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SURVIVING THE STAMPEDE: MARKET-BASED RESOLUTIONS VIS-À-VIS OVERREGULATION

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This essay examines the contrasting resolution mechanisms for banking failures in the United States and Switzerland by analyzing the cases of Silicon Valley Bank, Credit Suisse, Signature Bank, and First Republic Bank. Factors contributing to their downfall are explored, such as SVB's excessive exposure to endogenous risk and Credit Suisse's poor governance and compliance blunders. The resolution mechanisms used in each country—deposit guarantees in the US and corporate law changes in Switzerland—are compared, highlighting the need for a balance between regulatory frameworks and market discipline to mitigate future crises. Effective risk management, robust governance structures, and strict compliance are emphasized as crucial components in ensuring a stable financial system.

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I. INTRODUCTION

This essay delves into the harrowing world of banking failures and the contrasting resolution mechanisms in the United States and Switzerland. The cases of Silicon Valley Bank, Credit Suisse, Signature Bank, and First Republic Bank are analyzed to shed light on the factors contributing to their downfall. SVB's excessive exposure to endogenous risk, coupled with a lack of proper duration risk hedging, resulted in its eventual bankruptcy. Credit Suisse, which suffered from poor governance, compliance blunders, and weak shareholder engagement, succumbed to a dangerous consolidation of multiple risk categories. Signature Bank and First Republic Bank found themselves as mere collateral damage, caught in the crosshairs of efficient capital markets that priced in the banks' operational idiosyncrasies and the lagged effect of monetary tightening on their profit margins.

The resolution mechanisms in the two countries differ greatly in their approaches. The United States leveraged the low cost of deposit guarantees to conduct a systemic arbitrage. Switzerland, on the other hand, shattered long-standing principles of corporate law and governance to promote an acquisition that created a virtual monopoly, exacerbating the "too big to fail" problem. These divergent paths lead to a crucial question: how can we best manage banking failures to mitigate the risk of future crises?

This essay argues that the answer lies in finding a balance between regulatory frameworks that promote prudent risk-taking and the discipline of market forces. Striking this balance will be critical in avoiding future banking failures and ensuring a stable financial system.

II. THE HIGH-STAKES GAME OF SPECIALIZED BANKING: NAVIGATING ENDOGENOUS RISK EXPOSURE

Silicon Valley Bank (SVB) (NASDAQ:SIVB) has always been an anomaly to some extent. According to a study of the Federal Reserve Bank of New York by Blickle, Parlatore & Saunders, specialized banks perform an important economic function: they promote efficient capital allocation through the outward transfer of knowledge economies.[1] The authors demonstrate that knowledge economies produce better loan performance for the lender and lower cost of funding for the borrower.[2] This creates value for both the supply side and the demand side of the economy.[3] According to a later study of the International Monetary Fund by Boot et al., specialization is rapidly becoming a general business model in the banking sector as it is increasingly needed to reduce operational risk.[4] The authors argue that the rise of financial technologies in particular is causing the vertical and horizontal disintegration of the traditional bank business model.[5]

SVB took the notion of specialization a step further. Its operational blueprint depicted something more peculiar than just another specialized bank. SVB was an "(eco)system bank".[6] As such, SVB was focused on a single industrial vertical and run in such a way as to address a homogenous

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1. KRISTIAN BLICKLE, CECILIA PARLATORE & ANTHONY SAUNDERS, SPECIALIZATIONS IN BANKING (2021).

2. *Id.*

3. Patrick Bolton, Xavier Freixas & Joel Shapiro, *Conflicts of Interest, Information Provision, and Competition in the Financial Services Industry*, 85 J. FIN. ECON. 297 (2007).

4. Arnoud W.A. Boot et al., *Financial Intermediation and Technology: What's Old, What's New?*, (Int'l Monetary Fund, Working Paper, No. 161, 2020).

5. *Id.*

6. Paul Gompers, *Silicon Valley Bank's Focus on Startups Was a Double-Edged Sword*, HARV. BUS. REV. (Mar. 17, 2023), https://hbr.org/2023/03/silicon-valley-banks-focus-on-startups-was-a-double-edged-sword.

demand for credit risk absorption.[7] These characteristics created endogenous risk.

Endogenous risk was theorized by Danielson and Shin and refers to risk arising from within the financial system itself.[8] It is often related to the actions and decisions of market participants and financial institutions, such as banks, which can originate or amplify systemic risk.[9] Endogenous risk can be caused by various factors, such as excessive risk-taking by economic agents, herd behavior, deficiencies in risk management systems, lack of transparency, information asymmetries, and the interconnectedness of financial institutions.[10] Examples of endogenous risks are market crashes, liquidity crunches, bank runs, and systemic financial crises.[11] These risks can have a significant economic and social impact, leading to value destruction for individuals and institutions, economic recession, and high levels of unemployment.[12] According to a work by Pasztor, the number of adverse events that occur because of endogenous risk is growing.[13] The author speculates that the ballooning of financial capitalism, the increase of speculation over investments, shadow banking, the use of derivatives, and the rise of financial intermediaries "too big to fail" amplify the probability of endogenous risks.[14] Because of this statistical fact, a later work by Shu has observed that banks choose a degree of endogenous risk exposure as a matter of strategy.[15] The author shows evidence that risk exposures on banks' balance sheets tend to be complementary to each other.[16] Arguably, before its bankruptcy, SVB had chosen a high degree of exposure to endogenous risk.

III. BREAKING THE MOLD: SVB'S IDIOSYNCRATIC AND HIGHLY CONCENTRATED BUSINESS MODEL

SVB was founded in 1983 by a group of entrepreneurs led by Bill

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7. Emma Stevenson, *Silicon Valley Bank: What Does Its Failure Mean for Markets and the Economy?* SCHRODERS (March 15, 2023), https://www.schroders.com/en- us/us/individual/insights/silicon-valley-bank-what-does-its-failure-mean-for-markets-and-the- economy/.

8. John Danielsson & Hyun Song Shin, *Endogenous Risk*, *in* MODERN RISK MANAGEMENT: A HISTORY, (Peter Field ed., 2003).

9. Hans Dewachter & Raf Wouters, *Endogenous Risk in a DSGE Model with Capital-constrained Financial Intermediaries*, (Nat'l Bank of Belgium, Working Paper, No. 235, 2012).

10. Jim Pasztor, *Endogenous Risk and Dangers to Market Stability*, 14 J. INVEST. CONSULT. 59 (2013).

11. Danielsson, *supra*, note 8.

12. Vincent B. Y. Gan, *Endogenous Risk and Its Impact on the Real Economy*, SSRN (2017) https://ssrn.com/abstract=2984454.

13. Pasztor, *supra*, note 10.

14. *Id.*

15. Chong Shu, *Endogenous Risk Exposure and Systemic Instability*, SSRN (2017) https://ssrn.com/abstract=3076076.

16. *Id.*

Biggerstaff, Bob Medearis, Roger Smith, Reed Taussig and Ken Wilcox,[17] who recognized a market demand for a highly specialized lender to serve the technology industry. Technology was beginning to emerge as a major economic force as the Silicon Valley cluster was consolidating into an ecosystem. At the time, existing banks were reluctant to lend to technology start-ups, which they considered too risky and unproven.[18] To get its start, SVB raised $3 million in venture capital from a group of individual investors, venture capital funds, and SBICs.[19] It immediately began offering banking services to small- and medium-sized companies in Silicon Valley.[20] In the beginning, SVB was nimble. It offered business accounts, credit lines, equipment financing, cash management, trade finance facilities, as well as working capital solutions tailored to the needs of expanding companies.[21] The bank's first loan was to Hybritech, a small-cap biotech company that was later acquired by Eli Lilly & Co. (NYSE:LLY) in a $300 million deal.[22]

SVB's distinctive business model differentiated it from other banks. First, it was vertically focused on the technology and biotech sectors: SVB's operations were built to meet the unique needs of high-growth companies.[23] Additionally, it had an idiosyncratic risk appetite: SVB was willing, if not keen, to make riskier loans than its competitors.[24] The bank understood that innovative companies often require significant upfront investments. Knowing success was not guaranteed, SVB was still willing to lend to start-ups with no operating history[25]. Finally, SVB's activities extended beyond financial services to include strategic consulting, business advisory, capital introduction, and other non-financial activities to help technology companies grow.[26]

SVB's particular characteristics also entailed specific risks—above all, concentration risk. SVB's business model, being heavily exposed to the

17. Peter Ryan, *The Story Of Silicon Valley Bank: The Risk Less Taken, and That Has Made All the Difference*, MEDIUM (Feb. 2, 2016), https://medium.com/@_peterryan/the-story-of-silicon- valley-bank-4873e1d49fa7.

18. Gene Teare, *In Their Own Words: What Silicon Valley Bank Meant to the Valley*, CRUNCHBASE (Mar. 14, 2023), https://news.crunchbase.com/venture/silicon-valley-bank-impact- investors/.

