Mitigating inherent banking risk related to loan portfolios

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ABSTRACT

Bank managers face inherent risks in their retail loan portfolios despite regulatory requirements and technological advancements. Bank managers that do not address and mitigate inherent risk in their retail loan portfolios are at a disadvantage to better know their customers, use technology, and enhance credit analytics. This qualitative multiple case study was grounded in the enterprise risk management framework and aimed to explore strategies bank managers used to mitigate the level of inherent risk in their retail loan portfolios. Data were collected from semistructured interviews and document reviews. Participants comprised of 8 leaders at 4 companies who had implemented successful strategies in managing the risk of their retail loan portfolios participated in this study. Through a qualitative data analysis process of thematic analysis, 4 themes emerged: know your customer, business knowledge and effective leadership, enhance credit analytics, and technology use. A key recommendation for bank managers is to use holistic risk assessment strategies to manage inherent risk. The implications for positive social change include increased sponsorships for local events with the potential increase of donations to local schools and outreach organizations supporting local community residents.

Keywords: Risk tolerance, Liquidity risk, Loan default, Risk appetite, Risk assessment, Enterprise Risk Management

INTRODUCTION

Banks operate in business environments that include inherent risk from the products and services they offer to customers (Tamimi. 2021). Inherent risk derives from the environment without mitigating internal control effects (Van de Venter et al., 2016). The loan portfolio inherent risk contributed to 5 U.S. banks failing in 2016 and another 10 banks in 2017 (Federal Deposit Insurance Corporation, 2018). Managing risks associated with loan portfolios is a top priority for bank managers and leaders (Bushman et al., 2018). Unlike large banks, some small and medium-sized banks do not have the resources and expertise to manage risk at an acceptable level (Frazer, 2015). In this qualitative case study, we identified strategies used by bank managers to mitigate risk.

The U.S. banking industry supports the world's economic growth by extending credit to businesses (Laeven et al., 2016; Lundqvist & Vilhelmson, 2018). The banking sector has awakened to risk management, especially since the 2007-2008 financial crisis (Amarh, 2015; Jian & Zhi, 2018). The function of risk management in banking requires bank managers to continually look for the best risk assessment tools and practices to mitigate the high level of inherent risk in their loan portfolios (Thakor, 2018). By implementing a more robust risk management strategy, bank managers may decrease residual risk and increase profit and market share (Stulz, 2015).

Managing risks associated with bank loan portfolios is a continuing issue for some bank leaders (Lim et al., 2017). The sum of failed banks in the United States between 2008 and 2017 was 528, with a corresponding loss of assets totaling 750 million dollars (Federal Deposit Insurance Corporation, 2019). The general business problem was a high level of inherent risk that negatively affected banks' loan portfolios. The specific business problem was that some bank managers lack strategies to mitigate inherent risk in their retail loan portfolios.

REVIEW OF THE LITERATURE

A literature review is critical in a research process as researchers can identify, evaluate, and synthesize existing literature related to the research topic (Shaikh & Karjaluoto, 2015). The literature review provides an overview of existing knowledge of a study (Boell & Cecez-kecmanovic, 2015). Researchers conduct literature reviews to generate new ideas related to the study's phenomenon (Ishak & Osman, 2016). This qualitative multiple case study aimed to explore strategies bank managers use to mitigate the level of inherent risk in their retail loan portfolios. The central research question for the study was what strategies some bank managers use to mitigate the risk of inherent risk in their retail loan portfolios? To answer the research questions and find the potential solutions to the problem, we explored the literature relating to the established framework and the topic.

This literature review identified professional and academic literature on banks' success and related topics other researchers have explored. A comprehensive exploration of the research question may help bank managers provide additional information to mitigate the level of risk in the retail loan portfolio. The literature review content in this study was a comprehensive, critical analysis and synthesis of the literature related to the conceptual framework of ERM. This study's findings may provide bank managers with information on developing and implementing strategies that reduce the level of inherent risk in retail loan portfolios.

