, shorter replenishment periods, and better portfolios, but also wider spreads.

Figure 2: New Issue Reg Cap Spreads vs High Yield Index



Source: Seer Capital Research

Bank turmoil will create even more reg cap supply in a challenging market.

The recent turmoil in the bank market, which saw the failures of Silvergate Bank, Silicon Valley Bank (SVB) and Signature Bank in the US, and of Credit Suisse (CS) in Switzerland, has placed increased pressure on banks to carefully manage capital and risk. At the same time, it has become more challenging and expensive for banks to issue equity / other capital instruments. As a result, Seer expects that banks will increasingly rely on reg cap transactions to raise capital and manage risk.

In spite of the inevitable suggestions that investors and allocators may look to avoid bank risk entirely, we are convinced that there will be compelling opportunities for more constructive investors. Additional supply amid a challenging market backdrop will create a "win-win" situation for reg cap investors, including wider spreads, more conservatively structured transactions, and more carefully selected reference portfolios. Smaller and riskier banks will implement structural protections to insulate investors from entity risk, and/or pay higher spreads as a further inducement.

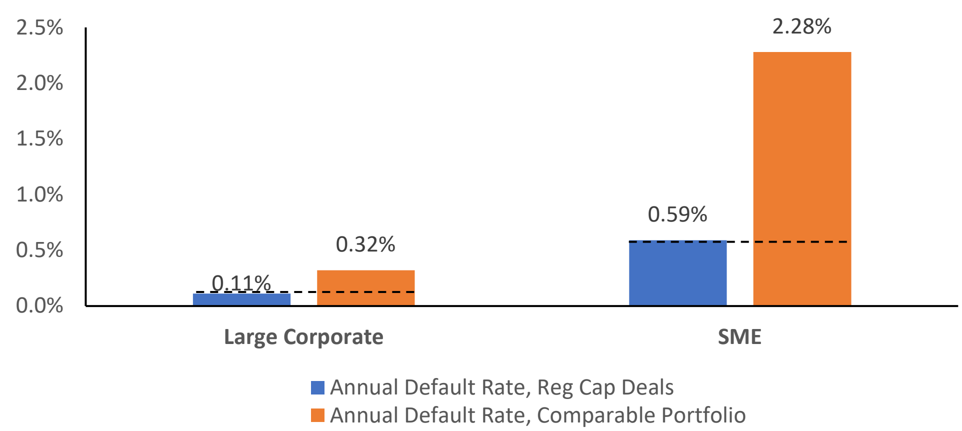
Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

Partnership Between Banks and Investors Leads to Favorable Credit Performance

Historically, assets referenced in reg cap transactions have experienced significantly lower losses than similar assets on bank balance sheets. This is partly attributable to constraints on assets that can be added to the reference pool, such as minimum ratings and exclusion of certain industries. Favorable credit performance is also driven by the mutual reliance between banks and investors on reg cap transactions. Banks carefully select assets for inclusion in reference portfolios, and a small, stable, and dedicated group of reg cap investors remain consistently available to help banks solve capital and risk management needs. In the current stressed environment, banks will be increasingly reliant on constructive partnerships with reg cap investors.

Reg Cap transactions reflect a partnership between banks and investors, and assets in reg cap deals have experienced lower losses than similar assets on bank balance sheets.

