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Analysis of Banking Risk Management Policies During Pre and Post Pandemic Period

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Abstract

The banking sector being a highly exposed to the risks of data theft and changes in policies and practices due to unprecedented events such as Covid-19 pandemic requires attention on constant monitoring and improvement. This paper governs the changes in banking risk management policies during the pandemic period. In order to develop better ideas on the effectiveness of banking risk management policies, a secondary method has been followed while applying action research as a type of qualitative research design to collect relevant data and present the same. Moreover, application of systematic review technique has helped to thoroughly present the findings from chosen 8 articles that are the sample size of this study. Here, based on the outcomes of thematic analysis, it has been concluded that banking risk management is closely associated with the credit risk aspects. Besides, emphasis on measuring the individual credit worthiness can be beneficial for banks to maintain balance between investors and borrowers. This would also be supportive in controlling the lending activities while applying the IRB (internal rating-based) model of banking risk management can help to evaluate the asset quality of banks and measure the credit risks for developing better strategies to deal with the financial risks.

Keywords

Asset Quality, Banking Risk Management, Capital and Liquidity Scarcity, Covid-19 Crisis, Credit Risk, Economic Damage, Financial System, Individual Credit Worthiness, Risk Management Policies.

INTRODUCTION

Background of the Study

The humanitarian crisis of Covid-19 has caused paradigm shifts in different sectors and industries including financial and labour markets. In case of banks, managing credit quality risks while dealing with borrowers incurred challenges for banking industry to concentrate on monitoring ***asset quality*** of banks while emphasising on ***credit risk governance***. This has further helped in emphasising on credit risk modelling policies and practices for lending money to borrowers, especially in case of availing loans based on retail portfolio [1].

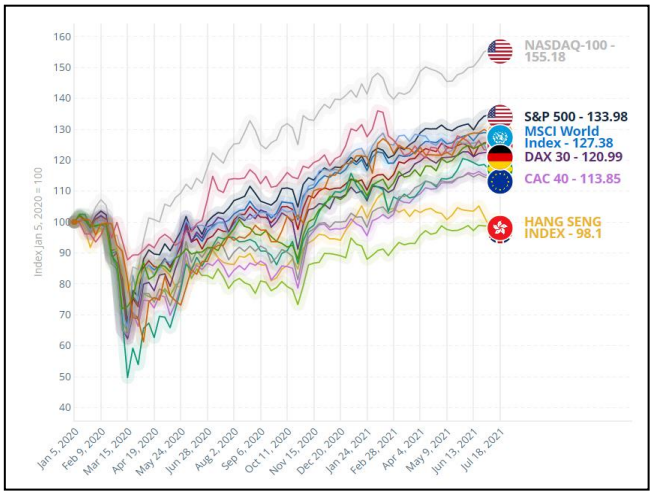

Figure 1: Stock Market Fluctuations across Globe during Covid-19 Outbreak [2]

Considering the supervisory models in banks, measuring the credit risks while measuring stock valuation can help in devising suitable risk management policies. As indicated in the above figure, financial crisis due to Covid-19 pandemic reflected in the UK stock valuation measuring at ***97.03*** in 2021 while it is ***128.55*** for India and ***124.62*** for China [2]. This indicates that uncertainty of pay off plays a major role in affecting equity prices, economic sanctions and foreign exchange rates to shape the banking risk management policies during the Covid-19 situation.

Aim and Objectives

The aim of this study is to critically evaluate the banking risk management policies during pre and post pandemic scenario. Therefore, the objectives are as follows-

- To develop ideas on the banking risk management policies and practices
- To identify different types of risks faced by banks in pre and post pandemic scenario and the reasons behind these
- To conduct a critical analysis on the effectiveness of banking risk management policies in handling scarcity in capital and liquidity flow amid Covid-19 pandemic
- To propose suitable recommendations for strengthening banking risk management policies amid the Covid-19 outbreak

Scope of the Study

This study is effective in identifying and assessing the banking risk management policies during the Covid-19 pandemic. Besides, this would be beneficial in tracking the changes in risk management policies for financial authorities, especially banks across the world to minimise the credit risks

and enhancing capital flow for overall economic growth.