19. Julia P. Sulek, *Silicon Valley Bank Started with a Poker Game, Crashed with a Bad Bet*, THE MERCURY NEWS, (Mar. 19, 2023, 6:00 AM), https://www.mercurynews.com/2023/03/19/from-a-poker-game-to-a-market-jolting-collapse-silicon-valley-banks-four-decade-ride-reflected-techs-booms-and-busts/.

20. Ryan, *supra*, note 17.

21. Gompers, *supra*, note 6.

22. *See, e.g.*, Greg Johnson, *Lilly to Buy Hybritech in a $300-Million Deal*, L.A. TIMES (Sep. 19, 1985); Jonathan P. Hicks, *Hybritech Agrees to Bid by Eli Lilly*, N.Y. TIMES (Sep. 19, 1985); Nell Henderson, *Lilly's Fusion with Hybritech May Start Trend*, WASHINGTON POST (Oct. 6, 1985).

23. Gompers, *supra*, note 6.

24. E. Scott Reckard, *At Silicon Valley Bank, Risky Tech Start-ups are Lucrative Business*, L.A. TIMES (Aug. 8, 2015).

25. M. Sheryar, *Silicon Valley Bank: The Rise and Fall*, INSIGHTS (Mar. 21, 2023), https://insightss.co/silicon-valley-bank-the-rise-and-fall/.

26. Gompers, *supra*, note 6; Reckard, *supra*, note 24.

technology sector, meant that the bank's success was correlated with the performance of a single industry sector. Consequently, any downturns in the technology industry, absent a specific risk-hedging strategy, would harm SVB's operations. Concentration risk, dangerous enough alone, also exacerbated interest rate risk and liquidity risk.

Interest rate risk is an inherent threat across the banking sector. It is well established that changes in interest rates have a direct impact on banks' net interest and other banking income as well as on their ability to attract and retain deposits.[27] Hence, effective management of interest rate risk is a critical component of banks' financial management.[28]

Likewise, liquidity risk is a permanent menace. Liquidity describes the ease with which an asset can be converted into cash without negatively affecting its market price.[29] Because banks raise short-term funds to make long-term loans, they must be able to meet their funding needs in a timely and cost-efficient manner. Banking regulation imposes compliance and prudential rules aimed at insuring financial stability.[30] Compliance breaches and violations of the spirit, if not the letter, of prudential rules and are a recipe for disaster.

A. *Maturity Transformation, Liquidity Management and Accounting Regulations: When There Is No Place to Hide*

The core business of the banking sector is "maturity transformation."[31] In the ordinary course of business, banks collect short-term funds—such as customer deposits—and employ them to grant medium- or long-term loans. By transforming maturities (short-term to long-term), banks earn their profit margin.[32] The competent execution of this activity is crucial to the functioning of the banking system and its ability to provide long-term financing to the economy.

During the COVID-19 pandemic, expansionary fiscal policies and monetary easing coalesced to produce a dislocation in the liquidity markets:

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27. *See* Basel Comm. on Banking Supervision, *Interest Rate Risk in the Banking Book*, BANK FOR INT'L SETTLEMENTS (April 21, 2016), https://www.bis.org/bcbs/publ/d368.pdf.

28. *See* Basel Comm. on Banking Supervision, *Principles for the Management and Supervision of Interest Rate Risk*, BANK FOR INT'L SETTLEMENTS (July 14, 2004), https://www.bis.org/publ/bcbs108.pdf.

29. Will Kenton, *Understanding Liquidity Risk in Banks and Business, With Examples*, INVESTOPEDIA (Updated May 12, 2021), https://www.investopedia.com/terms/l/liquidityrisk.asp.

30. *See* Basel Comm. on Banking Supervision, *Principles for Sound Liquidity Risk Management and Supervision*, BANK FOR INT'L SETTLEMENTS (September 25, 2008), https://www.bis.org/publ/bcbs144.pdf.

31. *See* Pierluigi Bologna, *Banks' Maturity Transformation: Risk, Reward and Policy* (Int'l Monetary Fund, Working Paper, No. 45, 2018); *see also* Teodora Paligorova & Joao Santos, *Rollover Risk and the Maturity Transformation Function of Banks* (Bank of Canada, Working Paper, No. 8, 2014).

32. Thomas S. Y. Ho & Anthony Saunders, *The Determinants of Bank Interest Margins: Theory and Empirical Evidence*, 16 J. FIN. & QUANTITATIVE ANALYSIS 581 (1981).

start-ups and venture capital funds were flooded with cheap money.[33] Consequently, SVB saw a huge increase in the volume of deposits; client assets sitting in accounts reached $210 billion.[34] In 2021 alone, deposits increased from $100 billion to $190 billion.[35] Conversely, the bank could not increase its loan portfolio at a corresponding pace.[36] This lagging effect is well known in finance. A study by Baumol & Malkiel teaches that when liquidity floods the market, start-ups prefer to raise capital—spreading the risk among investors—rather than borrow money, which results in taking on more liabilities themselves.[37] A later study by Marsh provides evidence that companies appear to make their choice of financing instrument as if they have target levels of debt in mind.[38] These target debt levels are a function of company size, bankruptcy risk, and asset composition.[39] As start-ups are small-cap and carry a high bankruptcy risk, their rational choice is to raise equity as opposed to incur debt, given the opportunity.

As a result of the macro environment, SVB's mismatching of assets and liabilities left it with excess liquidity on its books. Academic studies have proven that the liquidity trap may have microeconomic effects.[40] One of these effects is that excess liquidity may be used to make value-destroying rather than value-creating investments.[41] In an op-ed for the Italian daily financial newspaper *Il Sole 24 Ore*, Pasquale Merella, FRM—a risk manager based in Milan—explained that SVB committed this very mistake.[42]

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33. Simon Stevenson, *The Flood of Money and Its Lasting Impact on Our Economy*, SCHRODERS (Jun. 17, 2020), https://www.schroders.com/en-au/au/adviser/insights/the-flood-of-money-and-its-lasting-impact-on-our-economy/.

34. Will Dunn, *Fear Grips the Markets: After Three US Banks Collapsed in a Week, the Global Financial System Is Facing a New Set of Systemic Risks*, THE NEW STATESMAN (Mar. 22, 2023), https://www.newstatesman.com/economy/2023/03/fear-grips-markets-banks.

35. C. Johnson, *Financial Fund Managers Downplay Wider Risks of SVB's "Deadly Combination"*, CITYWIRE (Mar. 23, 2023), https://citywire.com/asia/news/financials-fund-managers-downplay-wider-risks-of-svb-s-deadly-combination/a2411764.

36. Howard Marks, *Lessons from Silicon Valley Bank*, OAKTREE (Apr. 17, 2023), https://www.oaktreecapital.com/insights/memo/lessons-from-silicon-valley-bank.

37. William J. Baumol & Burton G. Malkiel, *The Firm's Optimal Debt-Equity Combination and the Cost of Capital*, 81 Q. J. ECON. 547 (1967).

38. Paul Marsh, *The Choice Between Equity and Debt: An Empirical Study*, 37 J. FIN. 121 (1982).

39. *Id.*

40. *See* Michael C. Jensen, *Agency Theory of Free Cash Flow, Corporate Finance, and Takeovers*, 76 AM. ECON. REV. 323 (1986); *see also* Rene M. Stulz, *Managerial Discretion and Optimal Financing Policy*, 26 J. FIN. ECON. 3 (1990).

41. Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

42. Pasquale Merella, *SVB, ecco perché non meritava il salvataggio: dov'era il risk management?* [*SVB, Here's Why It Didn't Deserve a Bailout: Where Was Risk Management?*] IL SOLE 24 ORE (Mar. 14, 2023), https://www.econopoly.ilsole24ore.com/2023/03/14/fallimento-svb-risk-management/; *see also* Chris Pandolfo, *"Silicon Valley Bank Committed One of the Most ElementaryErrors in Banking", Larry Summers Says*, YAHOO! FINANCE (Mar. 14, 2023), https://finance.yahoo.com/news/silicon-valley-bank-committed-one-135059554.html.

SVB invested its cash availabilities in an overweight bond portfolio, allocating as much as 57% of total assets in fixed-income securities, a figure more than double that of the average US bank, which stands at 24%.[43] In addition, as much as 78% of SVB's fixed-income exposure was in mortgage-backed securities (MBS) compared to an industry average of about 20%.[44] In 2008, excessive exposure to MBS was instrumental to the collapse of Lehman Brothers.[45] SVB's fixed-income portfolio, however, did not pose a clear and present threat unto itself. It could still have been mitigated through well-known risk management techniques.

Any fixed-income portfolio is exposed to interest rate risk: a rise in rates leads to a fall in prices and thus a depreciation in the notional value of securities. The inverse relationship between interest rates and bond prices is a well-established principle in finance:[46] When interest rates rise, the present value of future cash flows from a bond decreases, leading to a decrease in bond prices. Conversely, when interest rates fall, bond prices rise. For this reason, banks generally hedge their fixed income exposure through interest rate swaps (IRSs).[47] IRSs are derivative instruments that exchange fixed-rate cash flows for variable-rate flows. By entering an IRS, a bank agrees with a counterparty to exchange interest payments on an equal notional value in the same currency, either at a fixed rate for floating-rate bonds or at a floating rate for fixed-rate bonds. IRSs allow risk managers to adjust interest rate exposure and offset the risks posed by adverse movements.