Figure 3: Performance of Reg Cap Deals vs. Comparable Exposures



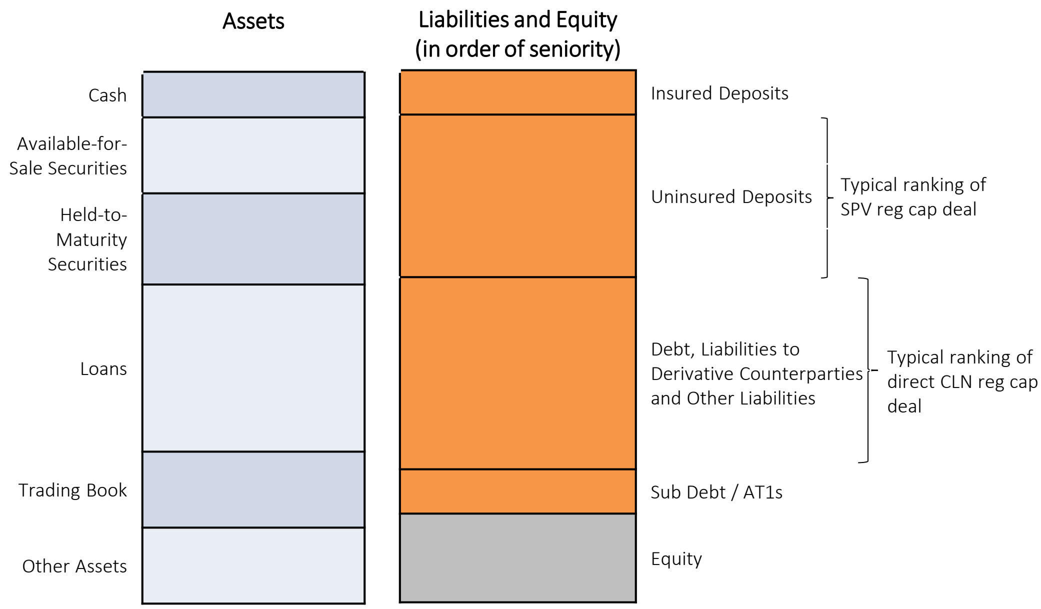
Source: September 2019 Discussion Paper on Synthetic Securitisation by the European Banking Authority (EBA). Comparable portfolio constitutes a comparable but broader portfolio of the bank. Based on a study of 70 transactions executed by 14 banks covering the period 2008-2019, including 26 large corporate transactions and 21 SME transactions.

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

Illustrative Bank Balance Sheet

Below we provide a diagram of an illustrative bank balance sheet as a reference for discussion about reg cap structures and about recent events at SVB and CS.

Figure 4: Illustrative Bank Balance Sheet



Source: Oliver Wyman, Seer Capital Research

Improved Reg Cap Deal Structures and Reduced Bank Counterparty Risk

The primary risk assumed and underwritten by reg cap investors is credit risk on the reference portfolio. Investors also assume some risk of the issuing bank, given that most reg cap deals are structured as direct obligations of the issuing bank or are linked to deposits at the bank. Recent market events have made investors more sensitive to these bank risks. Some reg cap investors choose to protect themselves from bank counterparty risk using market instruments such as CDS or equity options; however these can be costly, and also introduce basis / MTM risk of the hedging instrument.

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

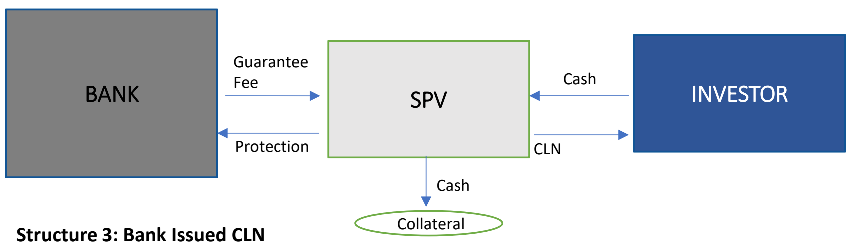
Reg Cap issuers can choose from 3 broad structures, with enhancement alternatives available for each.

Reg cap transactions can be issued using one of the three structural alternatives below:

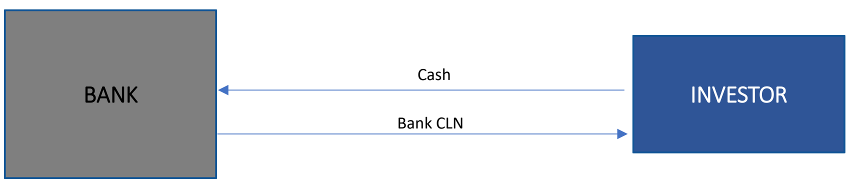
Figure 5: Reg Cap Structural Alternatives

Structure 1: Bilateral Guarantee

Structure 2: SPV-Issued Note



Structure 3: Bank Issued CLN



The table below describes each of the structures and highlights the benefits and drawbacks.

