Risk Assessment of Banks When Interest Rate Hikes

Jialin Li

Faculty of Arts & Science, University of Toronto Mississauga, Toronto, ON M5S 3G3, Canada

Abstract. In the era of global economic integration, the banking domain stands as a pivotal influence in determining a nation's economic health and stability. This piece explores the mounting significance of appraising banking hazards, especially in the face of the unparalleled obstacles brought forth by the COVID-19 pandemic. The international economic scenery has experienced significant transformations due to the pandemic, influencing economic endeavors, corporate earnings, and workforce dynamics. As a result, banks confront mounting credit, market, and liquidity risks, demanding strategic measures for operational stability. The essay focuses on assessing banking risks, with an emphasis on interest rate hikes, providing valuable insights for the industry's prudent development. It scrutinizes liquidity risk, highlighting challenges stemming from rising interest rates and urging diversification of funding sources and effective liquidity management. The credit risk landscape, influenced by pandemic-induced financial distress, increased defaults, and the need for enhanced risk management, is discussed. Additionally, the examination of market risk, particularly affected by interest rate hikes, explores fluctuations in asset prices and heightened volatility. The interplay of these risks during the COVID-19 pandemic emphasizes the necessity for banks to comprehensively strengthen their risk management strategies. The challenges associated with liquidity risk, including run risk, credit risk amid economic downturns, and market risk dynamics influenced by interest rate changes, are highlighted. The essay concludes by underscoring the substantial impact of the pandemic on the global economy, prompting the need for effective risk management strategies to ensure sustained operations and resilience in evolving market conditions.

1 Introduction

In an era of global economic integration, the banking sector, as a core component of the financial system, directly impacts the health and security of a country's economy. Particularly in the complex and ever-changing economic landscape, the importance of assessing banking risks becomes increasingly prominent. In recent years, the global economy has faced unprecedented challenges due to the worldwide impact of the COVID-19 pandemic, presenting unparalleled risk challenges to the banking industry.

The outbreak of the COVID-19 pandemic and its sustained effects have brought profound changes to the global economy. A series of chain reactions, such as lockdown measures, supply chain disruptions, and declining consumer confidence, have severely constrained economic activities, leading to a decline in corporate profits and an increase in unemployment. Against this backdrop, the credit environment of banks has undergone significant changes, with credit risk, market risk, and liquidity risk continuously accumulating, exerting immense pressure on the sound operation of banks. Furthermore, heightened volatility in financial markets and substantial fluctuations in asset prices have introduced considerable uncertainty for banks in both asset management and liability management. Liquidity risk, the potential shortfall of funds that banks may face when meeting customer withdrawal and loan demands, has become an integral aspect that cannot be overlooked in the current assessment of banking risks. Credit risk, stemming from asset losses due to borrower distress, has also been magnified further under the influence of the pandemic. Market risk, encompassing interest rate risk and exchange rate risk, has become a focal point in the risk management strategies of banks amid the instability in financial markets.

Therefore, in the face of the economic impact brought about by the COVID-19 pandemic and the instability in financial markets, banks must strengthen their comprehensive assessment and management of liquidity risk, credit risk, and market risk. This is crucial to ensuring resilient operations in a complex and ever-changing economic environment and providing robust support to the real economy. This paper aims to delve into the assessment of banking risks in the context of interest rate hikes, with the goal of offering valuable insights for the prudent development of the banking industry.

2 Liquidity risk

Liquidity risk is the prospect that a financial institution might face challenges in fulfilling its short-term financial...
obligations and operational necessities, arising from an imbalance between its liquid assets and liabilities. Put more straightforwardly, it signifies the risk that a bank might lack sufficient funds readily available to fulfill its day-to-day cash flow requirements [1]. This risk becomes particularly pronounced amid interest rate hikes. Hence, diversifying funding sources and implementing effective liquidity management strategies emerge as imperative measures for mitigating liquidity risk.