From a related point of view, fixed-income portfolios are exposed to duration risk. Duration measures the sensitivity of the price of a bond to changes in interest rates.[48] Duration risk can be hedged against as well.[49] Duration hedging is performed by opening short positions in bond futures. Since the hedging transaction pays a higher yield at a longer maturity and absorbs a lower yield at a shorter maturity, this reduces the overall portfolio's yield.

Surprisingly, SVB did not follow the best practices. On the contrary, it maintained an unhedged bond portfolio of over $100 billion in notional

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43. *Id.*

44. *Id.*

45. Nick Lioudis, *The Collapse of Lehman Brothers: A Case Study*, INVESTOPEDIA (Mar. 10, 2023), https://www.investopedia.com/articles/economics/09/lehman-brothers-collapse.asp.

46. Dale Bremmer & Randall Kesselring, *The Relationship Between Interest Rates and Bond Prices: A Complete Proof*, 36 THE AM. ECONOMIST 85 (1992). *See, e.g.*, FRANK K. REILLY & KEITH C. BROWN, INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT (10th ed. 2012); FRANK J. FABOZZI, FIXED INCOME ANALYSIS (2d ed. 2007).

47. *See* Basel Comm. on Banking Supervision, *supra*, note 28.

48. *See* FREDERICK R. MACAULAY, SOME THEORETICAL PROBLEMS SUGGESTED BY THE MOVEMENTS OF INTEREST RATES, BOND YIELDS AND STOCK PRICES IN THE UNITED STATES SINCE 1856 (1938).

49. Basel Comm. on Banking Supervision, *supra*, note 28.

value with a duration of 5.7 years and an average yield of 1.63%.[50] An industry insider chimed in on the financial analysis website *Seekingalpha*: "It is absolutely amazing how exceptionally poorly constructed this portfolio has been, and how utterly inept its management has been here".[51] The numbers are easy to crunch. Taking into account a leverage ratio of 1:10, subsequent increase in rates by 450 basis points in 14 months would have resulted in implicit losses of $240 billion for such a portfolio, wiping out the bank's assets.

Abraham Lincoln famously said: "You can fool some people all the time, and all the people for some time; but you cannot fool all the people all the time." Yet SVP thought that it could dispense with risk management by exploiting an accounting artifice to engage in regulatory arbitrage.

In 2016, the Financial Accounting Standards Board (FASB) issued an update to its accounting standards for financial instruments.[52] One of the key changes introduced in this update was the way in which unrealized losses on securities held to maturity are accounted for in a bank's Tier 1 capital. Under the previous accounting rules, unrealized losses on securities held to maturity were deducted from a bank's Tier 1 capital. Tier 1 is the capital buffer that must be maintained against credit exposure to keep banks' leverage under control.[53] This deduction had the effect of reducing a bank's regulatory capital, which could limit its ability to lend and absorb losses. However, the new accounting rules introduced in 2016 changed this treatment.

Under the updated rules, unrealized losses on securities held to maturity are no longer counted against a bank's Tier 1 capital. Instead, they are recorded as a separate component of other comprehensive income (OCI) on a bank's balance sheet. This means that unrealized losses on securities held to maturity no longer reduce a bank's regulatory capital, and do not limit its ability to lend or absorb losses. The purpose of this change was to provide a more accurate picture of a bank's financial strength by separating the impact of market fluctuations on securities held to maturity from a bank's underlying financial performance. By allowing banks to exclude these unrealized losses from their Tier 1 capital calculations, the new rules provide

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50. Robin Wigglesworth, *How Crazy Was Silicon Valley Bank's Zero-Hedge Strategy?*, FINANCIAL TIMES (Mar. 17, 2023), https://www.ft.com/content/f9a3adce-1559-4f66-b172-cd45a9fa09d6.

51. Courage & Conviction Investing, *SVB Financial Group Reached For Yield, Failed, PerhapsA Canary In The Coal Mine*, SEEKING ALPHA (Mar. 13, 2023), https://seekingalpha.com/article/4587030-svb-financial-group-reached-for-yield-failed-perhaps-a- canary-in-the-coal-mine.

52. Financial Accounting Standard Board, *Accounting Standards Update 2016-13, Financial Instruments—Credit Losses (Topic 326)*, FASB.ORG (Jun. 16, 2016), https://www.fasb.org/page/PageContent?pageId=/projects/recentlycompleted/credit-losses-transition.html&bcpath=tf&isCompletedProjectsPage=true.

53. Adam Hayes, *Tier 1 Capital Ratio: Definition and Formula for Calculation*, INVESTOPEDIA (Nov. 20, 2020), https://www.investopedia.com/terms/t/tier-1-capital-ratio.asp.

more flexibility for banks to manage their balance sheets and maintain their lending activities, even in times of market volatility.

Unfortunately, SVP abused this rule and booked virtually its entire bond portfolio as "held-to-maturity" (HTM), thus avoiding mark-to-market accounting and hiding potential unrealized losses—or so it thought.[54] As demonstrated by University of Chicago Booth Business School's economist Eugene F. Fama, who was awarded the Nobel Memorial Prize in Economics in 2013 for his studies on the efficient capital markets hypothesis,[55] markets immediately price in all publicly available information.[56] In 2022, University of Chicago Booth Business School's economist Douglas W. Diamond and Washington University in St. Louis Olin Business School's economist Philip H. Dybvig, together with former Federal Reserve Governor Ben S. Bernake, were awarded the Nobel Memorial Prize in Economics for their studies on bank runs.[57] The Diamond-Dybvig Model postulates that maturity transformation activity leaves banks vulnerable to bank runs.[58]

Bank runs occur with ease. As soon as depositors become concerned about the solvency of a bank, they transfer their funds elsewhere. Since bank loans have longer maturities than deposits, banks cannot immediately call in their loans and are forced to execute fire sales, thus incurring heavy losses, to honor the demands of depositors.

SVB got a taste of this bitter medicine when it lost $42 billion in deposits on March 9 alone.[59] When it rushed to sell $21 billion of available-for-sale assets to Goldman Sachs (NYSE:GS), it posted a loss of $1.8 billion in one day.[60] The loss, along with a failed attempt to raise $2.25 billion through a capital increase,[61] rang the bell for the last round. For SVB, it was over.

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54. Wigglesworth, *supra*, note 50.

55. *The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2013*, THE NOBEL PRIZE (2013), https://www.nobelprize.org/prizes/economic-sciences/2013/summary/.

56. Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383 (1970).

57. *The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2022*, THE NOBEL PRIZE (2022), https://www.nobelprize.org/prizes/economic-sciences/2022/summary/.

58. Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POLIT. ECON. 401 (1983).

59. Austin Weinstein & Bloomberg, *$42 Billion in One Day: SVB Bank Run Biggest in More Than a Decade*, FORTUNE (Mar. 11, 2023), https://fortune.com/2023/03/11/silicon-valley-bank-run-42-billion-attempted-withdrawals-in-one-day/.

60. Echo Wang, Niket Nishant & Saeed Azhar, *SVB Says Goldman Sachs Was Buyer of Portfolio It Booked Losses On*, REUTERS (Mar. 15, 2023), https://www.reuters.com/business/finance/goldman-sachs-bought-svbs-bond-portfolio-lender-says-2023-03-14/.

61. Craig Coben, *Dissecting Goldman's Gory $2.25bn SVB Equity Issue*, FINANCIAL TIMES (Mar. 14, 2023), https://www.ft.com/content/7e7fdddb-724c-42fd-98ee-5d7248d53334.

IV. DOMINO EFFECT: HOW THE FLIGHT TO QUALITY TOPPLED SIGNATURE BANK AND FIRST REPUBLIC BANK

In a dramatic turn of events, the collapse of SVB triggered a run on Signature Bank (SBNY:USOTC). On March 10 alone, depositors withdrew over $10 billion from the New York-based bank.[62] The panic was fueled by Signature's high volume of uninsured deposits and its risky foray into the crypto sector. New York State and federal regulators were on high alert as the bank run continued over the weekend, with customers taking to social media to voice their fears. Signature Bank operated as a Federal Deposit Insurance Corporation (FDIC)-insured, New York State-chartered bank, and was not part of the Federal Reserve System. Hence, it was not directly regulated or supervised by the Federal Reserve.

On March 12, the New York State Department of Financial Services (NYDFS) stepped in to take possession of the bank in a bid to safeguard depositors, with the FDIC appointed as trustee in receivership.[63] Efforts were made to reassure all depositors that their funds would be protected, even those with uninsured deposits.[64]

The root causes of Signature Bank's failure are complex but may have included its heavy concentration in the crypto sector and an unusually high proportion of uninsured deposits. Its financial reports indicate that around 90% of the bank's deposits were uninsured, a concerning figure that is likely to trigger a bank run, as depositors scramble to protect their funds.[65] Signature Bank had enough reserves to meet regulatory requirements—it held a comparatively low proportion of assets in cash compared to the industry average (5% against 13%), leaving it vulnerable to sudden shocks in the market.[66]

In a bold and contentious move, the FDIC invoked the "systemic risk exception" for Signature Bank, extending deposit insurance limits beyond the usual $250,000 threshold to cover all customer deposits.[67] This exception is typically reserved for extraordinary circumstances that pose a

62. *See, e.g.*, Hugo Son, *Why Regulators Seized Signature Bank in the Third-biggest Bank Failure in U.S. History*, NBC NEWS (Mar. 13, 2023), https://www.cnbc.com/2023/03/13/signature-bank-third-biggest-bank-failure-in-us-history.html; Matthew Goldstein & Emily Flitter, *Risky Bet on Crypto and a Run on Deposits Tank Signature Bank*, N.Y. TIMES (Mar. 12, 2023), https://www.nytimes.com/2023/03/12/business/signature-bank-collapse.html.