METHODS AND MATERIALS

Research Design, type and Duration

In order to meet the research objectives and comment on the banking risk management practices in pre and post Covid-19 outbreak, a ***qualitative research design*** has been chosen here. Qualitative design enabling chances to collect non-numerical data within short-period of time while reducing selection biases has been applied to select the relevant journals [3]. Moreover, as quantitative design focuses on gathering only numerical and statistical data and hence, this has been discarded in this study. Besides, inclusion of secondary qualitative design helped to carry out ***an action research*** that assisted in gathering, analysing and interpreting the information collected from secondary sources [4]. Here, the estimated time frame or research duration is considered as ***36 days*** to collect and analyse the secondary qualitative data and measure the different aspects of banking risk management policies.

Choice of Subjects and Data Collection Sources

As this study is intending to examine the banking risk management policies during pre and post pandemic situation, the research subjects have been chosen following a specific selection criteria. Therefore, following this, the sources for collecting data included the secondary articles, peer-reviewed journals and other government websites to extract relevant information [5]. In addition, the subjects for this study have been the secondary sources that are published in reputed journals and are suitable to gather credible information backed up with sufficient information. Regarding this, ***systematic review*** has been carried out to present the findings of the chosen secondary sources and synthesising the findings for addressing the research aim [6].

Inclusion and Exclusion Criteria

The study has applied the following inclusion and exclusion criteria to choose the research subjects and gather evidences accordingly-

- Journals, peer-reviewed articles and government reports that are published within the last 5 years (ranging from 2019 to 2023) have been included
- Secondary data sources that are published in only English language have been chosen
- Sources not containing the chosen keywords such as ‘banking risk management’, ‘credit risk’, ‘economic damage’, ‘financial system’, ‘capital and liquidity scarcity’ and ‘Covid-19 crisis’ have been discarded

Now, application of these selection criteria has supported in selecting the required sources and present secondary qualitative information on banking risk management practices in pre and post pandemic situation.

Sample Selection

As indicated in the above section, inclusion and exclusion criteria has been applied to choose the samples using ***stratified sampling technique*** to choose the samples based on particular characteristics [7]. In this study, application of these criteria helped to select ***8 articles*** that are the samples of this study. Besides, selection of these sources through incorporating this sampling technique supported in identifying the relevant secondary sources that present information on the banking risk management approaches in the pre and post pandemic world. This has also helped in gathering information on the banking risk management policies of different countries to deal with the crisis and managing capital flow to support the holistic economic development.

Process of Data Analysis

In case of analysing the collected data, ***thematic analysis*** technique has been applied that created chances to develop suitable themes to address the research objectives [8]. Here, based on the results of the systematic review, themes have been formulated to identify the main concerns of banking risk management practices. Moreover, the findings from the tabular format attached in the data extraction part supported in evaluating and comparing the strategies adopted by banks in different countries to strengthen the risk management practices and policies. This has also helped in reflecting on the credit risk management perspectives and financing system reformation activities for coping with the economic crisis due to the pandemic.

RESULTS

In this study, eight articles are selected to provide relevant information about banking risk management policies in pre and post-COVID.

Table 1: Data Presentation through Systematic Review (Source: Self-developed)

Source	Methods	Key findings	Significance
Bülbül *et al.* (2019) [9]	Hand-collected data from 249 German savings banks An empirical test is done on predicted model	• In the pre-COVID period, banks were usually focused on implementing ***credit portfolio modelling (CPM)*** as a passive risk management tool. The implementation of CPM assists banks to get an understanding of correlation structure of their loan portfolio. • ***Credit risk transfer (CRT)*** is another risk management policy that is used and under	The article has focused on highlighting the credit risk management practices that are conducted by the bank. The article also focused on highlighting the different types of risk management practice policies as it will provide a choice of different risk management practices.

