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RISKS FACED BY BANKS DUE TO NATURAL HAZARDS, CRISIS SITUATIONS, AND PANDEMICS – A COMPREHENSIVE REVIEW OF LITERATURE

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ABSTRACT

A country's banking system is inextricably linked to its financial and economic systems; as a result, any breakdown in the banking system will create an impact on both systems. Since the unexpected hazardous situations that occurred in the recent past created a considerable impact on the banking system, this paper aims to investigate the risk faced by banks due to natural hazards, crisis situations, and pandemics by examining impacts from major hazards such as the global financial crisis, the European crisis, the Asian crisis, Tsunami and other natural hazards, and COVID-19. This is a timely study that generates value for the banks to mitigate risks during an unforeseen situation. The research study is designed as a systematic literature review through a comprehensive analysis of published research papers. In order to give a holistic view of how the banks are affected during a hazardous situation, the entire banking system is taken into account without considering regional differences. The findings of the study show that an increase in default risk and systematic risk basically happens during a crisis or hazardous situation. This leads to an increase in the overall risk level of banks and if banks are unable to manage and mitigate the risk, they have to experience bank runs. Further, there is a possibility of decreasing the performance and lending capacity of banks. The final conclusion based on the literature states that the risk level of banks is detrimentally affected by natural hazards, crises, and pandemics.

Key Words: Risks, Banks, Natural Hazards, COVID-19, Global Financial Crisis, The Asian Crisis, Financial System

INTRODUCTION

Risk is often understood to be the exposure to a proposition whose results are unknown. Risk is a circumstance that involves conscious people and animals. Organizations, businesses, governments, and other artificial creatures, on the other hand, are not conscious of the risk they are facing. They are, therefore, unable to be in danger. Instead, they serve as platforms for people (such as members, investors, employees, voters, etc.) to assume the risk (Holton & Glyn 2004). In terms of finance, the risk is the possibility that the result of the actual potential gains varies from the result or return that is anticipated. The possibility of having a difference between expected and actual outcomes is known as risk (Chen & James, 2022).

The idea of risk and banks are seen as being connected in many ways with reference to the banking industry because risk is the foundation of banking. When banks accept client deposits, they accept risk. The capital of banks and fluctuations in risk are positively correlated (Dahl, Shrieves & Drew, 1992). Risk in banking is the likelihood of occurring both anticipated and unanticipated events and it negatively affects the capital or profits of

the banks, or both. Undoubtedly, all banks are facing a variety of risks in the current tumultuous and volatile climate, including credit risk, foreign exchange risk, liquidity risk, interest rate risk, market risk, etc. These hazards pose a threat to the banking industry's survival and prosperity. The Global Financial Crisis of 2007 can be called the biggest shock to the banking industry since the Great Depression which resulted in an increase in liquidity risk and a decrease in lending quality (Thankor & Anjan, 2015). Natural catastrophes have a noticeable influence on banks' loan impairment, return on average assets, and net income to assets and net income to equity ratios (Walker et al., 2022), and it is made quite obvious that the tsunami has a substantial impact on bank non-performing loans (Brahmana, Puah & Chai, 2016). Cross-border loans to Indian companies indirectly benefit the banks by increasing the demand for local bank credit during the pre-Eurozone crisis (Swamy & Vighneswara, 2019). Contrary to all other crisis situations and dangers that had previously occurred, COVID-19 is described as the worst pandemic in history (Miller & Korin, 2022). The COVID-19 epidemic irreparably damages and destroys economies all across the world, including financial markets and financial institutions, in all conceivable ways. The pandemic produces a multi-layered and complex catastrophe, particularly for banks, primarily through rises in non-performing and impaired loans (Barua & Barua, 2020).

The paper adds an important contribution to the literature by analyzing the impact of hazards on the entire banking system around the world. Moreover, any kind of hazard is taken into account when analyzing the impact, which leads to giving an overall understanding. Therefore, it is helpful to understand the numerous risks that banks face as a result of various crisis circumstances. Moreover, this study can be beneficial to identify the factors and areas that the banks should focus on during a crisis and hazardous situations in order to mitigate the risk and the finding of this study are useful for banks to identify and determine how they should respond to a pandemic. Further, the results of this study might help banks to make policy decisions. The findings are helpful in many ways to understand the impact of hazards and to identify the control actions in advance.