	1. Bilateral Guarantee	2. SPV-Issued Note	3. Bank Issued CLN
Description	Bank enters into credit default swap ("CDS") directly with investor. Except in case of insurers, protection seller generally fully collateralizes the CDS with a cash deposit at the bank	SPV (special purpose vehicle) issues CLN and sells credit protection to bank on the reference portfolio. SPV typically places cash on deposit with issuing bank	Bank issues CLN (credit-linked note) off its balance sheet, credit linked to reference portfolio, with the CLN holder also having direct credit exposure to the bank
Typical Users	Italian banks (as protection buyers), insurers and reinsurers (as protection sellers)	Canadian banks, European banks in jurisdictions where direct CLN structure less favored by regulators	Large European banks in many jurisdictions, small banks in the US
Benefits / Drawbacks	Form / liquidity of investment challenging for many cash investors	Banks incur costs / administrative efforts in implementing SPV structure	Simplest structure for banks
Investor Ranking in Bankruptcy	Pari passu with derivative counterparties, which typically rank pari passu with non-subordinated debt	Most favorable structure for investors, when cash is deposited with issuing bank investors rank pari passu with unguaranteed depositors	Pari passu with senior unsecured debtholders [1]

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

	1. Bilateral Guarantee	2. SPV-Issued Note	3. Bank Issued CLN
Possible Enhancements	Triggers to place the cash on deposit at another bank	Cash can be deposited with 3rd party bank, or invested in government securities, either at closing [2] or upon downgrade of issuing bank (usually to below investment grade)	Custodian can place the note proceeds on deposit with another bank or in government securities, either at closing or upon downgrade of issuing bank (usually to below investment grade)
Benefits / Drawbacks	Downgrade triggers provide little protection to investors, as bank failures usually occur rapidly	Downgrade triggers provide little protection to investors, as bank failures usually occur rapidly. Banks face higher capital charge for deposits at other banks. Short term government securities are generally low yielding, and managing government securities portfolio incurs administrative cost	Downgrade triggers provide little protection to investors, as bank failures usually occur rapidly. Banks face higher capital charge for deposits at other banks. Short term government securities are generally low yielding, and managing government securities portfolio incurs administrative cost

[1] Investors in Deutsche Bank issued CLNs are thought to rank senior to senior unsecured holders under German insolvency law
[2] In 2011-2012 Portuguese banks placed deposits with 3rd party bank at closing. Structure successfully tested on failure of Banco Espirito Santo in 2014

Rating downgrade triggers do little in the way of insulating investors from bank risk.

The limited value of rating triggers is underscored by the table below, which shows the ratings of three banks which failed recently, as of 90 days and as of 1 day prior to failure:

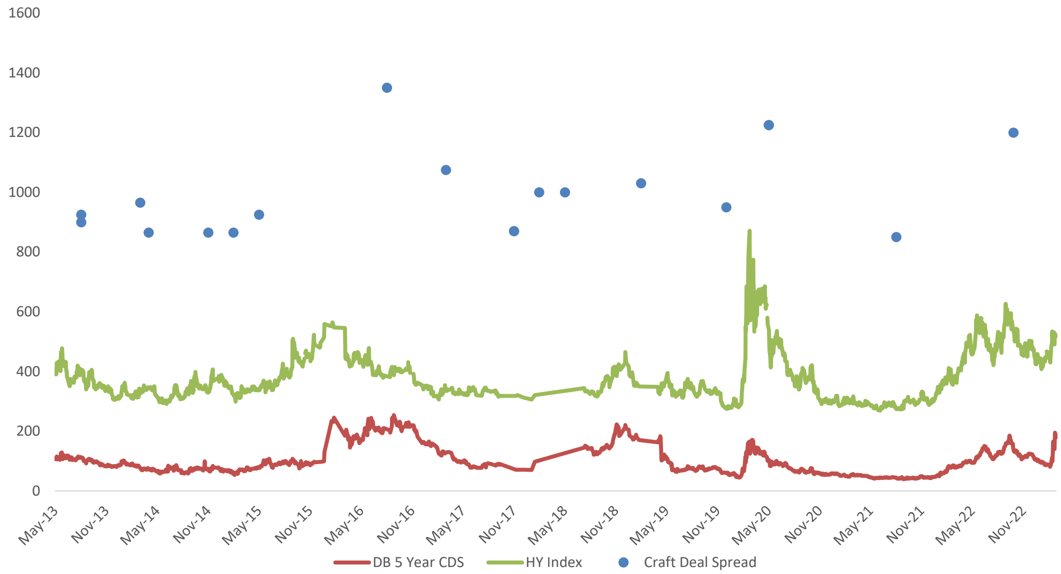
Bank	Ratings* 90 days before failure	Ratings* 1 day before failure
Signature Bank	Baa2/NR/BBB+	Baa2/NR/BBB+
SVB Financial	A3/BBB/NR	Baa1/BBB/NR
Credit Suisse AG	A3/A-/BBB+	A3/A-/BBB+