63. Press Release, N.Y. Dep't of Fin. Servs., Superintendent Adrienne A. Harris Announces New York Department of Financial Services Takes Possession of Signature Bank (Mar. 12, 2023).

64. Press Release, Fed. Deposit Ins. Corp., Joint Statement by the Department of the Treasury, Federal Reserve, and FDIC (Mar. 12, 2023).

65. *Signature Bank 2021 Annual Report*, ANNUALREPORTS.COM (2021), https://www.annualreports.com/Company/signature-bank.

66. Lora Shinn, *What Happened to Signature Bank?*, INVESTOPEDIA (May 1, 2023), https://www.investopedia.com/what-happened-to-signature-bank-7370710.

67. *Id.*; *Cf.* LCR; 12 U.S.C. §1823(c)(4)(G).

significant threat to economic conditions or financial stability, or that could jeopardize the entire banking and financial system.[68] On this occasion, the FDIC's decision to utilize this exception for Signature Bank was a necessary step to restore public confidence in the wake of the bank's collapse and prevent a broader financial meltdown.

Treasury Secretary Janet Yellen delivered the core resolution message in her March 16 testimony before the Senate Finance Committee: "Importantly, no taxpayer money is being used or put at risk with this action[69] [. . .] Deposit protection is provided by the Deposit Insurance Fund, which is funded by fees on banks."[70]

On March 19, Flagstar Bank, a subsidiary of New York Community Bancorp (NYSE:NYCB), stepped up to the plate and entered into an agreement with the FDIC to purchase deposits and loans from Signature Bridge Bank, N.A.[71] Under the terms of the deal, Flagstar Bank has assumed control of Signature's forty branches and their operations. Depositors not related to the digital banking business would automatically become depositors of Flagstar Bank with the FDIC directly providing deposits to customers associated with the digital banking business. The transaction involved the purchase of $38.4 billion in Signature Bridge Bank's assets, including $12.9 billion in loans acquired at a discount of $2.7 billion.[72] However, approximately $60 billion in loans remained in receivership for later disposition by the FDIC.[73]

The creation of Signature Bridge Bank, N.A. by the FDIC served as a crucial bridge for depositors to access their funds in the same manner as before the collapse—i.e., using debit cards, ATMs, and check writing. The agreement with Flagstar Bank provided a glimmer of hope for those affected by the collapse and demonstrated the importance of timely regulatory intervention and contingency planning in times of financial distress.

The collapse of SVB and Signature Bank in short order has dragged First Republic Bank (NYSE:FRC) down with them as concerns about the stability of regional banks have surged in the minds of depositors and investors. First Republic Bank has been hit hard raising red flags despite the Biden Administration's reassurance that there are no major warning signs

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68. MARC LABONTE, CONG. RSCH. SERV., IF12378, BANK FAILURES: THE FDIC'S SYSTEMIC RISK EXCEPTION (2023).

69. *Testimony of Secretary of the Treasury Janet L. Yellen Before the Committee on Finance, U.S. Senate*, U.S. DEP'T OF THE TREASURY (Mar. 16, 2023), https://home.treasury.gov/news/press-releases/jy1348.

70. *Id.*

71. Press Release, N.Y. Cmty. Bank, New York Community Bancorp, Inc. Through Its Bank Subsidiary Flagstar Bank, N.A., Acquires Certain Assets and Assumes Certain Liabilities of Signature Bridge Bank From the FDIC (Mar. 20, 2023).

72. *Id.*

73. *Id.*

regarding the health of the financial sector and that the nation's largest banks remain stable.[74]

On March 16, a syndicate of eleven US banks, led by JPMorgan Chase (JPM) (NYSE:JPM), Bank of America (NYSE:BAC), and Citigroup (NYSE:C), injected $30 billion of liquidity into First Republic in an attempt to avoid a bank run.[75] Nonetheless, the bank has struggled to regain its footing. The bank's deposit levels have plummeted 41% from last year's first quarter, amounting to a mere $104.5 billion—far below the $136.7 billion analysts estimated.[76]

On May 1, a few hours before the opening of the US markets, the federal authorities announced that they had seized control of the bank and immediately sold most of its assets to JPM.[77] The FDIC closed the bank's activities after the collapse of its stocks on the stock exchange and the bleeding of funds deposited by its account holders. According to the statement from the FDIC, JPM will assume all of First Republic's $103.9 billion in deposits and will acquire most of its $229.1 billion in assets.[78]

First Republic Bank was a medium-sized bank with a clientele mainly made up of mid-cap companies. It maintained a substantial number of business accounts that do not fall under the $250,000 threshold at which US law provides for guaranteed repayment in case of failure.[79] These clients have moved their funds elsewhere, limiting the bank's lending operation. Since the beginning of the crisis, it is estimated that $100 billion has been withdrawn from First Republic Bank.[80]

For the third time, JPM has come to the rescue in connection with a banking crisis. In March 2008, JPM undertook the acquisition of the floundering New York investment bank Bear Stearns for a price of $1.4 billion, a transaction that was supervised by the Federal Reserve.[81] Later that year, the financial institution proceeded to take over the banking subsidiaries

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74. President Joe Biden, Remarks by President Biden on Maintaining a Resilient Banking System and Protecting our Historic Economic Recovery (March 13, 2023).

75. Carleton English, *First Republic Gets $30 Billion Deposit Lifeline From Big Banks*, BARRON'S (Mar. 16, 2023), https://www.barrons.com/articles/first-republic-bank-stock-deposits-ad1e2334.

76. Jesse Pound, *First Republic says Deposits Tumbled 40% to $104.5 Billion in 1Q, but Have Stabilized Since*, CNBC (Apr. 24, 2023), https://www.cnbc.com/2023/04/24/first-republic-says-deposits-tumbled-40percent-to-104point5-billion-in-1q-but-have-stabilized-since.html.

77. Press Release, Fed. Deposit Ins. Corp., JPMorgan Chase Bank, National Association, Columbus, Ohio Assumes All the Deposits of First Republic Bank, San Francisco, California (May 1, 2023).

78. *Id.*

79. Adriana Morga & The Associated Press, *Another Bank Just Collapsed. Here's What You Need to Know About First Republic and How to Keep Your Money Safe*, FORTUNE (May 1, 2023), https://fortune.com/2023/05/01/first-republic-bank-collapse-keep-money-safe/.

80. Mehnaz Yasmin & Nupur Anand, *First Republic Bank Deposits Tumble More Than $100 Billion as It Explores Options*, REUTERS (Apr. 25, 2023), https://www.reuters.com/business/finance/first-republic-bank-deposits-falls-41-shares-slide-2023-04-24/.

81. Press Release, Sec. Exch. Comm'n, JPMorgan Chase To Acquire Bear Stearns (Mar. 16 2008).

of Washington Mutual for a price of $1.9 billion.[82] Washington Mutual's colossal downfall remains the most significant bank collapse in the USA to this day.

JPM has long been the world's most systemically important bank according to annual ranking of top lenders by The Financial Stability Board (FSB), made up of regulators from G20 countries.[83] JPM is also the world's leading bank by market cap, with a value of $415 billion.[84]

V. CRISIS RESOLUTION, COLLATERAL DAMAGE, AND POLICY RESPONSE

The US government took extraordinary measures to prevent the triggering of a potential banking crisis. Fears that SVB's collapse could spread contagion and damage the economy prompted the Treasury Department and the FDIC to announce that all SVB depositors would be protected and allowed access to their deposits.[85] At the same time, the Federal Reserve made an emergency institutional credit line available to the banking system to prevent a wave of bank runs.[86] The new Bank Term Funding Program (BTFP) offers loans of up to one year's duration to banks, savings banks, credit institutions, and other credit intermediaries offering US Treasury securities, government agency debt securities, mortgage-backed securities, and other assets as collateral.[87] These assets will be valued at par[88]. The BTFP is designed to be an additional source of liquidity to high-quality securities, eliminating the need for an institution to sell those same securities quickly in times of stress.[89] Under the scheme, banks will be able to borrow money from the Federal Reserve, rather than liquidate assets, to honor withdrawal requests from depositors.

SVB's UK subsidiary was instead sold in bulk to HSBC (LON:HSBA).[90] London-based HSBC is the largest bank in Europe with a balance sheet total

82. Press Release, Fed. Deposit Ins. Corp., JPMorgan Chase Acquires Banking Operations of Washington Mutual (Sep. 25 2008).