METHODOLOGY

This research study is undertaken as a systematic literature review where the published research papers are used to draw the conclusion. Prior to doing the literature review, 102 research publications that are relevant to the study's field of inquiry are gathered. Of those, 79 are deemed to be trustworthy and noteworthy. The collected research papers are arranged and assessed based on the context to help focus on the study and topic matter. 23 research articles that lacked sufficient data and appropriate procedures are eliminated owing to their poor quality. The outcome is a list of studies that are conceptually pertinent to the chosen field of study. This research is designed as a systematic literature review and the findings are going to be announced by reviewing the selected 79 published articles and following the procedure of (Breitenstein & Miriam, 2022) in conducting the research. The functions such as data collecting and data processing under this research are distinct from those under other quantitative studies because it does not include any statistical software or quantitative methodology. Due to the nature of the research, the organization of this study changes. The introduction, methodology, analysis, findings and discussions, and conclusion are the steps in the research process. A separate literature review is not included in this research because it is conducted as a systematic literature review; instead, a

deep and thorough examination of the literature is conducted as part of the analysis. In the analysis section, each of the chosen research papers is carefully read to examine the literature. Following this, a summary (descriptive and graphical) based on the reviewed literature is provided using a variety of segments and viewpoints. In order to align the study with the main objective and sub-objectives, relevant pieces of literature are categorized according to a few factors, including year, journal type, electronic databases, kind of hazard, technique, and variables, in order to examine the aforementioned hypotheses. The primary data collection methods, such as information from questionnaires and interviews, are not used in this study; instead, secondary data gathered through earlier research publications is used. The conclusion is solely based on the study of prior research publications that are undertaken and published in the fields of risk, banking, crisis, and hazards (as previously mentioned).

Finding keywords to use when searching the literature is the first step. Use of the search engine "Google Scholar" and the keywords "Risks, Banks, COVID-19, Natural Hazards, Tsunami and Financial Crisis, SARS, MARS, Floods, Tornado, Bank Runs, Financial System Collapse" are used to identify relevant articles. Six keywords are discovered to be really significant for this research after a thorough evaluation of research works. "Risks, Banks, COVID-19, Natural Hazards, Tsunami, and Global Financial Crisis" are those things. Additionally, the complete study topic is employed when looking for literature, and reference works that are cited in certain research papers are also taken into account and examined. The abstract, keywords, technique, and conclusion are taken into account while analyzing a research report. In order to validate that the literature review is consistent with the chosen research field, the research objectives of the studies are also carefully considered when looking for and analyzing the literature. The renowned electronic databases Emerald Insight, Elsevier, Wiley, and Science Direct are also used directly to search for more papers without being restricted to keywords. All of the papers are available for offline usage in PDF format.

Given that electronic databases can contain enormous volumes of data, using them as a source for data collection is advantageous and useful. Since a database gives reliable information based on necessity, using one takes less time. Since Elsevier and Emerald Insight databases are widely used, gathering information for research from them is less dangerous and more fruitful. In addition, finding research papers relevant to the research area is incredibly simple with an electronic database because all we need to do when searching for literature in an electronic database is enter our research area, and the database will then provide a variety of research papers that have been conducted in various locations and time zones. It should be noted, though, that there are occasions when publications in electronic databases cannot be accessed for free. As the database requires payment for the item in order to gain access, it can be detrimental to users. It also offers another technique to gain access as a remedy for that. The user may access the articles through the university if they have a current account that is provided by one of the registered universities. Undergraduates conducting research studies will greatly benefit from this. As previously noted, when free access is prohibited, the institution also grants me access through the university account.