** Moody's/Standard& Poor's/Fitch*

Reg cap investors have historically demanded higher spreads at times of market stress, which have typically corresponded with (and triggered) concerns about banks. The chart below shows spreads on new issue reg cap deals issued by Deutsche Bank (DB) under their "Craft" program, which references large corporate revolvers, plotted against DB 5-year senior CDS Spread and the HY Index spread.

Historically, reg cap new issue spreads have reacted to market volatility and changing perceptions of bank risk.

Figure 6: New Issue Craft Spreads vs DB CDS and HY Index



Source: Bloomberg

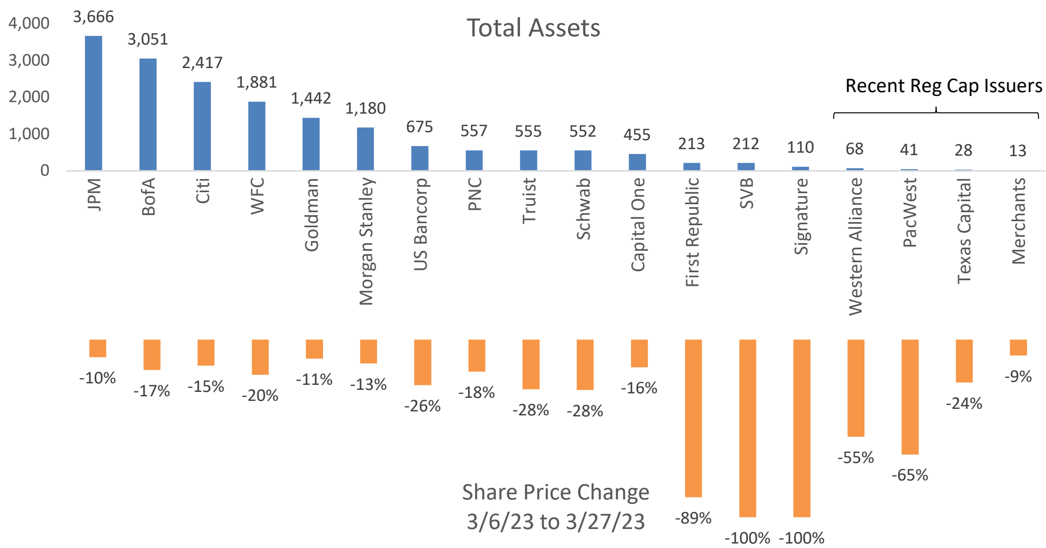
At Seer, we have confined our reg cap investing to deals issued by large banks which are leading players in their jurisdictions. Up until now, we have believed that most reg cap deals issued by smaller banks have not offered sufficient compensation for the additional bank counterparty risk. In light of recent events, we expect new, attractive opportunities in reg cap transactions issued by smaller banks with strong structural protections and higher risk premia.

<u>Banking Turmoil Started in the US</u>

The recent volatility began on March 8, 2023 with the collapse of Silvergate Bank, an $11 billion institution with significant exposure to cryptocurrency. However, the banking crisis was triggered by the downfall two days later of the much larger SVB, whose $209 billion of assets made it the second largest bank failure in US history. SVB's failure came about due to poor interest rate and asset / liability management practices (see SVB timeline in the Appendix.) SVB's failure had a knock-on effect on other small US banks. For example, investors withdrew cash from Signature Bank, leading it to become the third largest US bank failure ever on March 12; while First Republic and others remain under stress. As the chart below shows, the stress affected US banks of all sizes but was more acutely felt by smaller banks.