In light of the global economic hurdles posed by the COVID-19 pandemic, central banks worldwide enacted strategies to bolster their respective economies. Rather than opting for interest rate hikes, the predominant strategy entailed slashing interest rates to invigorate economic endeavors and alleviate the pandemic's repercussions. As the pandemic unfolded early in 2020, central banks, including the U.S. Federal Reserve, the European Central Bank, and others, swiftly implemented measures to decrease interest rates [2]. The primary objective was to render borrowing more accessible for both businesses and consumers, fostering expenditure and investment to counter the economic slump induced by pandemic-related disruptions. Moreover, US central banks introduced various unconventional monetary policy measures, such as quantitative easing, to infuse additional liquidity into financial markets and uphold the functionality of the financial system. These actions aimed to ensure credit availability and avert a financial crisis amid heightened uncertainty. Interest rate cuts and accommodative monetary policies were part of the broader efforts to stabilize economies, support employment, and facilitate a quicker recovery. The consensus among central banks was to keep interest rates low until there were clear signs of sustained economic improvement. It's important to note that the specific actions taken by central banks varied across countries based on their economic conditions and policy frameworks. Interest rates remained generally low in many parts of the world as central banks continued to navigate the ongoing challenges posed by the pandemic [3].

Increasing interest rates significantly impact liquidity risk for financial institutions. As rates rise, the cost of borrowing increases, particularly for those with short-term or variable-rate debt. This heightened expense may impede a bank's ability to maintain sufficient liquidity. Elevated interest rates often lead to reduced borrowing by consumers and businesses, causing a contraction in loan demand. This affects how banks deploy funds, potentially leaving them with excess liquidity and challenges in optimizing asset utilization. Additionally, rising interest rates may decrease the market value of fixed-income securities in institutional portfolios, impacting overall portfolio valuation and diminishing the value of liquid assets, influencing liquidity positions.

Importantly, this scenario contributes to increased market volatility, affecting the liquidity of financial instruments, and making it challenging for institutions to trade assets without significantly impacting prices. This dynamic can lead to liquidity constraints, especially during periods of market stress. Lastly, higher interest rates may reduce mortgage refinancing activity, a common source of household liquidity, potentially resulting in households having less disposable income and altering spending patterns. These shifts in consumer spending can impact businesses reliant on consumer expenditures [3].

Alerted about SVB's weakness, clients of the bank attempted to withdraw their deposits. This precipitated a run on the bank, as reportedly more than 90 percent of its depositors' accounts exceeded the per depositor insurance limit of $250,000 [4]. Run risk falls under the category of liquidity risk. A run, also known as a squeeze, is a phenomenon in which many bank users go to the bank to withdraw cash at the same time because of panic, mistrust, or other reasons. This usually occurs in the context of a bank's declining creditworthiness, rumoured insolvency, or an economic crisis, leading depositors to doubt the safety of their savings in the bank. As a run involves many depositors withdrawing cash at the same time, it can put significant pressure on the bank's liquidity management, particularly in terms of position management, which can lead to liquidity risk.

In summary, the interplay of rising interest rates and liquidity risk encompasses challenges such as increased borrowing costs, shifts in loan demand, changes in asset valuations, heightened market volatility, and alterations in consumer spending dynamics. Financial institutions need to navigate these complexities with strategic liquidity management to ensure resilience in the face of evolving market conditions.

3 Credit risk

Credit risk, often referred to as default risk or counterparty risk, denotes the likelihood that a borrower might falter in fulfilling their financial commitments delineated in a loan or credit arrangement. Put simply, credit risk represents the possibility of financial detriment to a lender or investor stemming from a borrower's incapacity to reimburse a debt or honour their contractual duties [5].

The pandemic triggered a global economic downturn, leading to decreased consumer spending, disrupted supply chains, and business closures. This economic contraction increased the likelihood of financial distress for businesses and individuals, contributing to higher credit risk. Besides, widespread job losses and income reductions occurred due to lockdowns and economic disruptions. Individuals and households faced challenges in meeting their financial obligations, leading to an increase in delinquencies and defaults on loans. Most importantly, the credit quality of borrowers deteriorated for some due to pandemic-related challenges. Lenders had to reassess the credit risk associated with their portfolios and make provisions for potential losses. Thus, Financial institutions had to enhance their risk management practices addressing the evolving credit risk landscape. This included conducting stress tests, reassessing creditworthiness criteria, and adjusting lending practices to mitigate heightened credit risk.