83. *2022 List of Global Systemically Important Banks (G-SIBs)*, FINANCIAL STABILITY BOARD (Nov. 21, 2022), https://www.fsb.org/2022/11/2022-list-of-global-systemically-important-banks-g-sibs/.

84. *Market Capitalization of JPMorgan Chase (JPM)*, COMPANIESMARKETCAP.COM (2023), https://companiesmarketcap.com/jp-morgan-chase/marketcap/.

85. Press Release, Fed. Deposit Ins. Corp., FDIC Acts to Protect All Depositors of the Former Silicon Valley Bank, Santa Clara,California (Mar. 13 2023).

86. Press Release, Fed. Rsrv., Federal Reserve Board Announces It Will Make Available Additional Funding to Eligible Depository Institutions To Help Assure Banks Have the Ability To Meet the Needs of All Their Depositors (Mar. 12, 2023).

87. Board of Governors of the Federal Reserve System, *Policy Tools, Bank Term FundingProgram* (Mar. 16, 2023), https://www.federalreserve.gov/monetarypolicy/bank-term- funding-program.htm.

88. *Id.*

89. *Id.*

90. Press Release, The Hongkong and Shanghai Banking Corp. Ltd., HSBC Acquires Silicon Valley Bank UK Limited (Mar. 13, 2023).

of €2.6 trillion and 39 million customers worldwide.[91] The rapid acquisition allowed SVB UK's customers to access their deposits and banking services as usual, averting any shockwaves on UK's financial stability.[92] The transaction was facilitated by the Bank of England (BOE) in consultation with HM Treasury using powers under the Banking Act 2009.[93] No taxpayer money was therefore implicated, keeping nonetheless customer deposits fully protected. Using the post-crisis banking reforms, which introduced powers to deal safely with bank failures, the divestment protected both SVB UK's customers and taxpayers[94]. The UK has a world-leading technology sector with a dynamic ecosystem of start-ups and scaleups, and Her Majesty's Government welcomed the fact that a private sector buyer had been found.[95]

The swift action of the supervisory authorities neutralized contagion risk. Markets do not anticipate a spillover.[96] Although it caused volatility in parts of the market, SVB's failure is seen as an idiosyncratic story rather than a systemic crisis.[97] Evidently, the fall of SVB is not a repeat of 2008. The collapse of Lehman Brothers was a different matter. Compared to the defunct New York investment bank, SVB does not employ significant leverage, does not have a large exposure to derivatives, did not engage in proprietary trading, and is not interconnected to the international financial system in any significant way.[98]

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91. Meaghan Yuen, *Here Are the Top 50 Biggest European Banks in 2023*, INSIDER INTELLIGENCE (Jan. 1, 2023), https://www.insiderintelligence.com/insights/largest-banks-europe- list/#:~:text=HSBC%20is%20the%20largest%20bank,to%20S%26P%20Global%20Market%20Intelligence.

92. Alex Ryan, *'Crisis averted': City Banking and Corporate Partners React as HSBC Acquires SVB UK*, LEGAL BUSINESS (Mar. 16, 2023), https://www.legalbusiness.co.uk/blogs/crisis-averted-city-banking-and-corporate-partners-react-as-hsbc-acquires-svb-uk/.

93. Banking Act 2009, c. 1 (UK).

94. Simon Jack & Tom Espiner, *UK Banking Rules in Biggest Shake-up in More Than 30 Years*, BBC (Dec. 9, 2022), https://www.bbc.com/news/business-63905505.

95. Press Release, His Majesty's Treasury, Government and Bank of England facilitate sale of Silicon Valley Bank UK (Mar. 13, 2023).

96. Emma Stevenson, *Contagion or Contained: Banks in Focus*, SCHRODERS (Mar. 24, 2023), https://www.schroders.com/en-hk/hk/individual/insights/contagion-or-contained-banks-in-focus/.

97. James Baxter-Derrington, *"This Time is Different": SVB Collapse Symptom of Easy Money Rather Than Systemic Banking Issues*, INVESTMENT WEEK (Mar. 13, 2023), https://www.investmentweek.co.uk/news-analysis/4077449/different-svb-collapse-symptom-easy-money-systemic-banking-issues.

98. *See* Ryan Hogg, *Paul Krugman Says Silicon Valley Bank Could've Been Called the "Schmoozing and Vibes Bank," But it's Probably Not Another "Lehman Moment"*, BUSINESS INSIDER (Mar. 11, 2023), https://www.businessinsider.com/paul-krugman-svb-shmoozing-vibes-bank-not-new-lehman-moment-2023-3?r=US&IR=T.

A. *Takeaways From SVB's Collapse: The Federal Reserve Report*

On April 28, the Federal Reserve released its report on SVB's failure,[99] nicknamed by the financial press as the "autopsy".[100] The Federal Reserve Vice Chair for Supervision, Michael S. Barr, acknowledged shortcomings in the supervision of SVB (though the lender ultimately collapsed due to serious management oversights).[101] As the primary regulator of SVB, the Federal Reserve took responsibility for its own lapses and recognized that its supervisors failed to fully comprehend the extent of vulnerabilities that arose as the bank grew in size and complexity.[102] Furthermore, the Federal Reserve acknowledged that it did not take adequate measures to ensure that SVB addressed its issues in a timely and effective manner.[103]

According to the report, SVB serves as a striking example of mismanagement by its senior leadership and board of directors who neglected basic interest rate and liquidity risk management.[104] Regrettably, Federal Reserve supervisors also failed to take sufficient action. Although the US banking system remains resilient with strong capital and liquidity, SVB was an outlier due to its highly concentrated business model, interest rate risk, and overreliance on uninsured deposits. The failure of SVB highlights regulatory and supervisory weaknesses that require attention. Regulatory standards were insufficient, supervisory actions lacked force and urgency, and systemic contagion was not adequately anticipated. The report identifies four key takeaways: (1) SVB's board of directors and management neglected risk management, (2) supervisors underestimated SVB's vulnerabilities as it grew in size and complexity, (3) supervisory actions were inadequate to address identified risks, and (4) tailoring in response to the EGRRCPA[105] and a shift in supervisory policy hampered effective supervision by reducing standards, increasing complexity, and promoting a less assertive approach.[106]

The Federal Reserve rightly points out the weaknesses in regulatory and supervisory oversight that contributed to SVB's collapse. However, the proposal for increased regulation warrants careful consideration. While

99. Board of Governors of the Federal Reserve System, *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank* (Apr. 28, 2023), https://www.federalreserve.gov/publications/review-of-the-federal-reserves-supervision-and-regulation-of-silicon-valley-bank.htm.

100. *See* Allison Morrow, *Fed Autopsy on SVB Faults Bank's Management - And Its Own Oversight*, CNN (Apr. 28, 2023), https://edition.cnn.com/2023/04/28/business/silicon-valley-bank-post-mortem/index.html.

101. Board of Governors of the Federal Reserve System, *supra* note 99, at 57.

102. *Id.* at 6.

103. *Id.* at 7.

104. *Id* at 2.

105. Economic Growth, Regulatory Relief, and Consumer Protection Act, Pub. L. 115–174 (2018).

106. Board of Governors of the Federal Reserve System, *supra* note 99, at 10.

regulation can help prevent systemic risks and promote market stability, it may also lead to herd behavior among economic agents.[107] In a competitive market, firms need to innovate services and processes. Compelling firms to follow the same increasingly pervasive regulatory guidelines, even if such guidelines are not optimal for their specific business model or risk profile, may create endogenous risk. Moreover, financial technologies cause new risks to emerge unexpectedly, and regulatory measures may not be nimble enough to address them effectively. Therefore, any proposed further regulatory tightening should be carefully tailored to avoid unintended consequences and promote a flexible and dynamic financial system.

VI. BALANCING ACT: THE RIPPLE EFFECTS OF MONETARY POLICY ON FINANCIAL STABILITY

The timing of the banking crises is not irrelevant. In its BlackRock Bulletin, the BlackRock Investment Institute argued that the recent market convulsions do not show the prodromes of a banking crisis but rather financial cracks resulting from the fastest interest rate hikes since the early 1980s.[108] "Markets," the Bulletin reads, "have realised the damage caused by the rapid rise in interest rates and are now pricing in a recession."[109] In its Investment Talk, Amundi Asset Management likewise ruled out a banking crisis but agreed with BlackRock that "SVB's collapse highlights the need to carefully assess the lagged effects of the monetary tightening cycle."[110]

As is well known, rising interest rates can have a negative impact on banks and other financial intermediaries in several ways. First, rising interest rates increase the cost of funding. When interest rates rise, so does the cost of money for banks and financial intermediaries.[111] Consequently, maturity transformation takes a hit: banks' borrowing costs may rise rapidly while the rates earned on loans may take longer to recover. This, in turn, may squeeze the profit margin, which is the difference between the interest earned on loans and the interest paid on deposits. Second, higher interest rates may cause a decrease in the demand for loans as the cost of borrowing increases. This may reduce the loan portfolio, which may further squeeze banks'

107. *See* Sushil Bikhchandani & Sunil Sharma, *Herd Behavior in Financial Markets: A Review* (Int'l Monetary Fund, Working Paper, No. 48, 2000).