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

Figure 7: Total Assets and Share Price Change at Selected US Banks

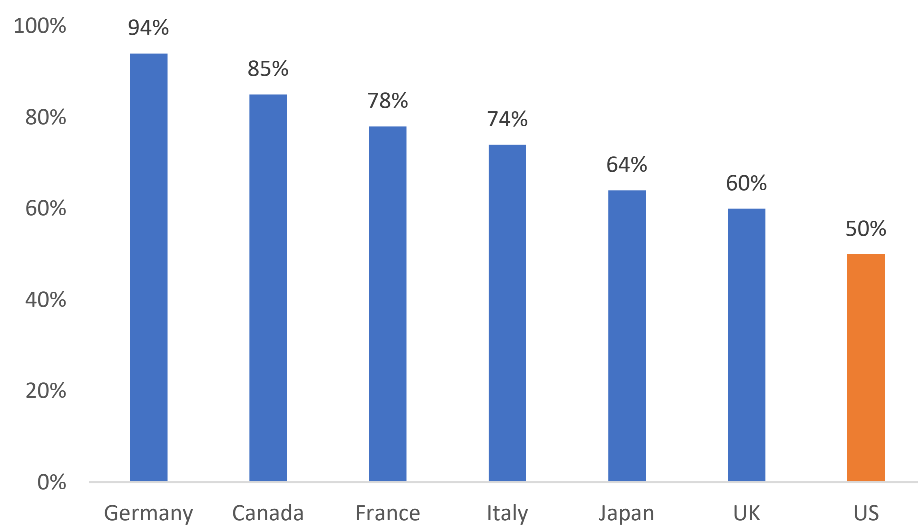


Source: Bloomberg

The US has many small, lightly regulated, relatively riskier banks, which have been in the crosshairs during recent market volatility.

The US banking landscape is highly fragmented, a relic of restrictions on banks operating across state lines which were only rolled back in the mid-1980s. The US had 4,706 commercial banks operating as at the end of 2022. Canada has fewer banks than the state of North Dakota alone, and Japan has 4% the number of US banks. The chart below shows the share of assets held by the top 5 banks in the US vs other key developed markets.

Figure 8: Top 5 Banks Share of Industry Assets



Source: Bloomberg

US bank regulators apply significantly more stringent standards to larger banks deemed "systemically important," including higher capital requirements, stress tests, and the requirement to produce a "living will" to provide for orderly dissolution. A 2018 law loosened regulations on smaller banks by raising the threshold for "systemically important" from $50 billion of assets to $250 billion. Many market participants believe that, had SVB been subject to the same regulatory standards as banks with more than $250 billion in assets, its failure could have been avoided.

Light regulation of small banks can incentivize uninsured depositors to move their money elsewhere.

SVB focused market concerns on smaller banks with a large proportion of unguaranteed deposits and those with significant duration exposure in held to maturity assets. However, depositors have become much more sensitive to the risks inherent in working with lightly regulated small banks, and many are moving funds to large banks or to money market funds. Regulators and government officials are seeking a solution to this problem, with some calling for guarantees on all deposits, regardless of size, for some period. The proliferation of so many small and lightly regulated banks may in fact present more risk to the financial system than the few large ("Too Big to Fail") institutions.

Crisis Expected to Trigger Growth in US Reg Cap Issuance

As of now, a significant regulatory divergence between US small and large banks is that only smaller banks can obtain regulatory approval to issue reg cap deals. The four small banks at the right of Figure 7 are the only US banks to complete reg cap deals recently. Unfortunately, the structure approved by regulators and preferred by US small banks involves the issuance of reg cap deals as direct credit linked notes, exposing investors to the unsecured credit of the bank in addition to losses on the reference portfolio.

Recent events could stimulate reg cap issuance by large US banks.

We have previously highlighted the disparate regulatory treatment of reg cap deals among large and small US banks here https://seercap.com/wordpress/media/2022/08/US-Banks-to-Fuel-Significant-Growth-in-Reg-Cap-Issuance.pdf. Some market participants have expressed concern that, in the current environment, US bank regulators will be too occupied to allow large banks to resume issuing reg cap deals. However, we spoke to officials at one large US bank in late March who are confident that they have addressed regulatory objections to specific structural features of reg cap deals, and the bank plans to issue a deal on a test basis. The bank plans to issue via the SPV structure, and assuming regulators do not object to the test issue, there should be many more banks looking to take advantage of a relatively low cost, non-dilutive source of capital. In general, the turmoil in the banking sector will lead to more focus on risk and capital management by banks using all possible tools.