There is no specific chronological period while reviewing the literature. In order to gather additional information to support the conclusions, the papers are not filtered based on the publication year (there is no precise time period). Instead,

any research article relevant to the chosen research subject is chosen, regardless of the publication year. Additionally, there is no restriction on journals, authors, or electronic databases when looking for literature. However, there are some exclusion criteria as well. This study is limited to the field of banking. As a result, we do not take into account the risks that other financial organizations, such as insurance firms and non-bank institutions, face. Therefore, when searching the literature, there was no emphasis on these regions. To clearly grasp the impact of risks on banks, 96% of research publications focus entirely on the banking sector. Five papers, however, focused on the real estate market, the loan market, and financial institutions. A background study focused on different settings is done in order to reach a better result, even though our main focus is on banks and dangerous situations.

When analyzing the risks faced by banks, the following risks were mainly found to be key risks that faced by banks. Credit Risk - Credit risk is the possibility that a borrower who obtains a loan from a bank, or a counterparty, will not adhere to the terms and will not make the agreed-upon payments of interest and principal (Raghavan, 2003). Operational risk is defined as the risk that results from carelessness, mistakes, and damage caused by people, artificial systems, or processes (CFI Team, 2022). Market risk is the likelihood that a bank would sustain a loss as a result of shifting market conditions (Raghavan, 2003).

The risk associated with a bank's ability to generate and provide cash to meet its ongoing funding obligations is known as liquidity risk (CFI Team, 2020) Interest rate risk is the likelihood that negative effects on Net Interest Income may materialize as well as the susceptibility of the financial situation or condition to changes in interest rates (Raghavan, 2003). Foreign exchange risk is the possibility that fluctuations in exchange rates create an impact on the total risk levels (Raghavan, 2003).

ANALYSIS

Since the research is done as a systematic literature review, the previous research papers are carefully analyzed in the analysis chapter.

Analyzing the impact of the global financial crisis (2007) on banks

The 2007–2009 global financial crisis led to the fastest decline in the market value of bank shares and had the biggest impact on banks' risk since the Great Depression. The "riskier" financial institutions were more sensitive to the bank turmoil. A crucial point was that the stock market's value creation in the years leading up to the crisis raised systemic risk in the banking sector and left unresolved issues (Altunbas, Manganelli & Marques-Ibanez, 2011). As a result of the financial crisis and increased restrictions in the credit markets, structured financial products like corporate bonds were downgraded. This forced the central banks to lower interest rates and give liquidity to the institutions (Thankor & Anjan, 2015). The US financial system saw a significant shrinkage as a result of the shock that the global financial crisis caused in many nations, including the US (Katzenstein, Nelson & Peter, 2014), and an acceleration in credit and asset/ property prices led to a banking crisis (Drehmann, Borio & Mathias, 2009). Nigerian banks were impacted by the widening of the global financial crisis, which ultimately led to the collapse of the whole financial system. The decline in Nigeria's capital markets, improvement in credit quality, rise in non-performing loans, tightening of exchange rates, and slowing of bank expansion are all mostly due to the financial crisis. It posed a threat to global financial progress (Olakunle & Olawumi, 2012). As the global financial crisis progressed into a

global economic downturn, non-performing loans as well as the banks' overall risk premia rose sharply. Bank recovery rates and the likelihood of default had a markedly negative relationship, and PD was regarded as the key variable in assessing systemic risk. The heightened systematic risk during the crisis period was expressed by 40% of default risk and 15% to 20% of liquidity premium. (Huang, Zhou & Zhuc, 2011; Switzer, Qiao Tu & Wang, 2017). Two significant commercial banks in Lithuania, AB Snoro Bank, and AB Ukio Bank, collapsed as a result of increased credit risk, according to Lithuanian banks, who indicated that they were indirectly impacted by the global financial crisis. In 2010, Lithuanian banks reported an increase in the percentage of non-performing loans from 7.2 percent to 18.9 percent. Another crucial element was that Lithuanian banks claimed better loan repayment capacity as a result of the lower interest rates. Furthermore, the loan portfolio of Lithuanian banks had a huge catastrophe due to the financial crisis (Mačerinskienė, Ivaškevičiūtė & Railienė, 2014). Banks significantly raised their holdings of liquid assets during the global financial crisis, which caused a $211 billion fall in consumer and investment loans. While the banking sector was grappling with turmoil brought on by the financial crisis, extra liquidity was added. In line with earlier research, European banks also reported that the financial crisis created a liquidity problem in the banking system. As a result, governments took supportive measures, such as buying up insolvent banks' illiquid assets and injecting liquidity into the banking system (Goddard, Molyneux & Wilson, 2009). The financial crisis also had a significant impact on interbank markets, which dried up and reported an increase in the systematic risk of the banking industry, ultimately leading to an overall failure (Allen & Carletti, 2008). The crisis had a significant impact on asset quality and loan portfolios. In particular, a bank was more likely to fail if it was relatively large, had low capital ratios, had less liquidity, depended more on brokered deposits, had a high percentage of non-performing loans, and had less income diversity (Whidbee, Lu & David, 2013).