		this policy, banks used to sell a fraction of old loans to grant new loans. In order to diversify the loans, banks use this method • ***Advance risk management (ARM)*** is a step where banks use both CPM and CRT for managing credit risk. The usage of ARM leads to creating economies of scope by diversifying and create a fine tune of buffers to manage effective competition.	
Saeidi *et al.* (2019) [10]	Quantitative approach - Self-administered survey with 84 valid questionnaires Statistical analysis of collected data with help of Structural Equation Modelling (SEM) and Partial Least Square (PLS).	• ***Enterprise risk management (ERM)*** provides authority to business entities to gain access to risk and monitor them to increase longevity at firms' operational level. • Financial institutions are implementing ERM as a risk management system as it supports environmental scanning and usage of strategic planning for improving corporate image and market position of financial institutes.	The article has highlighted that financial institutes for gaining competitive advantage have been using ERM as it supports mitigating risk. In addition to this, with usage of ERM IT strategy and structure get involved as it leads to creating an effective internal environment scanning as it leads to an increase in assessment of risk and supports ineffective response.
Ekinci & Poyraz, (2019) [11]	Secondary data is collected	• In pre-COVID era, profitability of banks is highly negatively influenced by loans, non-performing deposits and loans. • Increase in credit risk will create a negative impact on financial institutions and it will lead to an increase in chances of partial and total loss. Banks use ***credit risk management***, under these policies for using non-performing loans as an indicator of credit risk management as it assists in enhancement of sustainability and profitability in operations. • The credit risk management also focused on highlighting the ratio between non-performing loans to total loans. Lower the ratio signifies lower credit risk and it indicates lower doubtful loans and better asset quality.	In the pre-COVID era, bank assets and revenue generated profit for the entity. However, the bank's profitability is highly dependent on regaining loans. In order to manage the credit risk, credit risk management is used as it leads to positive bank profitability and improves performances of financial institutions.
Rizwan *et al.* (2020) [12]	Secondary methods of data collection are adopted	• ***Open market operations*** policy is adopted by China in response to COVID economic consequences. • The US regulators have encouraged lending entities to ***use their liquidity buffers*** and lower community bank leverage ratio. • In Europe, ***fiscal stimulus*** is adopted as its support in managing financial and economic shocks and it act as a policy to manage systemic risk	In post COVID scenarios, for maintaining stability in banking and financial institutes' different countries have selected different risk management policies to provide intended benefits to financial sectors and manage their evolutions.
Çolak & Öztekin, (2021) [13]	Difference-in-difference methods is used for studying samples of banks from125 countries	• In the post pandemic situation, central banks have introduced different ***monetary stimul***i to resolve liquidity and solvency of various non-corporate financial firms. • In the beginning stage of COVID-19, influx of funds for different ***liquidity injection programmes*** has allowed banks to surge for meeting liquidity demands. • In the post-COVID, weakening of bank	The article provides a brief overview about policies that are adopted by banks during early stages of COVID. However, the article has provided viewpoint that in post COVID financial institutions have adopted flight home approach as in this approach market with a more robust debt

		lending will lead to curtailment of loan supply and leads to a decline in bank profitability. However, banks adopted the ***fight-home approach*** and it leads to an increase in resilient bank lending.	market will witness a financial development.
Elnahass *et al.* (2021). [14]	Secondary data is used The samples included six-quarter data of 1090 banks	• COVID-19 has created various detrimental impacts on financial performance and stability. • The financial institute is adopting ***adequate renegotiation of loans*** that are granted as it will maintain transparency in credit risk. • The central banks around the world have increased ***international cooperation*** to preserve stability of financial institutes in the region. For example, the European Commission Bank has developed a set of monetary policies by introducing the Pandemic Emergency Purchase Programme as it will lower borrowing costs and increase lending as will lead to long-term refinancing in operations.	The widespread COVID-19 virus has led to lockdowns in various parts of the world, as it creates exogenous shocks for financial institutions. In the current post-pandemic situation, to reduce credit risk financial institutes are renegotiating loans. In addition to this for increasing loan procurement process, financial institutions focused on international cooperation.
Demirgüç-Kunt *et al.* (2021) [15]	Secondary data are collected	• In the post-COVID situation, banks use ***borrower assistance***. Along with this, the policy of using new government credit lines, liability guarantees and interest rates subsidies. The borrower assistance policy is effectively dependent on fiscal commitment of banks. The government guarantees during COVID create an opportunity for banks to use borrower assistance as an opportunity to minimise risk and improve stock returns. • ***Countercyclical prudential policy*** allows banks to use their buffers for expansion of loans. This policy lowers negative impact on economy due to COVID.	The article signified that in post-COVID situation, financial institutions are using borrower assistance as policy to maintain sustainability. Since, the government guarantees liability, with usage of borrower's assistance banks can withdraw excessive stock returns. The sustainable performances of financial institutes assist in maintaining balancing in market liquidity.
Orlova, (2021) [16]	Empirical research for measuring individual creditworthiness	• IRB (internal rating-based) approach has been effective in pre-Covid-19 scenario to measure the assets quality and size while following credit-based risk assessment models • Understanding borrower's credit worthiness enabled the banks to integrate advanced technologies in practical sphere for improving financial services and measuring the financing risks	This paper helps in understanding the approaches of banks in dealing with individual creditworthiness of the borrowers to design the risk management practices in times of crisis