The ERM framework provides a better understanding of risk appetite and tolerance (Annamalah et al., 2018). For instance, many entities have struggled to find a mechanism to express risk appetite and tolerance (Ching et al., 2021). Other entities have developed a slightly more granular risk appetite methodology (Brustbauer, 2016). However, few entities have identified helpful appetite and tolerance statements (Cohen & Falcione, 2016). The new ERM update framework is a step in the right direction to facilitate good debates in the future.

ERM is a comprehensive risk-optimization process that integrates risk management (Kimbell, 2017). Lam (2016) stated that the board of directors ultimately decides to develop and implement an ERM framework. The ERM framework often aligns risk with the strategic objectives of an entity. ERM is not a process to eliminate risk. Instead, the framework encourages banks to take a broad look at all the risk factors, understand the interrelationships among those factors, define an acceptable level of risk, and continuously monitor areas to ensure that the risk-defined threshold is achieved (Tittle, 2018).

PURPOSE OF THE STUDY

This qualitative multiple case study aimed to explore strategies bank managers use to mitigate the level of inherent risk in their retail loan portfolios. The targeted population included eight bank managers from four different banks located in San Antonio, Texas, who had implemented successful strategies in managing the risk of their retail loan portfolios. The implication for positive social change might benefit residents through increased access to credit, empowering residents to improve their communities.

METHODOLOGY

We used a qualitative multiple case study method and design. A qualitative research method allows a researcher to analyze systematic textual data from multiple sources, including interviews, observations, and documentary evidence. A case study design allows a researcher to explore the *how, what*, and *why* of a phenomenon bounded by time and place through multiple data sources (Yin, 2018). The research population consisted of eight bank managers in four banks located in San Antonio, Texas, who demonstrated success in managing retail loan portfolio risk. We interviewed a purposive sample of bank managers in San Antonio who meet the eligibility criteria for this qualitative case study. To select participants for this study, we used purposive sampling as it enabled me to conduct a qualitative inquiry on information-rich cases that focus on the research questions. Purposeful sampling is a non-random process used by researchers to represent participants' categories (Staller, 2021).

The bank managers selected for the study possessed the knowledge necessary to understand the factors to mitigate the level of inherent risk in their retail loan portfolios. This study's sample consisted of eight bank managers from four different banks located in San Antonio, Texas. Each participant had success in managing the risk of their retail loan portfolios. While there is no required number of participants in a qualitative case study, the researcher should justify participants' inclusion in a study. The sample size needs to be large enough for the researcher to obtain redundancy of responses or saturation (Yin, 2018).

After receiving approval from Institutional Review Board (IRB), we sent an introductory email to eligible participants identified by the gatekeepers. We explained the study's purpose, the procedures, risks and benefits of participating in the study, and participants' confidentiality in an introductory email. All participants who met the established criteria and agreed to participate in the study reviewed signed a consent form. The signed consent form was transmitted by email. The consent form provided the study's purpose and confirmation that the participant's identity and confidentiality would not be compromised. The consent form also contained a statement that the individual's participation in the study was voluntary.

This study's data collection technique included conducting phone semistructured interviews with participants, reviewing risk policy documents, procedures, and Form 10Ks. We conducted semistructured interviews using open-ended questions to explore strategies to mitigate the high level of inherent risk in the retail loan portfolio. Before conducting interviews, we requested permission from participants to audio record the interviews. All participants who met the established criteria and agreed to participate in the study reviewed and signed a consent form. The informed consent form includes information relating to the study's purpose, a statement that the researcher will not compromise the participant's identity, and voluntary participation (Bazzano et al., 2021).

The semistructured interview consisted of seven interview questions (see Appendix A). Each interview lasted between 40 to 50 minutes. To triangulate interview data, we collected additional data. Triangulation converges sources from primary and secondary data, which enriches evidence and adds value to the research (Natow, 2020). Thus, we gathered additional data by reviewing the banks' annual reports, risk policy documents, and Form–10K.

PRESENTATION OF THE FINDINGS

This study's research question was: What strategies do some bank managers use to mitigate the level of inherent risk in their retail loan portfolios? We conducted phone interviews with eight bank managers from four different banks to explore this research question.