Analyzing the impact of natural hazards on banks

In connection with the hurricane attacks in the Caribbean, banks encountered a significant withdrawal of bank deposits, faced a negative funding shock, and consequently had to draw on liquid assets. Since banks only lend money, they had received it as deposits from depositors, when depositors took money out of the banking system, their ability to lend money generally declined. During times of natural disasters, less credit was available, which reduced banks' earnings (Brei, Mohan & Strobl, 2019). Natural disaster-related damages increased the likelihood of default and led to a high ratio of non-performing loans. Following the natural disasters, the return on assets and bank equity decreased (Noth & Schuwer, 2018).

Analyzing the Impact of Asian Crisis on Banks

Asian crisis first surfaced in East Asian nations like Korea, Thailand, Malaysia, and Indonesia in 1997, having a devastating impact on the region's economies. While the balance sheets of banks deteriorated, growth rates changed into negative rates. Due to significant capital outflows from the financial systems, central banks had to step in as lenders of last resort to save the financial system. Capital outflows are a key sign of a bank's financial fragility, demonstrating that the Asian crisis put banks at risk (Mishkin & Frederic, 1999).

Analyzing the Impact of the European crisis on Banks

Cross-border lending systems failed as a result of the European crisis, and cross-border lending fell sharply and suddenly.

This had a significant impact on the local bank lending system in India (Swamy & Vighneswara, 2020). By raising systemic risk, the European crisis caused susceptibility to damage to the banking sector. After the crisis, the financial system, and the central banks both began to pay more attention to risk management (Ap□t□chioae & Adina, 2013).

Analyzing the impact of COVID-19 on banks

COVID-19 was viewed as a calamity that had an impact on many aspects of life in the world, including health (Borio & Claudio,2020). Loan growth has decreased to lower percentages of 1.04 percent, 0.69 percent, and 5.50 percent per quarter. Disease increased by 1-SD, which resulted in a 0.20 percent decline in banks' quarterly loan growth. Small, foreign, government banks and banks with a poor return on assets were negatively impacted by the pandemic. COVID-19 had an impact on loan growth depending on the industry, business, and nation-specific circumstances. Additionally, when that nation's financial markets, financial intermediaries, and restrictions on the availability of credit were underdeveloped, it had a negative impact on bank lending (Öztekin, Çolak & Özde, 2021). German banks saw a nearly 24 percent drop in their capital levels, which left cooperative and savings banks very vulnerable to the COVID-19 epidemic (Reint E. Gropp, Koetter & McShane, 2020). Additionally, COVID-19 raised the risk of default and contributed to a significant rise in non-performing loans (NPL). Due to cross-border lending, this has caused a shock not only to one country's balance sheet but also to other nations, where there has been an increase in non-performing loans. Since there was also a significant increase in withdrawals from developing countries, this type of growth in NPL ratios and US dollar denominated were positively correlated with withdrawals of capital from those markets (Park & Shin, 2021). Both large banks and public banks saw a significant decline in the value of their shares and stock returns as a result of the COVID-19 outbreak. However, borrower aid, quantitative easing, and liquidity support might have a positive effect on atypical returns (Demirgüç-Kunt, Pedraza & Ruiz-Ortega, 2021). Given the circumstances in Bangladesh, the banking industry was impacted by a larger default risk as a result of rising non-performing loans, declining risk-weighted asset values, declining capital adequacy ratios (CARs went negative), and interest income. This demonstrated how huge banks were more susceptible to the epidemic (Barua & Barua, 2020).