Market Turmoil Spread to Europe

After SVB and Signature, contagion quickly spread across the Atlantic to CS, which has been hampered by a number of significant missteps recently. (See Appendix for a timeline of events leading up to the rescue of CS in the arms of UBS on March 19, 2023.) As part of the weekend rescue, CS shareholders received just over 40% of the market value of their shares as of the close of business on the previous Friday, but $17 billion of outstanding Alternative Tier 1 (AT1) bonds were written down to zero.

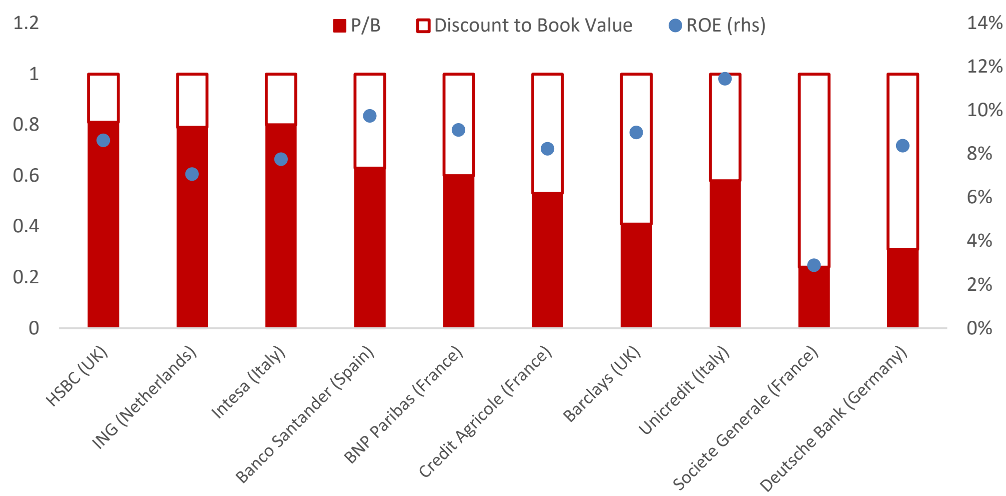
Most large European banks generate modest returns on equity, and consequently their shares trade at a discount to book value. Because capital markets penetration is deeper among US companies,

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

European banks tend to compete for low margin lending business, while their US counterparts can focus on more lucrative fee business. Share price discounts to book value have been exacerbated by fears of contagion from CS, and make raising new equity capital highly dilutive to existing shareholders.

European banks are generally less profitable than their US peers, and rely more on reg cap.

Figure 9: Price to Book and ROE of Large European Banks



Source: Bloomberg, as of March 29. 2023

CS was a large issuer of reg cap transactions. These are generally expected to be assumed by UBS.

It is worth noting here that CS was a regular issuer of reg cap deals, backed by Swiss SME loans, global corporate loans and leveraged loans. According to public filings, CS had $44 billion of total assets in synthetic securitizations as at the end of 2022. The market generally expects that UBS will assume the outstanding transactions, and on March 28 CS released a statement confirming that the Elvetia transactions, backed by Swiss SME loans, contain no change of control provisions that would trigger termination.

<u>AT1 Market Closed, Forcing Banks to Turn to Reg Cap</u>

Alternative Tier 1 instruments (AT1s) are a form of subordinated debt issued by European banks which count toward Tier 1 capital but not Common Equity Tier 1 (CET1) requirements. We provided a brief description of these instruments and how they fit into bank capital structures here https://seercap.com/wordpress/media/2021/02/Seer-Capital-Bank-Regulatory-Capital-Relief-White-Paper-Feb-2021.pdf. We believe recent events have confirmed our long-standing thesis that AT1s entail unquantifiable risks and that reg cap deals, which expose investors to losses on specific loan portfolios, represent much better risks.