In the initial months of 2023, Credit Suisse, confronted with a significant plummet in its stock price,
revealed intentions to secure loans amounting to $54 billion tofortifyliquidity and regain investor trust. Nonetheless, come mid-March, itsprimary backer, The Saudi National Bank (SNB), retracted further financialbacking owing to regulatory constraints. The pivotal moment arrived in early March 2023 with thedownfall of Silicon Valley Bank and Signature Bank, paving theway for UBS to acquire Credit Suisse. In response, the U.S. government reassured depositors of the availability oftheir funds, alleviating concerns within the globalbanking system. Despite warning signs, Credit Suisse proceeded with risky decisions, lending $140 million toGreensill in October 2020 and downplaying risks associated with Archegos, whose founder, Bill Hwang,had a history of financial missteps [6]. The gravity ofthesituation cannot be overstated, as Credit Suisse’s failure to ignore warnings and adapt to the pandemic’s impactraised suspicions among lenders and borrowers. The disregard for risk assessment and a series of questionable decisions ultimately led to the downfall of the once-prominent financial institution.

4 Market risk

Market risk, also recognized as price risk or directional risk, pertains to the possibility of suffering financiallosses due to unfavorable shifts in market prices. This risk stems from thevolatility observed in the prices offinancial assets, including stocks, bonds, currencies,commodities, and derivatives. Market risk encompassesaspectrum of subtypes, which encompass equity risk,interest rate risk, currency risk, and commodity risk [7].

The prevailing rate arrangement evolved subsequent to the Federal Reserve (Fed) initiating a series of increments in the short-term interest rate it manages, known as the target federal funds rate, commencing in early 2022. Over the period spanning from March 2022 to July 2023, the Fed implemented eleven rate hikes, elevating rates from nearly 0% to an upper threshold of 5.50% [8]. Since then, the Fed has held the line on rate hikes and made it clear that they will continue to do so. An interest rate hike plan can have a significant impact on market risk. When a central bank or monetary authority indicates its intention to elevate interest rates, it can precipitate heightened market turbulence and risk for several reasons. Firstly, as interest rates rise, the cost ofborrowing becomes more prohibitive for both businesses andindividuals. Consequently, this can result in diminished spending and investment, potentiallyaffecting corporate earnings and economic expansion.

As a result, stock prices may decline as investors revaluate the potential return on their investments. Statistic shows that rising interest rates initially took a toll on the broader stock market (the S&P 500 lost more than 18% in 2022) [8]. Moreover, when interest rates rise, bond prices typically fall. This is because new bonds issued at higher rates will offer better returns than existing bonds with lower rates. As a result, bond investors may see the value of their portfolios decrease, leading to potential losses [9]. In October 2023, 10-year Treasury yields approached the 5% mark, but then dropped to below 4% by December. Yields briefly rose to 4.18% in January before falling below 4% again at the end of the month [10]. Furthermore, interest rate hikes can influence exchange rates. Elevated interest rates may entice foreign investors, resulting in an appreciation of the domestic currency. A robust currency can affect exports, corporate profits, and overall economic expansion, thereby introducing supplementary market risk. Moreover, market participants frequently respond to the prospective interest rate hikes in accordance with their interpretations and expectations of the central bank’s maneuvers [11]. In instances where there exists uncertainty or discord regarding the ramifications of rate hikes, it can precipitate escalated volatility and risk within the markets.

The onset of the COVID-19 pandemic exerted a notable influence on market risk spanning diverse assetcategories and financial markets. The onset of thepandemic led to heightened market volatility, with major stock indices experiencing sharp declines followed by rapid rebounds. Uncertainty surrounding the spread of the virus, its economic impact, and policy responses contributed to increased volatility in equity markets, bond markets, and commodities. On February 19, 2020, the stock market reached its pinnacle before the emergence of the COVID-19 pandemic precipitated a sharp decline in stock prices [12]. During the initial month of the crisis, all sectors faced unprecedented and rapid declines. In the early stages of the pandemic, negative news dominated, uncertainty loomed large, and the potential downside appeared limitless. Nevertheless, come mid-March, authorities initiated unprecedented stimulus initiatives. As of early June, specific sectors, notably pharmaceuticals and biotechnology, had completely recuperated from their setbacks. Nevertheless, the revival has been disparate, with sectors such as aerospace, air travel, banking, insurance, and oil and gas still substantially lagging behind their pre-pandemic standings. Sectors hardest hit by the crisis have commenced the process of reclaiming lost ground, while those that prospered during the pandemic persist in their upward trajectory. As each phase progressed, average returns improved, but the gap between the best and worstperformers widened. In mid-March, the difference was 27 percentage points, but today it stands at 80 percentage points, marking the widest divergence in recent memory [12]. Moreover, the pandemic resulted in widespread disruptions to global supply chains, business operations, and consumer demand. These disruptions led to increased uncertainty about corporate earnings, economic growth prospects, and financial stability. Investors became more cautious and risk-averse, leading toheightened market risk. Lastly, certain sectors of the economy were disproportionately affected by thepandemic, such as travel and tourism, hospitality, and retail. Companies in these sectors faced significant revenue declines, layoffs, and financial distress, which
increased market risk for investors holding securities in these industries.