It was believed that COVID-19 was a systemic global risk that affected the capital adequacy of commercial banks as well as the creditworthiness of individuals (Zahariev et al., 2021). Banks that had poorer profitability, weaker capital positions, and credit portfolios of lesser quality were more vulnerable to pandemic risk. As a result of loan write-offs, a decline in interest revenue, and a decline in the market value of banks listed on the exchange, Poland's banks have faced COVID-19, which advised that the banks need sufficient capital to offset the negative consequences of probable losses (Korzeb & Niedziółka, 2020). Loan portfolios and non-interest-earning operations were shown to be significantly impacted by the pandemic due to the idiosyncratic risk attached to those. Parallel to the decline in credit ratings and deterioration in loan portfolio quality, capital markets were restrained. The pandemic had an impact on a wider variety of risks, including market risks, interest rate risks, foreign exchange risks, and commodity price risks (Rizwan, Ahmad & Ashraf, 2022). Further, Banks' long-term profitability has been significantly impacted negatively by COVID-19, while their short-term profitability has been

significantly impacted negatively by the non-performing loan ratio, liquidity ratio, and market sensitivity risk. However, the interest rate on Treasury Bills and the loan rate both contributed to the bank's profitability (Katusiime & Lorna, 2021). Indonesian banking sector gave clues that even the state banks were impacted by the epidemic, which also had an impact on the stock market for the banking sector. People were doing less banking, therefore even the state banks saw a decline in profits during that time (Ahadiat & Kesumah, 2021). Commercial banks in Bangladesh have also been impacted by COVID-19, just like other financial systems. Additionally, the risk brought on by COVID-19 caused banks' non-interest income to drastically decline. Since performance and non-interest income are strongly correlated, a decline in non-interest income led to a decline in performance (Xingjian Li, et al., 2021). COVID-19 has resulted in a significant increase in systematic risk in the banking industry (Rizwan, Ahmad & Ashraf, 2020) and resulted in a credit crunch and declined the delivery of credit (Darjana, Wiryono & Koesrindartoto, 2022).

More significantly, banks with larger structures, high leverage, riskier business practices, and low capitalization levels are more susceptible to systematic risk (Duan et al., 2021). The probability of default increased from 5.6% to 7.9% during the pandemic by increasing the default risk in the lending market (Nigmonov & Shams, 2021) and there was a significant, negative association between non-performing loans and the financial performances of Islamic banks and conventional banks (Ahmed, El-Halaby & Soliman, 2022).

RESULTS OF LITERATURE

Analysis based on the year (Figure 1)

The majority of the articles considered when summarizing earlier articles are written after the year 2020, with a sizable unstick. In terms of the COVID-19 pandemic and hazards, 2021 is recognized as having the greatest levels. 32 percent of research publications are from 2021, and 22 percent of investigations are carried out in 2020. In 2022, there is a significant decrease in the volume of research papers. These findings demonstrate that at least one study has been conducted annually on the risks that banks face as a result of hazards and crises

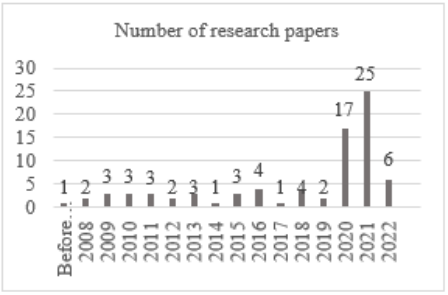

Figure 01

Analysis based on the type of journal (Figure 2)

Out of 79 articles, 46 finance-related research papers and 16 economics-related research papers tackle either natural catastrophes or crisis scenarios. The majority of the knowledge on the hazards encountered by banks is gathered from publications pertaining to finance. Finance-related literature makes up 58 percent of the overall body of literature.