108. BlackRock Investment Institute, *No 2008 Redux, but Recession Coming*, BLACKROCK BULLETIN (Ma. 16, 2023), https://www.blackrock.com/corporate/insights/blackrock-investment-institute/publications/market-volatility-2023.

109. *Id.*

110. Amundi Asset Management, *No Systemic Risk from SVB Failure, but Watch Out for Areas of Vulnerability*, INVESTMENT TALK (Mar. 14, 2023), https://research-center.amundi.com/article/no-systemic-risk-svb-failure-watch-out-areas-vulnerability.

111. Davide Porcellacchia, *The Tipping Point: Interest Rates and Financial Stability* (Eur. Cent. Bank, Working Paper, No. 2447, 2020).

margins and profitability.[112] Third, rising interest rates may also have a negative impact on the value of financial assets—such as bonds and shares—held by banks and other financial intermediaries. Higher rates generally lead to a decrease in the value of fixed-income securities since the price of these securities moves inversely with interest rates.[113] This can lead to losses on the investment portfolio of banks and lower capital ratios. Fourth, when interest rates rise either too quickly or too steeply, borrowers may find it difficult to repay their loans, generating higher default rates. This may lead to higher credit losses for banks and other financial intermediaries.

After 20 years of accommodating monetary policy, the central banks' struggle to tame inflation will have an impact on the banking sector.[114] The financial position, particularly for smaller, non-systemically important financial institutions and regional banks—which benefit from more flexible prudential regulation—will weaken increasing the risk of triggering a crisis of confidence.

VII. FALLING FROM GRACE: CREDIT SUISSE'S CRISIS OF COMPLIANCE AND GOVERNANCE

The situation, it appears, could be worse in Europe. The rescue of the troubled Swiss financial group Credit Suisse (SIX:CSGN) is sending shockwaves throughout the European markets. The Zurich-based financial institution collapse after over a decade of poor governance tells another idiosyncratic story. Its compliance record is dreadful on every aspect of banking. Paradeplatz has been involved in tax evasion, money laundering, bribery, corruption, fraud, and even espionage.[115] In 2009, after being implicated in money laundering charges in several countries—including the US, Italy and France—the bank agreed to pay a $536 million fine to settle charges of violating international sanctions against Iran, Sudan and other countries.[116] In 2014, after being accused of helping wealthy clients evade US taxes by hiding their assets in offshore accounts, the bank pleaded guilty to the charges and paid a $2.6 billion fine to the US Department of Justice (DOJ).[117] In the same year, the bank was fined by the UK Financial Conduct

112. *Id.*

113. Bremmer & Kesselring, *supra*, note 46.

114. Tommaso Monacelli, *Dilemma inflazione – stabilità finanziaria per le banche centrali* [*Inflation – Financial Stability Dilemma for Central Banks*], LAVOCE.INFO (Mar. 24, 2023), https://lavoce.info/archives/100539/dilemma-inflazione-stabilita-finanziaria-per-le-banche-centrali/.

115. John O'Donnell & John Revill, *Spies and Lies: Regulators Round on Credit Suisse*, REUTERS (Oct. 21, 2021), https://www.reuters.com/business/finance/spies-lies-regulators-round-credit-suisse-2021-10-20/.

116. Reuters Staff, *Credit Suisse Agrees To Pay $536 Million*, REUTERS (Dec. 16 2009), https://www.reuters.com/article/us-creditsuisse-justice-idUKTRE5BF3C620091216.

117. Press Release, Dep't of Just., Credit Suisse Pleads Guilty to Conspiracy to Aid and Assist U.S. Taxpayers in Filing False Returns (May 19, 2014).

Authority (FCA) for improperly selling complex "structured products" to its retail customers.[118] In 2017, as part of a plea bargain with the NYDFS for violations of New York banking law—including collusion with other global banks, front running to the detriment of customers, and additional conduct against the interest of customers—the bank agreed to pay a $135 million fine.[119] The violations were established by an investigation by the NYDFS which determined that, from at least 2008 to 2015, Credit Suisse consistently engaged in illegal, improper and wrongful conduct by failing to implement effective controls over its foreign currency transactions.[120] In 2020, after being accused of paying bribes to government officials and engaging in bribery in several countries—including China, Russia and Libya—the bank was fined $47 million by Swiss authorities for a case involving a former Asia-Pacific executive.[121] Shortly afterwards, CEO Tidjane Thiam left the bank on the spot when it emerged that private investigators had been hired to spy on an executive who had moved to arch-rival UBS (SIX:UBSG).[122] In 2021, Credit Suisse was involved in the collapse of Greensill Capital. Credit Suisse had invested $10 billion in the British supply chain financier, forcing the Swiss supervisory authority (FINMA) to issue a reprimand stating that the bank had "seriously breached its due diligence obligations."[123] Just three weeks after Greensill's bankruptcy, Credit Suisse lost $5.5 billion when US hedge fund Archegos Capital Management liquidated its operations.[124] Then, to mark an annus horribilis, Portuguese-British banker Sir António Mota de Sousa Horta-Osório had just been appointed as the group's new chairman when he was accused of violating Switzerland's COVID-19 restrictions and resigned after just nine months in the role.[125] In 2022, Credit Suisse was implicated in the

118. Huw Jones, *UK Watchdog Fines Credit Suisse, Yorkshire Building Society*, REUTERS (Jun. 16, 2014), https://www.reuters.com/article/britain-fca-fine-idUKL5N0OX2DC20140616.

119. Press Release, N.Y. Dep't of Fin. Servs., DFS Fines Credit Suisse AG $135 Million for Unlawful, Unsafe and Unsound Conduct in Its Foreign Exchange Trading Business (Nov. 13, 2017).

120. *Id.*

121. Reuters Staff, *Credit Suisse To Pay $47 Million To Settle Hiring Corruption Probe*, REUTERS (Jun. 6, 2018),https://www.reuters.com/article/us-credit-suisse-gp-penalty-idUSKCN1J20ID.

122. Reuters, *Factbox: Credit Suisse's Troubles - Spies, Money Laundering and Takeover*, REUTERS (Mar. 20, 2023), https://www.reuters.com/business/finance/credit-suisses-troubles-spies-money-laundering-central-bank-cash-2023-03-16/.

123. Hugo Miller & Myriam Balezou, *Credit Suisse "Seriously Breached" Rules in Greensill Case*, BUS. STANDARD (Feb. 28, 2023), https://www.bloomberg.com/news/articles/2023-02-28/credit-suisse-seriously-breached-obligations-in-greensill-case#xj4y7vzkg.

124. *See* Press Release, Credit Suisse, Credit Suisse Group Publishes the Report of the Independent External Investigation Into Archegos Capital Management (Jul. 29, 2021).

125. Simon Jack, *Credit Suisse Boss Horta-Osorio Resigns Over Covid Breaches*, BBC (Jan. 17, 2022), https://www.bbc.com/news/business-60019735.

Mozambique "tuna bond" scandal and paid $475 million in penalties to the US and UK authorities.[126]

The story finally came to an end on March 14, when Credit Suisse notified the Securities and Exchange Commission (SEC) that it had reported a loss of CHF 7.3 billion for 2022 and that it had found "material weaknesses" in its 2021 and 2022 annual financial reports.[127]

Shortly thereafter, Ammar Al Khudairy, Chairman of Saudi National Bank (SANB) (XSAU:1180) was interviewed by *Bloomberg*. The financial news and analysis agency asked him whether SANB was willing to increase its stake in Credit Suisse to stabilize its financial position. His answer was "absolutely not, for many reasons other than the simplest reason, which is regulatory and statutory."[128] The comment triggered investor panic and sent Credit Suisse shares down 30% during the stock market trading session, bringing the bank to the brink of insolvency. The Swiss National Bank (SNB) injected CHF 54 billion of liquidity into the bank's balance sheet[129] and agree a CHF 3 billion takeover with UBS—at a 93% discount to Credit Suisse's tangible book value—in order to avert a systemic crisis.[130]

VIII. THE SWISS GOVERNMENT'S RECKONING: VIOLATING CORPORATE LAW, GOVERNANCE, AND MONOPOLY IN THE CREDIT SUISSE SAGA

The bail out of Credit Suisse wrote a black page in the Swiss family book. The Federal Council claimed powers under emergency legislation (Art. 184, para. 3 and Art. 185, para. 3 of the Swiss Constitution) and issued an "Ordinance on additional liquidity support loans and the provision of loss risk guarantees by the Confederation for liquidity support loans by the Swiss National Bank to systemically important banks."[131] The ordinance derogated from existing federal law in significant manners.

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126. Press Release, Fin. Conduct Auth., Credit Suisse Fined £147,190,276 (US$200,664,504) and Undertakes to the FCA to Forgive US$200 Million of Mozambican Debt (Oct. 19, 2021); Joseph Cotterill & Owen Walker, *Mozambique Reeling from Credit Suisse "Tuna Bond" Scandal*, SWISSINFO (Oct. 25, 2021), https://www.swissinfo.ch/eng/business/mozambique-reeling-from-credit- suisse--tuna-bond--scandal/47054964.