5 Systematic risk

Systematic risk, alternatively termed market risk or non-diversifiable risk, embodies the inherent risk encompassing the entirety of the market or a specific market segment. In contrast to unsystematic risk, which can be alleviated through diversification, systematic risk persists despite holding a diversified asset portfolio. This category of risk influences all investments to varying extents and is linked to overarching economic, market, or geopolitical factors that exert an impact on the entire financial landscape [13].

The Basel III regulation was implemented with the objective of mitigating the economic harm stemming from banks undertaking excessive risk. It was put forth subsequent to the 2008 Global Financial Crisis to bolster banks’ resilience to financial strain and enhance their transparency and disclosure practices [14]. Basel III enforced more stringent capital requirements on banks to ensure they maintain an ample capital cushion to weather financial shocks and losses. Banks are mandated to uphold a minimum threshold of common equity tier 1 capital (CET1) relative to their risk-weighted assets. Additionally, it introduced a leverage ratio as a supplementary measure to complement the risk-based capital standards. This leverage ratio acts as a non-risk-based gauge, setting a cap on a bank’s leverage by comparing its Tier 1 capital to its total exposure. For example, amid the COVID-19 pandemic, the Federal Reserve reinstated the Money Market Mutual Fund Liquidity Facility (MMLF), initially launched during the financial crisis. This facility provided loans to banks using collateral obtained from prime money market funds, which typically invest in Treasury securities and short-term corporate IOUs known as commercial paper [15]. At the onset of the pandemic, investor uncertainty regarding the value of private securities held by these funds led to swift withdrawals from prime money market funds. In response to ensuing outflows, funds endeavoured to sell their securities, but market disruptions impeded the sale of even high-quality and shorter-maturity securities, precipitating a “fire sale” scenario. This depreciation of securities values disrupted markets vital for businesses’ fundraising efforts. In light of these challenges, the Fed established the MMLF to assist money market funds in meeting redemption requests from households and other investors, thereby enhancing overall market functionality and facilitating credit provision to the broader economy.

6 Conclusion

The COVID-19 pandemic has caused a seismic upheaval across the global economy, its repercussions rippling through financial markets and banking institutions alike. As countries grappled with the dual challenges of containing the virus and mitigating economic fallout, financial market instability emerged as a glaring reality. The COVID-19 pandemic thrust banks into uncharted territory, where the traditional paradigms of risk management were tested to their limits.

In terms of liquidity risk, the pandemic has pushed numerous businesses into distress, leading to a rise in default rates for both individuals and corporate loans, posing a challenge of insufficient funds for banks. To sustain their operations, banks have had to rely on external financing, thereby increasing liquidity risk. Concerning credit risk, the economic downturn has resulted in a decline in corporate profits, weakening their repayment capabilities and causing potential losses to banks’ credit assets. Simultaneously, stringent lockdown measures and decreasing consumer confidence have also impacted the repayment status of individual loans, further intensifying credit risk. Market risk is equally significant. The instability in financial markets has led to drastic fluctuations in asset prices, adding uncertainty to banks in both asset management and liability management. Changes in interest rates and exchange rates also bring risks to the balance sheets of banks.

In summary, the intersection of the COVID-19 pandemic and financial market instability has unleashed profound challenges upon the banking industry. From liquidity risk, exacerbated by distressed businesses and heightened default rates, to credit risk, amplified by weakened corporate profitability and faltering consumer confidence, banks find themselves navigating treacherous waters. Concurrently, market risk looms large, with volatile asset prices and unpredictable fluctuations in interest and exchange rates testing the resilience of banks' balance sheets. To weather this storm, banks must not only fortify their risk management frameworks but also adapt swiftly to evolving market conditions. Only through proactive measures and strategic initiatives can banks ensure their resilience and sustainability in the face of these unprecedented challenges.

References

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