AT1s were believed to be senior to equity in bank capital structures, so the writedown of the CS AT1 bonds to zero while the equity holders received a payment came as a shock to many investors and caused considerable disruption in the AT1 market. The CS AT1 documentation allows for a writedown upon a "Viability Event," under which "CSG (Credit Suisse Group) receives an irrevocable commitment of extraordinary support from the public sector… that has, or imminently will have, the effect of improving CSG's capital adequacy and without which, in the determination of FINMA, CSG

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

would have become insolvent, bankrupt, unable to pay a material part of its debts as they fall due or unable to carry on its business." The Swiss government passed an emergency ordinance implementing the rescue of CS by UBS on March 16, and FINMA later stated in a press release that they relied on both the Viability Clause and provisions of the emergency ordinance in writing down the AT1 securities. Following the writedown, CS AT1s were trading in the mid-single digits, suggesting some prospect for prolonged litigation and a settlement.

European banks can no longer count on AT1 issuance to meet a portion of their capital requirements.

Seeking to restore investor confidence in AT1s issued by banks in its jurisdiction, the ECB issued a statement clarifying the ranking of AT1s: "common equity instruments are the first ones to absorb losses, and only after their full use would Additional Tier 1 be required to be written down." Under this treatment the AT1s could not be written down if the equity received any payment. In spite of this statement, much uncertainty remains in the AT1 market, and spreads are likely to remain elevated for some time.

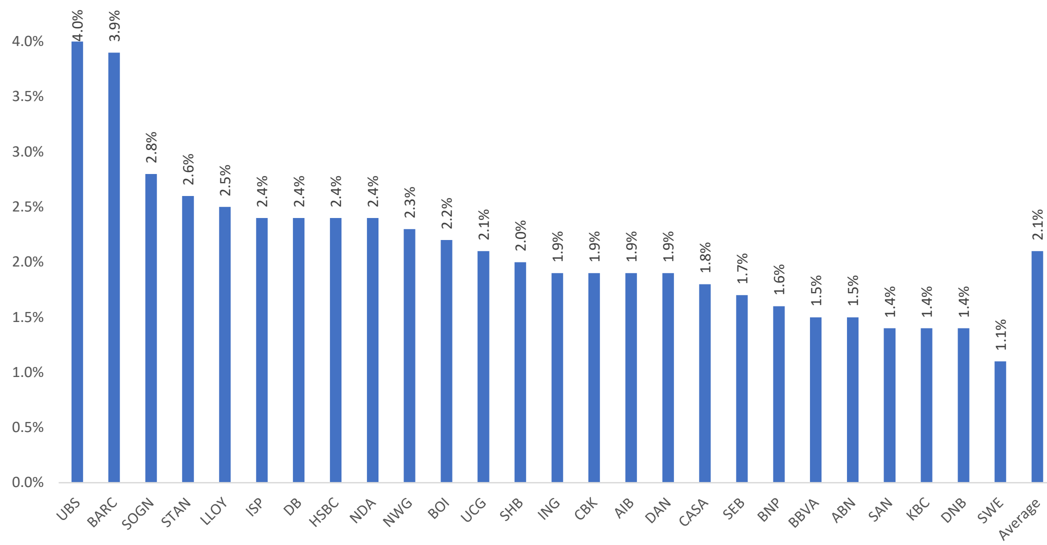
Figure 10: AT1 Index Yield History

European Banks Coco Tier 1 Total Return Index, Source: Bloomberg

Total outstanding AT1 debt is more than $250 million, with many European banks having relied on the instruments for a meaningful portion of the capital they are required to hold. AT1s issued by the banks in Figure 11 below account for more than 2% of risk-weighted assets (RWA) on average. Inability to issue AT1s will leave banks with a meaningful capital shortfall, for which they will need to turn to reg cap at least in part. The chart shows UBS to be the largest issuer of AT1s as a share of RWA, and they in particular will find it challenging to issue AT1s because of the CS precedent. UBS was previously a reg cap issuer but has long been absent from the market; we expect them to return.

Seer Capital Management LP
1177 Avenue of the Americas, 34th Floor
New York, NY 10036
(212) 850-9000
www.seercap.com

Figure 11: AT1s as % of FY22 Risk-Weighted Assets (RWA)



Source: Goldman Sachs

<u>Conclusion</u>

March, 2023 saw the second and third largest bank failures in the history of the United States and the failure of a major Swiss bank with a 167-year history and a sprawling international presence. While the initial crisis phase appears to have passed, risk of contagion and concerns about the banking sector are expected to persist for some time. Banks face heightened focus on risk and capital, but the current market assigns a punitive cost to many instruments banks would typically use to manage risk and capital.