127. Owen Walker, *Credit Suisse Finds "Material Weaknesses" in Financial Reporting Controls*, FIN. TIMES (Mar. 14, 2023), https://www.ft.com/content/3605c3fb-973d-440d-88e3- 9ddf367bbef2.

128. Yousef Gamal El-Din & Marion Halftermeyer, *Credit Suisse Reels After Top Shareholder Rules Out Raising Stake*, BLOOMBERG (Mar. 15, 2023), https://www.bloomberg.com/news/articles/2023-03-15/credit-suisse-top-shareholder-rules-out-more-assistance-to-bank-lf9gfhbr#:~:text= A%20top%20shareholder%20ruled%20out,from%20Europe%20to%20the%20US.

129. *Credit Suisse To Borrow up to CHF50 Billion from Swiss National Bank*, SWISSINFO (Mar. 16, 2023), https://www.swissinfo.ch/eng/business/swiss-central-bank-ready-to-backstop-credit-suisse-with-funds/48364116.

130. Press Release, Union Bank of Switz., UBS to acquire Credit Suisse (Mar. 19, 2023).

131. Swiss Confederation, Federal Department of Finance FDF, State Secretariat for

As part of the bailout, €16 billion of Additional Tier 1 (AT1) bonds were cancelled.[132] AT1 bonds are a complex debt instrument of the contingent convertible (CoCo) type issued by banks.[133] "Additional Tier 1" is a regulatory classification of bank capital under the Basel III International Regulatory Framework.[134] CoCo bonds combine the characteristics of both debt and equity instruments.[135] Like other bonds, they pay regular interest to investors and have a fixed maturity date, but also include a "contingency" feature that allows them to be converted into equity under certain predetermined conditions.[136] The contingency that triggers conversion into shares can vary, but typically involves the bank's capital levels falling below a certain prudential threshold.[137] At this point, the CoCo bond will convert into common equity, helping to strengthen the bank's capital position.[138] CoCo bonds were introduced in the aftermath of the 2008 global financial crisis as a way for banks to strengthen their capital positions and comply with new regulatory requirements.[139] During the financial crisis, many banks suffered significant losses and faced insolvency, which highlighted the need for banks to hold more capital as a buffer against unexpected losses.[140] In response, international regulators introduced new rules under the Basel III International Regulatory Framework requiring banks to hold higher levels of capital to improve their resilience and reduce the risk of future financial crises. CoCo bonds were introduced as a way for banks to raise additional capital quickly and efficiently by meeting these new regulatory requirements.[141] By converting into equity under certain circumstances,

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International Financial Matters SFI, Ordinance on additional liquidity support loans and the provision of loss risk guarantees by the Confederation for liquidity support loans from the Swiss National Bank to systemically important banks (March 16, 2023), https://www.fedlex.admin.ch/filestore/fedlex.data.admin.ch/eli/oe/2023/6/it/pdf/fedlex-data-admin-ch- eli-oe-2023-6-it-pdf.pdf.

132. *See* Robin Wigglesworth, *Credit Suisse AT1s Vaporised*, FIN. TIMES (Mar. 19, 2023), https://www.ft.com/content/b5cd8ff0-4c0e-418c-8e4b-dda1d00fa5a7.

133. Stefan Avdijev, Anastasia Kartasheva & Bilyana Bogdanova, *CoCos: A Primer*, BIS QUART. REV., Sept. 2013, at 43.

134. Basel Comm. on Banking Supervision, *Basel III: A Global Regulatory Framework For More Resilient Banks and Banking Systems*, BANK FOR INT'L SETTLEMENTS (Jun. 1, 2011), https://www.bis.org/publ/bcbs189.htm.

135. Avdijev, *supra*, note 133.

136. Basel Comm. on Banking Supervision, *supra*, note 134.

137. James Chen, *Contingent Convertibles (CoCos): Definition and Use in Europe*, INVESTOPEDIA (Mar. 21, 2023), https://www.investopedia.com/terms/c/contingentconvertible.asp.

138. *Id.*

139. Stefan Avdjiev et al., *CoCo issuance and bank fragility*, 138 J. FIN. ECON. 593 (2020).

140. COMMITTEE ON THE GLOBAL FINANCIAL SYSTEM, STRUCTURAL CHANGES IN BANKING AFTER THE CRISIS (2018).

141. Ceyla Pazarbasioglu, Jianping Zhou, Vanessa Le Leslé & Michael Moore, *Contingent Capital: Economic Rationale and Design Features* (Int'l Monetary Fund, Staff Discussion Note, No. 01, 2011).

CoCo bonds can help strengthen a bank's capital position during periods of financial stress, helping to reduce the probability of default.[142]

Understandably, the decision to wipe out AT1 bondholders in order to save—at least in part—the shareholders has put international investors on a warpath, forcing the European Central Bank (ECB), the European Banking Authority (EBA) and the Single Resolution Board (SRB) to issue a joint statement explaining that capital instruments should be the first to absorb losses and that only after their full utilization should AT1 debts be allowed to be written down.[143] In an attempt to reassure markets, the European authorities wrote: "This approach has been consistently applied in past cases and will continue to guide the actions of the SRB's banking supervision and the ECB in crisis interventions."[144] At the same time, the BOE issued a statement to the effect that AT1 bonds rank ahead of the highest level of equity capital.[145] Threadneedle Street wrote: "Holders of such instruments should expect to be exposed to losses in the event of resolution or insolvency in the order of their positions in this hierarchy."[146]

To facilitate the completion of the takeover, Switzerland also circumvented the shareholder vote on the merger between UBS and Credit Suisse, further breaching basic principles of corporate law and corporate governance.[147] At law, any takeover of a listed company must be subject to a vote of the special shareholders' meeting of the acquired company.[148] The Federal Council has bypassed this obligation. The legal basis for this waiver was created ad hoc through the new Section 10a (Waivers of the Merger Act) of the Ordinance.[149] The new rule went even further, excluding the application of Articles 11 (preparation of interim financial statements), 14 (publication of merger minutes), 15 (audit of merger minutes) and 16 (right to shareholder consultation) of the Swiss Merger Act of 2003.[150] Although the shares of Credit Suisse are listed on both the NYSE and on the Swiss Exchange (SIX) in Zurich, the Swiss government unilaterally removed

142. Piotr Jaworski, Kamil Liberadzki & Marcin Liberadzki, *How Does Issuing Contingent Convertible Bonds Improve Bank's Solvency? A Value-at-Risk and Expected Shortfall Approach*, 60 ECO. MODELLING 162 (2017).

143. Press Release, Eur. Cent. Bank, ECB Banking Supervision, SRB and EBA Statement on the Announcement on 19 March 2023 by Swiss Authorities (Mar. 20, 2023).

144. *Id.*

145. Press Release, Bank of Eng., Bank of England Statement: UK Creditor Hierarchy (Mar. 20, 2023).

146. *Id.*

147. *See* Dan Primarck, *UBS-Credit Suisse Deal Shows that Shareholders are No Longer in Charge*, AXIOS (Mar. 20, 2023), https://www.axios.com/2023/03/20/ubs-credit-suisse-shareholders-no-longer- in-charge.

148. The Federal Law on Merger, Demerger, Conversion and Transfer of Assets and Liabilities (Bundesgesetz über die Fusion, Spaltung, Umwandlung und Vermögensübertragung), 3 October 2003, art. 16.

149. Swiss Confederation, *supra*, note 131, Section 10a.

150. Swiss Confederation, *supra*, note 131.

shareholders' voting rights.[151] The change in corporate governance is unprecedented in the context of crisis resolution mechanisms. During the 2008 financial crisis, for example, the shareholders of Bear Stearns were asked to approve the US government-sponsored takeover by JPM.[152] In the process, the latter was induced to increase its initial offer of $2 per share to $10 per share in response to pressure mounted by the shareholders' meeting.[153]

Markets rejected Switzerland's handling of the case, throwing the $275 billion AT1 bond market into turmoil. The exchange-traded Invesco AT1 Capital Bond UCITS fund (LON:AT1P) fell more than 16% on the day of the announcement while Deutsche Bank's £650 million AT1 note with 7.125% coupon (Xtra:DBK) fell 64p, its biggest ever one-day drop.

There was speculation that the Swiss government's move was politically-motivated and that Bern was trying to protect its foreign relations with Saudi Arabia and Qatar. The Saudi National Bank (SANB), 37% of which is owned by Riyadh's Public Investment Fund,[154] was Credit Suisse's largest shareholder and owned 9.9% of its share capital before the collapse.[155] The Qatar Investment Authority (QIA), Doha's sovereign wealth fund, was Credit Suisse's second largest shareholder and owned 6.8% of its share capital.[156] Despite the insinuation, SANB confirmed to CNBC that it had suffered a loss of about 80% on its investment in Credit Suisse.[157]

IX. CONCLUSIONS

"It were not best that we should all think alike;
it is difference of opinion that makes horse races."

