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Risk Assessment of Banks and Financial Institutions When Interest Rate Hikes

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Abstract: This article delves into the multifaceted risks precipitated by a bank's decision to increase interest rates. It commences with an overarching overview contextualized within The Times, elucidating the significance of the subject matter. Subsequently, it delineates various extant risks, each accompanied by a succinct exposition and an outline of corresponding mitigation strategies. Following this introductory phase, the article conducts a meticulous analysis of these identified risks, methodically dissecting liquidity risk, reputation risk, market risk, and systemic risk. Each risk is meticulously defined, substantiated with historical precedents, and elucidated with comprehensive management methodologies. This paper underscores the myriad risks attendant to a bank's interest rate hike. This synthesis serves to underscore the overarching theme that such policy decisions not only reverberate through the financial ecosystem but also necessitate vigilant risk management protocols to safeguard against potential ramifications. Finally, the article concludes by summarizing the numerous risks posed by a bank's interest rate hike. It emphasizes the need for careful consideration and proactive risk management to mitigate potential consequences.

Keywords: Banks, Liquidity Risk, Market Risk, Interet Rate, Systemic Risk

1. Introduction

Since the 2008 financial crisis, consumers have been used to the extremely low rates, but now unquestionably come to an end. The Federal Open Market Committee (FOMC) has raised interest rate 11 times and has brought its crucial federal funds rate to a mark range of 5.25-5.5% in the period of around a year and a half. Bankrate analysis of the Feb's moves throughout history proves it's the highest rate from early 2001. It also shows that FED has never hiked rate at such speed since the 1980s [1]. Central banks could maintain higher interest rate for a longer period to restrain high inflation in many countries and consequently slow economic growth [2]. The world's financial markets have not encountered such an environment for a generation. This feels like that financial regulators must improve their analytical tools and administrative responses to meet rising danger. The concentration of new risks in the banking system and elsewhere means that now is the time to redouble attempt to identify the weakest lenders.

In the second section, this part uses the example of the SVB collapse, raising questions about another portfolio that no one had noticed in the past - the held-to-maturity (HTN) portfolio due to the collapse of SVB. To avoid a similar catastrophe, the world's financial Ombudsman reached an agreement with the Basel Committee on International Banking Supervision to expand minimum

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capital, liquidity requirements, and leverage ratios to ensure that key banks can continue to have another mess in 2009.

In the third section, citing COVID-19 as an example, it would be a problem for almost all banks globally to face key requirements of the principle when calculating "forward looking" expected credit losses. Credit prototyping teams within banks will require in-depth research on how to predict economic shocks and incorporate separate probability weights into generalized damage models.

In the fourth section, Market risk is an important feature of the investment community, and when market risk can never be eliminated, investors can control the risk by diversifying their portfolios and using hedging strategies. According to IMF, while there is no additional timing for a rate cut, the market is predicting a rate cut by 2024 - which is not necessarily out of the norm.

In the fifth section, Systemic risk was the biggest factor leading to the 2008 financial crisis. The downturn in the US economy has led to a sharp decline in global and trade investment. The recession is also affecting economies at the highest levels. Recession planning is entwined with the banking system. The recession bottomed out in late 2009, but not before a long period of long-term growth for those countries that had been saddled with debt because of the financial crisis. Because systemic risk can bring down all or part of an economy, financial risk managers can use administrative tools and legally irrevocable recourse to manage the behavior of an economy.

2. Liquidity Risk

Higher interest rates will signify a dare to the future net interest earnings of banks. The effect on banks' investment portfolios is one of the principal challenges. SVB went down because its "available-for-sale" portfolio was indicated as "other inclusive earnings", but had born lots of losses as a result of higher rates [3]. Even if SVB didn't regard them as losses to its capital, the market treated it as a risk, and that was one of the precipitates for the deposit flight. It also raised questions about another portfolio that no one used to notice – the held–to–maturity (HTN) portfolio because of the SVB collapse. Banks watching to hold large exposures in the HTM bucket since they don't need the liquidity, they don't wish income volatility. It causes a lot of awareness in the area due to the failure, the idea of shadow capital and the capital ratio will be considered if the HTM portfolio is completely marked-to-market. Will amply supported with funds. Big banks specifically are looking at ways to decrease that risk. To control discernment, they are searching for a method to hedge the risk, but it has still its disadvantages due to those hedges not being eligible for hedge accounting.

Big U.S. banks announced frail fourth quarter ends in operate by matter one-time fees, topping a daring year of charges income headwinds. moving up collection costs, harmful working leverage, and standardization credit quantity, as stated by Fitch Ratings. Total 4Q23 pre-provision net revenue (PPNR) turned down by 37% is as good as 4Q23 across 17 big banks that have announced to date. But, the whole year PPNR increased 6% compared with 2022.