Seer Capital believes that reg cap, which offers a range of structural alternatives that can be adjusted to meet market conditions, will become an increasingly essential tool for banks. Skilled and experienced investors who understand the structural alternatives and have established partnerships with banks should enjoy a growing opportunity to source exceptional risk-adjusted returns.

Appendix

Silicon Valley Bank (SVB) Timeline

Date	Item
2018	SVB had $49 billion in deposits
2020	SVB had $102 billion in deposits
2021	SVB deposits grew to $189 billion, as tech companies and venture capital firms continued to prosper in the aftermath of the pandemic. The influx of large deposits above the FDIC $250,000 insurance limit (over 90% of SVB deposits were uninsured at the time of failure) left the bank uniquely vulnerable to a run. SVB invested many of the new deposits in long term US government securities and mortgage-backed securities in an effort to earn carry in a low yield environment. The bank did not hedge the risk of rising interest rates.
2022	As at year end, SVB owned $91 billion of long-term bonds in its held to maturity book. According to a footnote to the bank's financial statements, the market value of the securities was $76 billion, but the bank did not recognize the $15 billion loss because the securities were held to maturity and therefore not subject to mark to market. The bank had shareholder equity of $16 billion as at year end 2022, as against $209 billion in total assets.
March 8, 2023	Moody's announced it was downgrading SVB from A3 to Baa1. SVB announced its intention to raise $2.25 billion in capital following the sale of securities at a $1.8 billion loss. The capital raise failed, triggering a race by depositors to withdraw funds.
March 10, 2023	The FDIC seized SVB's assets in the second largest bank failure in US history. Equity was written off, while all deposits, including those over the $250,000 FDIC threshold, were guaranteed to avoid a crisis of confidence of depositors in small banks.

Credit Suisse (CS) Timeline

Date	Item
March, 2021	Greensill, a supply chain finance provider, collapsed. Funds distributed by CS had $10 billion outstanding Greensill exposure at the time of collapse. CS suffered a loss of $1.7 billion, as well as significant reputational damage.
March, 2021	Archegos, a hedge fund heavily invested in technology companies globally, failed to meet a margin call and was forced to liquidate. CS lost $5.5 billion and suffered further reputational damage.

November, 2021	CS announced a $440 million restructuring to take place over 3 years, dividing the company into asset management, wealth management, the Swiss bank, and the investment bank.
October, 2022	CS announced a $4 billion capital raise, with Saudi National Bank becoming the largest shareholder at 9.9%. The bank also announced the spinoff of its capital markets and advisory activities.
November, 2022	CS announced an agreement to sell a significant part of its securitized products group to Apollo in an effort to de-risk the investment bank.
March 14, 2023	CS announced that it had "identified material weaknesses" in its internal reporting controls after the bank delayed the release of its annual results, scheduled for March 9, on request of the SEC.
March 15, 2023	Ammar al Khudairy, chairman of Saudi National Bank, when asked if the Bank would inject more capital into CS, said "The answer is absolutely not, for many reasons outside the simplest reason, which is regulatory and statutory." Saudi National Bank would have been subject to additional capital charges and regulatory requirements had it increased its stake above 10%. On March 27, al Khudairy resigned for "personal reasons."
March 16, 2023	CS announced that it would borrow up to $54 billion from the Swiss National Bank, in a failed attempt to shore up liquidity and restore market confidence.
March 19, 2023	After a weekend of negotiations, UBS announced an agreement to purchase CS for $3.2 billion, just over 40% of its market value as at COB on March 17. The Swiss National Bank provided $108 billion in liquidity assistance to UBS and the Swiss government provided a $9.7 billion guarantee for potential losses from assets taken over by UBS. Swiss financial markets regulator FINMA announced that $17 billion of outstanding Credit Suisse Alternative Tier 1 bonds, or AT1s, were being written down to zero. Swiss Finance Minister Karin Keller-Sutter later said "CS would not have survived Monday. Without a solution, payment transactions with CS in Switzerland would have been significantly disrupted, possibly even collapsed." As a result "we should have expected a global financial crisis" as "the crash of CS would have sent other banks into the abyss."