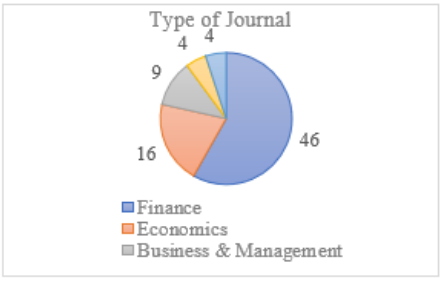

Figure 02

Analysis based on the electronic databases (Figure 3)

Due to the fact that most of the chosen publications are published through this

database, the electronic database "ELSEVIER" makes the largest contribution to the research. This electronic database contains many papers that are relevant to finance. Other databases used for reviewing literature include Social Science Research Network (SSRN), Emerald Insight, Taylor & Francis, Wiley, MDPI (Multidisciplinary Digital Publishing Institute), and others. Econstor, Financial Management Studies, Open Access, and other names for journals are also acceptable. In terms of proportion, Elsevier accounts for 27% of the sample. According to their respective percentages, Emerald Insight, SSRN, Taylor & Francis, MDPI, and Wiley represent 13 percent, 10 percent, 3 percent, 4 percent, and 3 percent

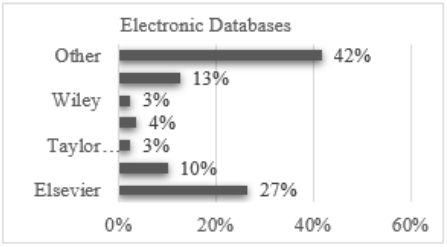

Figure 03

Analysis based on the classification of banks (Figure 4)

The bulk of research papers have a general focus on banks, while 8 studies are about Islamic banks, and 15 studies are about commercial banks. Two research papers on state-owned banks are taken into consideration, while three studies concentrate on the real estate market, small banks, and the financial sector. As it represents the outcomes from all banks, this strengthens the conclusions. Studies on banks make up 65% of the total, whereas studies on commercial banks make up 19%. Importantly, several publications also take listed institutions' risks into account.

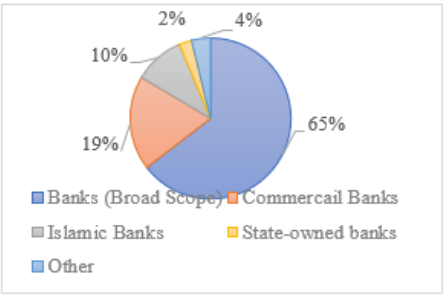

Figure 04

Analysis Based on the type of hazard (Figure 5)

53 percent of study studies mention the dangers posed by the COVID-19 pandemic. There are 42 research papers on COVID-19 and 30 papers on the Global Financial Crisis.

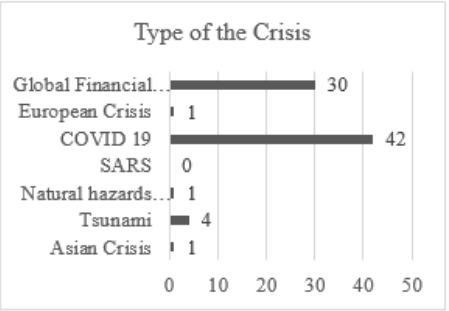

Figure 05

Analysis based on methodology (Figure 6)

This review uses both qualitative and quantitative research studies, as was previously discussed. 9 percent of the review is made up of qualitative research papers, and the other 91 percent is made up of reviews of quantitative research papers. Regression analysis is employed in more than half of the publications in order to analyze the data that had been acquired.

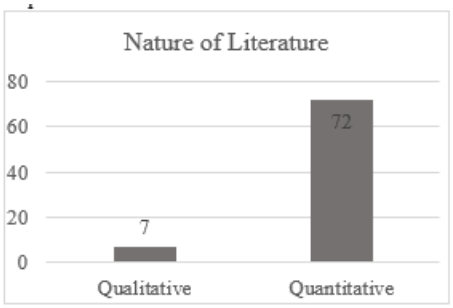

Figure 06

Analysis based on Variables (Figure 7)

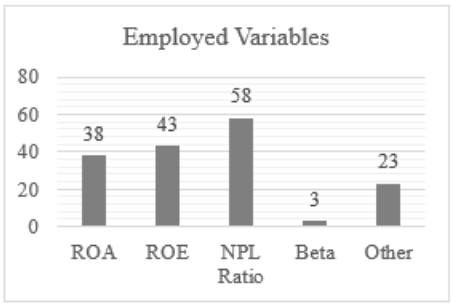

Figure 07

Researchers frequently use the non-performing loan ratio (NPL), return on assets (ROA), and return on equity (ROE) to gauge the risk that banks face.