As expected, banks took one-time fees throughout the fourth quarter connected with the $16.3 billion FDIC exceptional assessment to refill the Deposit Insurance Fund and diffusely took severance-related restructuring over for staff lessening. Such non-recurring things precipitate a quarterly net loss at two organizations. Accurate Financial Corporation's (TFC) $5.2 billion net loss sent back a $6.1 billion benevolence impairment, plus FDIC evaluation and restructuring fees. Citigroup (Citi) took $4.7 billion in noteworthy before-tax fees, which incorporated coming out market currency assessment and transfer risk costs, manufacturing a $1.8 billion net loss for the quarter. In the whole group, non-recurring issues lessened quarterly PPNR by roughly 50% in general.

Net interest income turned down yoy by 8% normally, but diverse as stated by the business model. Banks with large card and particular portfolios, such as JPMorgan Chase (JPM) and Citi, resisted the tendency, while commercially oriented geographical banks (some of which essentially get smaller of their balance sheets) saw a double-numeral decrease. However, net interest margins (NIM) became visible to have either achieved or bordered on a floor across the group. Average NIM decrease by 6 bps thereby, is comparable to 7 bps in the earlier quarter, and 16 bps in 2Q23. Banks led to a continued decrease in net interest earnings, hindered by tenaciously slow loan growth, continued lodge repricing and anticipated rate reduction in the latter part of the year.

Emphatically, banks uniformly noted increasing state for fee earnings as capital markets reacted to comparative rate firmness. However, in general, non-interest income for the fourth quarter was approximately flat YOY. The huge trading banks also announced restrained investment banking revenues during the quarter, smooth off an unusually poor year for these bustle (down on collection by roughly 10% connect with 2022, which was itself a comparatively weak year). However, debt sponsoring was an average shining mark, as revenues made stronger by roughly one-third on collection, while the picture for value sponsoring and M&A consultative was assorted across organizations [4].

Financial ombudsmen around the world gathered to discuss methods to keep away from a similar disaster with the regulations date to the backwash of the 2007-to-2009 financial crisis. They settled the international Basel Committee on Banking Supervision to expand minimum capital, liquidity requirements and leverage to make sure crucial banks could continue another disruption in 2009. In mid-2023, the Federal Reserve, the Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency planned to publish for comments of the U.S. report of the new regulations [5].

An acute liquidity crisis may bloom into an entire capitalization crisis inside the range of a short period. The circumstances may develop attributable to fire sale risk that may come to light on account of taking large positions in illiquid assets. This fire sale risk may take extra impacts on the balance sheet since the organizations have to mark their assets to the fire sale price. Banks can keep away from this crisis by concentrating the ratios such as liquid assets to total assets and liquid liabilities to total liabilities.

On the other side, according to a bank hold highly liquid assets as these assets can be sold or mortgaged to meet the funding risks in a short period, it may make better to the maturity transformation [6]. A bank may oblige to raise its cash reserves to alleviate the liquid risk, but it could be catastrophic in practice. The liquidity of an assets needs to be found its ability to cause the liquidity, as an alternative to its trading book categorization or its accounting treatment. CEBS additionally bring attention to confirm a liquidity cushion, consist of cash and liquid assets. This buffer supplies a buffer to resist the liquidity strain in a “survival period”.

3. Credit Risk

However, today the COVID-19 pandemic has carried nearly the while global economy to a effective stop, and the reduction seen in the global GDP (and other macroeconomic standard) is notably worse than what would have been predicted in bank’s forward-looking sequence of events [7].

Anyway, with the current COVID-19 pandemic, it will be a problem for nearly all banks around the world, announced under IFRS 9, to face the crucial requirements of the principle in calculating “forward-looking” expected credit losses (ECLs). Due the IFRS 9 principle asks for banking institutions to incorporate “probability-weighted scenarios” when calculating ECLs, the credit prototype teams inside banks will ask to dig over how predict economic shocks and separate probability weights can be included into prevail damage models [8].

4. Market Risk

Market risk is a crucial feature of the investment world that investor need to comprehend. It is the chance of an investment damaging its value because of changes in market element such as economic

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circumstances, interest rate, and governmental unreliability. Many investors are frequently suspicious of investing in assets that are more contract to the market risk, while others may think of it as a chance to cause higher refunds. Irrespective of the manner, comprehending market risk is necessary for any investor. By being conscious of the possible risks related to different investments, invertors can make more knowledgeable decisions about where to invest the money. When market risk can never be totally removing investors can oversee it by branching out their portfolios and using hedgerow strategies [9]. The most usual kinds of market risk incorporate interest rate risk, equity risk, commodity risk, and currency risk. Interest rate risk include the volatility that may occur with interest rate variation and is the most pertinent to fixed-income investment.