DISCUSSION

Theme 1: Banks Credit risk management practices to lower down financial risk banking sector

The advancement of information technology has eased out the analysis that is associated with credit risk. Financial institutes gathered credit risk information based on credit portfolio modelling (CPM) [9]. In the competitive market, the usage of credit risk management is focused on building buffers based on competition and sector concentration. The usage of credit risk management assists banks to manage credit risk by creating credit portfolios. In a concentrated and competitive market, the usage of a credit portfolio acts as a credit risk instrument. Furthermore, under the credit risk management, financial institutions can use credit risk transfer as it increases chances of creating a balanced portfolio.

In addition, emphasis on tracking the quality of banks' assets and measuring the capital flow can be essential to measure the credit worthiness. This can also support in reducing the risk of bad debt and long-term loan repayment risks. Banks with lack of adoption of credit risk management

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provide quality loans that are of aggregated risk as negative growth is witnessed between market power and organisational risk [17]. The inclusion of credit risk management leads to persistence in financial institutes' risk control and risk-taking abilities and it lowers risk culture that is sensitive to crisis. The intensity of risk-taking creates an impact on investment decisions, and inclusion of credit risk management leads to an analysis of credit derivatives and it contributes to secure performances by banks.

Theme 2: Information technology impact in managing credit risk of financial institutions

Risk management is a highly evolutionary domain as it is explicitly based on data that are collected. The usage of information technology facilitates the chances of risk identification and closing with risk monitoring. Factors such as globalisation, corporate governance chances and financial models increase competitive advantages whereas creating major challenges for organisations. The inclusion of information technology leads to an increasing level of competitive advantage by controlling and managing risk management activities. The financial institution deals with various types of customers, a range of different financial assets and complicated trade. Financial institutions play an intermediary role in uplifting national economy as it is extensively responsible for deficit and surplus units [10]. In managing credit risk of financial institutions, IT plays an impactful role as it stores and transfers data that can be used for tactics.

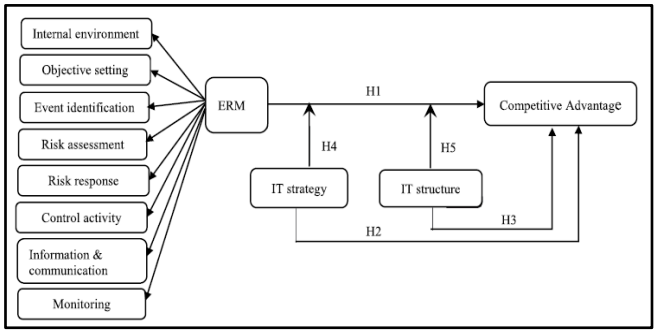

Figure 2: Implementation of IT within financial institutions to gain competitive advantage [10]

Furthermore, the IT structure can be used within an organisation at an operational level as it provides a strategic level of competitive advantage. In this context, adoption of advanced technology in keeping constant tracking of credit worthiness of individuals while concentrating on applying the internal rating-based (IRB) approaches can be effective for financial institutions, especially banks to lower the liquidity risks [16].