Analysis based on region (Figure 8)

Most nations, including the United States, China, India, Germany, Indonesia, Bangladesh, Uganda, Europe, Niaz, Greek, Thailand, Malaysia, Korea, Bosnia, Vietnam, Canada, Poland, Japan, Pakistan, Australia, Denmark, Finland, France, New Zealand, Norway, Italy, Lithuania, etc., conduct research on the effects of risks and crisis situations on banks. More than half of study studies place more of the banks' attention on Western than on Eastern nations

Figure 08

FINDINGS BASED ON LITERATURE

A sharp increase in non-performing loans - (Olakunle & Olawumi, 2012; Huang, Zhou & Zhuc, 2011; Switzer, Qiao Tu & Wang, 2017; Weigand & Robert, 2018; Goddard, Molyneux & Wilson, 2009; Mačerinskienė, Ivaškevičiūtė & Railienė, 2014; Whidbee, Wenling-Lu & David, 2013; Dal et al., 2022; Noth & Schüwer, 2017; Brahmana, Puah & Chai, 2016; Gropp, Koetter & McShane, 2020; Park & Shin, 2021; Barua & Barua, 2021; Berger & Demirgüç-Kunt, 2021; Perwej & Asif, 2020; Ahmed, El-Halaby & Soliman, 2022). When debtors don't fulfill the conditions set forth to repay the borrowed funds, the loans become non-performing. Natural disasters and pandemics have an impact on people's lives. Because of this, borrowers frequently fail on their debts. These borrowers' intents and actions raise the amount of non-performing loans held by a bank, which has an impact on the balance sheets of banks. Banks get into problems when borrowers fail to repay the loans they have been awarded, as the ratio of non-performing loans (NPLs), which reflects bad bank performance, rises due to the increase in non-performing loans.

Decrease in lending capacity - (Otchere, Mohsni & Isaac, 2015; Berrospide & Jose, 2012; Shirasu & Yoko, 2012; Majid, Kassim & Shabri Abd., 2010; Mechler et al., 2010; Brei, Mohan & Strobl, 2019; Swamy & Vighneswara, 2019; Öztekin,

Çolak & Özde, 2021; Berger & Demirgüç-Kunt, 2021; Acharya, Engle III & Steffen, 2021; Park & Shin, 2021; Rahman & Saeed, 2015). Lending money and accepting deposits is what banking is all about. Banks use the deposits that both private individuals and businesses place with them to fund lending. Banks experience a liquidity problem and are unable to provide loans when borrowers default on their loans. It reduces the ability to make loans. Since lending is the primary activity of banks, output, and performance both fall when lending capacity does. Numerous studies have supported these conclusions.

Decrease in performances – (Altunbas, Manganelli & Marques-Ibanez, 2011; Thakor & Anjan, 2015; Demirgüç-Kunt, Pedraza, Ruiz-Ortega, 2021; Vasigh, Erfani & Bijan, 2018; Elyasiani & Jia, 2019; Rahman & Saeed, 2015; Sironi & Andrea, 2018; Gazi, et al., 2022; Zahariev et al., 2021; Rahmi & Sumirat, 2021; Xingjian Li et al., 2021; Gropp, Koetter & McShane, 2020; Rahmi, Erman & Sumirat, 2021). Due to the unfavorable shocks that happened at various periods, the performance of all banks, including commercial banks, state banks, Islamic banks, and conventional banks, has declined. In general, return on assets, return on equity, market price per share, net interest margin, etc. are used to assess a bank's success. Banks' ability to lend lessened as a result of having to deal with adverse shocks and the percentage of non-performing loans rose. Bank performance has significantly decreased, primarily for these causes. The following studies and findings exhibit that a hazard or crisis situation can have a negative effect on banks' performance by reducing one or more performance criteria.