The IMF's Gopinath started the meeting with ideas on the 'premature' supposition around assertive rate reduce [10]. She said that they still have labor markets that are comparatively impervious in the US and incorporating the Euro area. So, they need to suppose rates to decline sometime this year. But founded the facts that they're searching right off the bat, they supposed this to be more probable in the second half of this year. During a longer time, she anticipated the mean interest rates will maintain to stay higher when linken the time after the very financial crisis, between the years of 2008 and 2019 [11]. The reason is that they're in a world where people have much more provide fright that are for more acute, and they've seen that inflation can resurgence a huge amount strongly.

While no additional moment has been worn for rate lessening, markets are forecasting that 2024 will see rate reduce by that time – and that isn't automatically a substandard thing, described Friedman, of Nasdaq. She said the US Federal Reserve willing to make sure that there's a appreciation of firmness around the rate before making notable actions on that forepart, while advised against a refund to a low-interest economy. If they are returning down to a low-interest rate situating, it signifies that they're not expanding, and that's not good for anyone. It just hopes that they can get a rate situation in the 3-4.5% range.

There are other kinds of risk. For example, equity risk is the risk associated with the altering prices of stock investment. Commodity risk includes the altering prices of commodities like unrefined oil and corn. Currency risk, or exchange-rate risk, comes to light from the alter in the price of one currency concerning to another. This may influence investors having assets in other country.

In public, trading companies in the U.S are ordered by the Securities and Exchange Commission (SEC) to revel how their efficiency and consequence may be related to the functioning of the financial markets. This necessity is intended to present a company's revealing to financial risk. For example, a company supplying imitative investment or overseas exchange time to come may be more unprotected to financial risk than companies that do not supply these kinds of investments. This detail helps investors and dealers make a resolution base in their own administration regulation [12].

Stock market can also be influenced by interest rates. When the ratio gets lower, companies take care of taking more money as a loan, which can feign the economy and cause to raising stock prices, companies may ask for the loan of less money, and the economy may decrease speed, bringing about stock prices to lessen. There is not only one way to totally keep away from market risk when you are investing. However, you can use hedgerow master plans to keep safe opposed to volatility and keep down the collision that market risk will own the investments and all-inclusive financial health. Foe instance, buying put choice to protect from a snag trend while picking out specific safety. Or, making use of register choices to hire a big portfolio of bonds.

SVB's stock fell 30%, when markets opened, on March 9. The bank's stock dropped by 60% that day in the end. An increasing number of enterprise financier and startups began to take their money out of the bank, which attaches to the decreasing coercion on the stock. SVB's large deposit discharges successfully destroyed the bank's share contributing. With the bank's financial circumstances quickly worsening the organization became bankrupt, strengthen the Federal Reserve

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to tread in and capture it. The drop of SVB sent shockwaves through the financial world, bringing out investors and dissection to struggled as they look around for indication of other banks facing common challenges. The wavelet effect was instant, with other institutions feeling the force of SVB's collapse. With the possible of a cupola result, the business was on high vigilant for any signs of unreliability. It didn’t take long for a wavelet result to display.

Regional lender First Republic Bank saw its shares drops as nearly 52% during early trading, and it went on drop later. Only two days after SVB’s breaking down, New York-based Signature Bank was also closed by regulators, begining the third-largest bank break down in U.S. history, just at the back of SVB [13].

5. Systemic Risk

Systemic risk is the chance that an occurrence at the company level could precipitate acute unreliability or cave-in a whole manufacturing or economy. Systemic risk was the greatest factor leading to the financial crisis in 2008. Companies regard as a systemic rick that call “too big to fail” [14].

The financial crisis started at 2007 with a crisis in the United States highest market. In the end, the globule split open and there was a large housing and mortgage break in the U.S. this circumstance resulted in a liquidity and credit munch that extend to all credit and financial markets. Both of these risk lead to an economic alarm which was not forecast to be so huge [15].

Economic alarm caused an economy-wide economic decline in the U.S. Besides, the U.S. downturn resulted in a precipitous turn down in worldwide and trade investments. This economic decline influences the most higher-level economies as well. Recessionary plans cumbering with the banking system. The banking crisis issued in a supreme debt crisis and improved to a full-drift international banking crisis with the breakdown of the investment bank, Lehman Brothers. Immoderate risk-taking by Lehman Brothers and other banks contribute to enlarge the financial impact worldwide. All these results caused to a deteriorating economic decline.