Mark Twain

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151. Myriam Balezou & Hugo Miller, *Credit Suisse Shareholder Says Override of Vote 'Unprecedented'*, BLOOMBERG (Mar. 21, 2023), https://www.bloomberg.com/news/articles/2023-03-21/credit-suisse-shareholder-says-override-of-vote-unprecedented.

152. Press Release, Sec. Exch. Comm'n, JPMorgan Chase and Bear Stearns Announce Amended Merger Agreement and Agreementfor JPMorgan Chase to Purchase 39.5% of Bear Stearns (Mar. 24, 2008).

153. Chris Reiter, *JPMorgan Raises Bear Stearns Bid, Grabs Stake*, REUTERS (Mar. 24, 2008), https://www.reuters.com/article/us-bearstearns/jpmorgan-raises-bear-stearns-bid-grabs-stake-idUSN2430313520080324.

154. Public Investment Fund, *Annual Report 2021*, PIF.GOV.SA (2021), https://www.pif.gov.sa/en/Pages/About-AnnualReport.aspx.

155. *Significant Shareholders*, CREDIT SUISSE (2023), https://www.credit-suisse.com/about-us/en/investor-relations/shareholders/significant-shareholders.html.

156. Fergus Horsfall, *Qatar Investment Authority Ups Stake in Credit Suisse*, CITYWIRE (Jan. 25, 2023), https://citywire.com/ch/news/qatar-investment-authority-ups-stake-in-credit-suisse/a2407536.

157. Natasha Turak, *Saudi National Bank Loses Over $1 Billion on Credit Suisse Investment*, CNBC (Mar. 20, 2023), https://www.cnbc.com/2023/03/20/saudi-national-bank-loses-over-1-billion-on-credit-suisse-investment.html.

In resolving SVB's, Signature Bank's, and First Republic Bank's collapse, US regulators have acted as rational economic agents. When banks fail, there may arise real systemic risk. The banking system is a network in which banks' balance sheets are interconnected, so that a shock on one bank is transferred to the others.[158] There is, however, another aspect that goes beyond the real aspect of real cash flows and that is expectations (or beliefs). Beliefs manifest themselves through the role of deposits. Since many credit institutions are highly leveraged, there is an underlying risk that, at any given time, the market will see the rise of a heterogeneity of beliefs.[159] The moment depositors decide for some even irrational reason that there is a risk of default, a bank run is triggered. Consequently, idiosyncratic risk turns into systemic risk.

To describe this phenomenon, the economic literature has produced the concept of sunspots.[160] Sunspots refer to extrinsic random shocks to economic variables that do not have any direct economic impact but can still affect economic outcomes through their influence on expectations or beliefs. The concept of sunspots was first introduced by economist William S. Jevons in the late 19th century.[161] However, it was economist Robert Clower who brought the concept of sunspots back to the forefront of economic literature in the mid-20th century.[162] In his study, the author argued that sunspots could help explain economic fluctuations, particularly in the context of coordination failures and market inefficiencies.[163] Since then, the concept of sunspots has been further explored and developed by many economists, including Lucas,[164] and Cass and Shell.[165] Sunspots have been used to explain a variety of phenomena, such as business cycles, asset prices, and financial crises.

Because of sunspots, timely government intervention is important: government action can have relevance in changing beliefs that could cause a crisis of confidence. The intervention instrument, the deposit guarantee, is the perfect tool for the resolution of idiosyncratic failures. When crises incorporate sunspots, the implicit cost of the deposit guarantee is zero. If regulators correctly classify a risk as idiosyncratic, the issuing of a deposit

158. INT'L MONETARY FUND, UNDERSTANDING FINANCIAL INTERCONNECTEDNESS 1 (2010).

159. Andrea Buraschi & Alexei Jiltsov, *Model Uncertainty and Option Markets in Heterogeneous Economies*, 61 J. FIN. 2841 (2005).

160. David Cass & Karl Shell, *Do Sunspots Matter?*, 91 J. POL. ECON. 193 (1983).

161. WILLIAM S. JEVONS, THE PRINCIPLES OF SCIENCE: A TREATISE ON LOGIC AND SCIENTIFIC METHOD (1874).

162. Robert Clower, *A Reconsideration of the Microfoundations of Monetary Theory*, ECON. INQUIRY, Dec. 1967, at 1.

163. *Id.*

164. Robert Lucas, Jr., *Expectations and the Neutrality of Money*, 4 J. ECON. THEORY 103 (1972).

165. Cass & Shell, *supra*, note 160.

guarantee changes beliefs, the bank run does not occur, and the guarantee will never be called. It is exactly this mechanism that allowed the FDIC to announce insurance of all bank accounts, even those above the insurable threshold of $250,000. The US resolution was a spectacular form of systemic arbitrage.

On the contrary, more regulation, as proposed by the "Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank" could backfire. Economist Fabio Scacciavillani has pointed out the elephant in the room. He noted that in the last twenty years, after every economic crisis, new, stricter, and more pervasive prudential rules have been introduced in a futile attempt to neutralize risks.[166] Yet each time, he observed, new risks emerge in unexpected forms from hitherto neglected recesses or completely unpredictable situations.[167] Pacces and Heremans have proven that because financial intermediaries pursue a competitive advantage, they innovate and expose themselves and the system to unpredictable and inestimable uncertainty.[168] The authors find that since financial intermediaries overcome but do not eliminate uncertainty by creating liquidity, the recurrence of liquidity crises cannot be avoided.[169] The effect of this is counterintuitive: the more rules governments introduce, the more fragile the system becomes. That is because regulation forces all banks to adopt the same risk management criteria, thereby imposing herd behavior by law.[170] A study of the Federal Reserve Bank of New York by Acharia and Pedraza proves that regulation introduces incentives which might compel economic agents to mimic others and herd toward common assets.[171] The authors were able to model the extent to which financial regulations inadvertently add to financial market inefficiency.[172] Herd behavior amplifies endogenous risk. As Mark Twain said about horse racing: for the sport to function properly, the market needs economic agents with opposing or divergent views.[173]

For similar reasons, the rescue of Credit Suisse is not a happy ending. The merger of Credit Suisse and UBS will not benefit Switzerland, whose two "too big to fail" SIFIs (systemically important financial institutions) will

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166. Fabio Scacciavillani, F., *Credit Suisse, SVB e il Focolaio Delle Banche in Crisi: Dieci Punti Chiave per Orientarsi* [Credit Suisse, SVB, and the Outbreak of Banking Crises: 10 Key Points To Get Around], ECONOMIA & LOBBY BLOG (Mar. 20, 2023), https://www.ilfattoquotidiano.it/2023/03/20/credit-suisse-svb-e-il-focolaio-delle-banche-in-crisi-dieci-punti-chiave-per-orientarsi/7101965/.

167. *Id.*

168. Alessio M. Pacces & Dirk Herenmen, *Regulation of Banking and Financial Markets*, *in* ENCYCLOPEDIA OF LAW AND ECONOMICS: REGULATION AND ECONOMICS (Alessio M. Pacces & R.J. Van den Bergh eds., 2nd ed., 2012).

169. *Id.*

170. Scacciavillani, *supra*, note 166.

171. SUSHANT ACHARYA & ALVARO PEDRAZA, ASSET PRICE EFFECTS OF PEER BENCHMARKING: EVIDENCE FROM A NATURAL EXPERIMENT (2015).

172. *Id.*

173. Scacciavillani, *supra*, note 166.

merge into a single even bigger bank with a balance sheet equal to more than twice Switzerland's GDP. At CHF 333 billion, current account balances in the new bank are equivalent to 45% of GDP, a huge amount even for an austere country with tight public finances and low levels of public debt.[174] As theorized by Mishkin, Switzerland now fits the issue of "too big to fail" becoming "too big to ignore": the implicit guarantee that SIFIs will be bailed out in the event of a crisis creates a high level of moral hazard and imports systemic risk.[175] In a research note, JP Morgan's chief analyst Kian Abouhossein concurred: "There is too much risk of concentration and dominance in the Swiss domestic market."[176] The Swiss grand finale is a monopoly. That's great news for UBS but terrible news for everyone else. To paraphrase the immortal incipit of "Anna Karenina" by Lev Tolstoij: all stable financial systems are alike; each unstable financial system is unstable in its own way.

174. Hanna Ziady, *Too Big For Switzerland? Credit Suisse Rescue Creates Bank Twice the Size of the Economy*, CNN (Mar. 24, 2023), https://edition.cnn.com/2023/03/23/investing/credit-suisse-ubs-impact-switzerland/index.html.

175. Frederic S. Mishkin, *How Big a Problem is Too Big to Fail? A Review of Gary Stern and Ron Feldman's Too Big to Fail: The Hazards of Bank Bailouts*, 44 J. ECON, LITERATURE 988 (2006).

176. M. Munoz, *JPMorgan Sees Credit Suisse Takeover as Likely Scenario*, THE EDGE MARKETS (Mar. 16, 2023), https://www.theedgemarkets.com/node/659511; Elliott Smith, *Fail or Sale? What Could Be Next for Stricken Credit Suisse*, CNBC (Mar. 18, 2023), https://www.cnbc.com/2023/03/18/credit-suisse-banking-experts-predict-what-could-happen-next.html.