Increase in risk – (Altunbas, Manganelli & Marques-Ibanez, 2011; Otchere, Mohsni & Isaac, 2015; Elyasiani & Jia, 2019; Maso et al., 2022; Mishkin & Frederic, 1999; Acharya, Engle III & Steffen, 2021; Elnahass, Trinh & Teng-Li, 2021; Katusiime & Lorna, 2021)

Credit risk, liquidity risk, operational risk, market risk, exchange rate risk, and interest rate risk are just a few of the categories that can be used to specifically group the hazards that banks face. There is a chance that these hazards will combine to raise systematic risk. The inherent risk to the entire market or to a specific market sector that cannot be diversified or removed is known as systematic risk. Systematic risk is regarded as being challenging to manage with portfolios. Non-performing loans raise credit risk, liquidity problems raise liquidity risk, market crashes raise market risk, purposeful and inadvertent operational mistakes, and damage up the operational risk, and adverse effects on interest rates raise the interest rate risk for banks. Possibility of bank runs – (Hallara, Derbali & Slaheddine, 2016; Olakunle & Olawumi, 2012; Goedde-Menke, Langer & Pfingsten, 2013; Gropp, Koetter & McShane, 2020; Korzeb & Niedziółka, 2020; Almonifi, Rehman & Gulzar, 2021; Ghosh & Saima, 2021)

Due to security and safety concerns, individual depositors and corporate depositors who want to save more money are less likely to lend directly to individual and corporate borrowers. Banks play the role of a mediator in this process, accepting deposits from depositors and disbursing loans to eager borrowers. Depositors may ask for their money back in a crisis or dangerous situation if the public's faith is compromised. Banks might not be able to recall the loans they have issued to borrowers when the majority of depositors demand their deposits at the same time because the borrowers can't repay their loans right away (credit risk). As a result, a bank run could happen.

SUGGESTIONS

Managing Risk

Every study has found that any crisis, hazard, or pandemic circumstance can raise the risk. It could be a single risk, several risks, or a combined systemic risk. Therefore, it is advised that banks keep their risk levels at a level that is preferable and manageable and that can be tolerated even during a catastrophic moment. Unless there is an exception, a significant increase in risk would cause a bank run.

Managing Bank Structure

Additionally, large banks (banks with complex systems) were more vulnerable to risk from dangers and crisis scenarios than small banks. It implies that banks should maintain flexible bank structures rather than maintaining complex bank structures.

Managing Asset Quality

Furthermore, in a risky climate, banks with larger risks, low-quality credit portfolios, and weak capital positions were more vulnerable. As a result, it serves as a reminder to banks to strengthen their equity positions and pay close attention to the quality of loan lines through meticulous examination and follow-ups. To assess the caliber of credit portfolios, creditworthiness should be frequently monitored.

Adhering to the Regulations and Using Analysis and Forecasting Techniques

In order to reduce risk, commercial banks should concentrate on the procedures that Islamic banks follow in dangerous situations. More significantly, previous research indicates that a bank's stability also depends on its capacity to make enough money, even during times of crisis. Banks could lessen the impact on revenues during a catastrophic moment if they introduced a variety of profit-generating strategies. Banks can use scenario analysis and sensitivity analysis as methods to do this efficiently. This research highlights the significance of having catastrophe financing schemes and policies as some banks were unable to finance during the global financial crisis. These would make it easier to comprehend potential finance strategies in front of an impending hazard.

Regional Differences and the Differences Among Banks

Savings and cooperative banks should exercise caution during a crisis, according to German studies that found these banks to be more prone to risks. Asian banks should exercise greater caution when they are going to encounter a crisis or danger because previous research has shown that they are more vulnerable than US banks.

CONCLUSION

As it relates to people, there are various ways that banks are exposed to risk. Any event that has the potential to hurt or change how people behave may have an effect on the banking industry. The 2007 global financial crisis, the Asian and European crises, tsunamis, the COVID-19 pandemic, and other natural disasters are the main worldwide catastrophes. This paper has attempted to examine the risks of banks due to natural hazards, crisis situations, and pandemics, and to observe this, 79 published research articles were referred to as a systematic literature review. Needless to say, all of the hazards have created a negative impact on banks and all of the nations that were taken into consideration for this study offered support for the aforementioned conclusions and came to the conclusion that natural disasters, financial crises, and pandemics had a detrimental effect on banks.

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