Theme 3: Factors Fostering Financial Institutional Risk

Stable financial institutions are beneficial to create a contribution to a healthy economy as it will support explicitly stabilising the economy. Financial sector reflects state of economy as it generates revenue with help of interest rates, loans and capital funding. Reducing sustainable risk of financial institutions leads to an improvement in financial services and it supports sustaining economy. Financial sector witnesses a negative substantial impact due to ***increase in interest rates*** [18]. The increase in interest rates lowers down chances of borrowing money as borrowing money becomes more expensive. In addition to this, the cost of doing business will rise as it will negatively impact growth rate and stock values. On the other hand, ineffective ***government regulation*** plays a negative role in financial institutions' performances [19].

Ineffective government rates create poor services and enhance financial cost ultimately creating financial institutional risks. In addition to this, the ineffective governmental policies often lead to a decrease in adoption of loans by institutions. Moreover, inclusion of effective financial risk management policies, especially in case of banks can directly benefit the investors to have a clear idea on the liquidity and quality of banks' assets. This can further benefit the bank to adopt 'green investment' policies for mitigating the risks and extracting the maximum capital investments [20]. In this context, emphasis on measuring the stock market condition and quality of assets while concentrating on individual credit worthiness can help the financial institutions to come up with a better risk management policy to mitigate the prevalent risks in the post-Covid-19 world.

Theme 4: Adoption of IRB Model for Inspecting Asset Quality and Minimising Credit Risks

Depending on the above analysis, emphasis on ***IRB model*** can be adopted by the banking sectors across the world to govern the credit risks. This can be effective to control the banking provisions for measuring the quality of banks' assets. Moreover, it would be support in mitigating the prevalent risks of ***PD (probability of default)***, ***LGD (loss given default)*** migrations for lowering the credit risks [21]. In this regard, emphasis on measuring the creditworthiness of individual borrowers can be helpful in dealing with the risks related to delayed debt collection. Here, inclusion of digital technology in tracking the credit worthiness and diagnosing the lending market can be advantageous to deal with capital formation during crisis situations [16]. In addition, emphasis on measuring the prevailing policy responses is essential in improving the banking risk management approaches for contributing to the overall economic growth.

Apart from this, focus on policy developments can be beneficial for banks to be prepared for any liquidity crisis or financial shock and deal with the market turmoil initiated by any unprecedented events such as Covid-19 outbreak. Following this, ***ECB (European Central Bank) Financial Stability Review*** in June 2020 has concentrated on assessing the capital and lending activities while applying an equilibrium macroeconomic model to measure the banking risk management policies in the Euro areas [1]. This also highlights the importance of measuring the liquidity and capital flow risks for mitigating the credit risks and concentrating on the formation of investment capital.

Therefore, emphasis on evaluating macro-prudential policies while adopting green investment approaches can be beneficial in dealing with the financial risks in times of crisis [20]. Besides, it would be effective in forming better policies for financial institutions to attract the attention of investors and incurring the maximum capital flow.

CONCLUSION

This research is intended to critically evaluate the banking risk management policies in pre and post Covid-19 scenario for commenting on the effectiveness of the policies to reduce financial risks. Comprehensive analysis of the findings of this research highlighted that emphasis on adopting an effective banking risk management policy is crucial for the financial institutions to manage the capital formation and cash flow while dealing with liquidity issues. Now, Covid-19 outbreak creating a scarcity of liquidity and cash flow presented challenges for banks to govern the credit worthiness of individuals as well as corporate authorities that seek both long-term and short-term loans. In this context, while ***ERM (Enterprise risk management)*** model allows the firms to identify and monitor the pertinent risks in the operational activities, inclusion of different ***credit risk management models*** helped banks to govern the quality of assets and related credit risks.

Similarly, inclusion of ***Fiscal stimulus*** seemed to be effective for European banks to respond to the economic crisis instigated by Covid-19 outbreak whereas banks in USA concentrated on using ***liquidity buffers*** to combat the financial risks. Following this, the changes in banking risk management policies and practices in post Covid-19 scenario in comparison with the pre-Covid-19 situation required attention on measuring the credit risks and capital formation strategies. Depending on this, adoption of IRB system while measuring the credit worthiness of individuals and accessing the quality of banks' assets can be effective for banks to develop better mitigation plan and deal with such uncertainties.

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