This crisis was in the end came behind by a worldwide economic down trend, the Great Recession in 2008-09. The European crisis which is a crisis in the banking structure of the European countries utilizing the euro) came behind subsequently. In late 2009 the economic decline touches the bottom, but there were long time of long-drawn-out growth up to this time in countries loaded by debt attributable to the financial crisis.

Systemic risk management can have done by geographical, nationwide, or even worldwide efforts. Because systemic risk can make down all or bit of an economy, financial risk managers can entrance administrative tools and lawfully irrevocable recourse to be in charge of behaving within an economy. For financial organizations regulators, this incorporates the power to inspect fairness recurrence, debt-risk insurance, put movement, and other revealing. The omnipresence of connect assets and the way capital can progress across supreme edges, but grows the risk of systemic contamination across the worldwide system.

6. Conclusion

To sum up, the continued high interest rate of the bank will bring many risks. Higher interest rates lead to higher costs, a lot of liquidity and pressure on margins. Liquidity risk management has always been the cornerstone of proper balance sheet management, focusing on customer risk, finance, and the operational capabilities of the finance team, monitoring risk and seizing every opportunity to reduce funding costs. High interest rates may create credit risk and the lending bank may not receive the principal and interest owed. Banks can manage credit risk through a variety of strategies. They can set specific lending criteria, including requiring borrowers to achieve a certain credit score. They

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can then periodically monitor their loan portfolios, assess any changes in borrowers' creditworthiness and adjust. However, no single method can completely avoid market risk, and investors suffer losses due to the impact on the overall performance of financial market investments. But hedging strategies can be used to guard against turbulence. A bank rate hike would cause serious systemic risk, and it would create a chain reaction that could lead to an economic collapse. Systemic risks need to be restrained by regulatory tools and laws.

References

[1] Hamilton, J. D., & Jorda, O. (2002). A model of the federal funds rate target. Journal of Political Economy, 110(5), 1135-1167.

[2] Alter, A., Hlayhel, B., Kroen, T., & Piontek, T. (2024). Financial Stability in a Higher-for-Longer Interest Rate Environment the Case of the Middle East and North Africa.

[3] Lucchetta, M. (2007). What do data say about monetary policy, bank liquidity and bank risk taking?. Economic notes, 36(2), 189-203.

[4] Fitch Ratings. (2024). Non-Rating Action Commentary: U.S. Banks Report Weak 4Q23 Results; Signal Lower Net Interest Income in 2024. https://www.fitchratings.com/research/banks/us-banks-report-weak-4q23-results-signal-lower-net-interest-income-in-2024-22-01-2024

[5] Yeh, A., Twaddle, J., & Frith, M. (2005). Basel II: A new capital framework. Reserve Bank of New Zealand Bulletin, 68(3), 4-15.

[6] Arif, A., & Nauman Anees, A. (2012). Liquidity risk and performance of banking system. Journal of Financial regulation and compliance, 20(2), 182-195.

[7] Wakode, S. (2020). Efficacious scrutinizing of COVID-19 impact on banking using credit risk metrics. International journal of finance and banking Research, 6(3), 51.

[8] Golin, J., & Delhaise, P. (2013). The bank credit analysis handbook: a guide for analysts, bankers and investors. John Wiley & Sons.

[9] Dowd, K. (2007). Measuring market risk. John Wiley & Sons.

[10] Agenda. (2024). Financial and Monetary Systems: Are interest rate cuts coming? Here's what the IMF and other global leaders are saying at Davos 2024. World economic forum. https://www.weforum.org/agenda/2024/01/interest-rate-cuts-imf-global-leaders-davos/

[11] Bollard, A. (2013). Crisis: One central bank governor & the global financial collapse. Auckland University Press.

[12] Hayes, A. (2023). Market Risk Definition: How to Deal with Systematic Risk. Investopedia. URL: https://www. investopedia. com/terms/m/marketrisk. Asp.

[13] Santa clara university. (2024). Inside the Silicon Valley Bank Collapse: What Really Happened. Leavey school of business. https://onlinedegrees.scu.edu/media/blog/inside-the-silicon-valley-bank-collapse-what-really-happened

[14] De Bandt, O., & Hartmann, P. (2000). Systemic risk: a survey. Available at SSRN 258430.

[15] Acharya, V. V., Pedersen, L. H., Philippon, T., & Richardson, M. (2017). Measuring systemic risk. The review of financial studies, 30(1), 2-47.