Yin's (2018) 5-step method facilitated analyzing the aggregated textual data, including compilation, disaggregation, reassembling, interpreting, and concluding. We analyzed the data collected from interviews by reading and rereading the data collected while reflecting on what we read to grasp the transcripts' general themes. In the data analysis process, we transcribed every interview and field notes in a Microsoft Word document and uploaded them to Nvivo. We read through the transcripts and field notes while identifying codes and linking significant segments to appropriate themes. We requested participants to correct inaccuracies and challenge incorrect interpretations to facilitate member checking.

We applied codes to the texts as concepts became apparent after collecting field notes on annual reports, risk policy documents, procedures, and Form-10k. We applied codes on concepts and themes outlined in the field notes. Next, we combined related concepts into categories and themes. We used NVivo to help organize, sort, classify, and analyze non-numerical or unstructured data. Four themes emerged through data analysis included (a) know your customer, (b) business knowledge and continuous improvement, (c) enhance credit analytics, and (d) the use of technology.

Theme 1: Know Your Customer

All participants interviewed indicated that *knowing your customer* is an integral part of the credit risk management process. According to Mittal et al. (2015), financial institutions can sustain growth and profitability by delivering superior customer service that surpasses customer needs, increases satisfaction, and enhances competitiveness. One of the most valuable business assets is consumer data (Chen & Fong, 2015). Participants acknowledged the importance of knowing the different customer segments that request retail loans to manage better and mitigate the level of inherent risk in their loan portfolios. According to Li et al. (2018), firms can introduce a greater variety of products to attract new consumers with heterogeneous tastes and induce consumers to switch from competitors while maintaining.

Participants noted that bank managers should work on mandatory verification of new and existing customers' credentials to prevent and mitigate loan default and money laundering. A1, A2, and E2 emphasized the importance of knowing your customers to understand better the kind of financial advice, products, and services they need. Participant A1 stated: "Know your customer is an integral part of the risk management process and forms the basis for all subsequent steps in the lending process." Participant A2 stated: "It is essential to collect pertinent, accurate, and timely information to establish a stable client relationship." Participant E2 suggested, "without a good understanding of our customer base, it will be difficult to determine their needs."

During the interview, participant A2 gave us a walkthrough of the analytical tools used to gather personal information on their customers to make efficient and effective loan decisions. The participant works with credit score companies to gather relevant information to upload to the analytical tool to run algorithms and customers' risk profiles. Management can further review loan applications or outsource the application to a third party based on the analytical tool's risk level.

Participants also emphasized that *knowing your customers* better positions loan managers to understand their needs and the suitable and best-suited products. Participant A1 stated: "I know most customers are shopping for loans with a low-interest rate to use them to pay off other existing debt or to fund a large purchase. Customers want a better experience and more control over managing their finances, including debt." Participant E1 responded, "my job gets easier when I create a personal rapport with the customers."

Banks can differentiate from other competitors by competing on having the best services and quality. Banks can achieve effective control environments by investing in products or services that offer unique qualities desirable to customers (Bogodistov & Wohlgemuth, 2017). A1, A2, B1, B2, and C1 admitted that they encourage bank employees to provide outstanding customer service and dig deep to know their customers to address their individual needs. Participant A2 stated, "I encourage my employees to work diligently to know their customers and their needs." Participant B1 responded, "I work to align our customers' profile to their needs and verify for any anomalies by running a stress test on their profiles." Participant B2 suggested that understanding customers' financial habits and health is critical to managing risk. Participant C1 stated: "Incredible customer service is key to their success." Participant A1 responded, "the customer is king to the success and failure of the bank."

This finding supports the ERM framework that knowing your customers is vital to the banks' control environments, including the product and service offerings. Malelak and Pryscillia (2020) stated that ERM helps the banks successfully grow the business and customer base in alignment with their mission. Implementing an ERM process helps drive value creation by enabling management to respond promptly, efficiently, and effectively to uncertainty, threats, and opportunities (Ratri & Pangeran, 2020).

Theme 2: Business Knowledge and Continuous Improvement

Having business knowledge in the bank industry was prominent in interviews with all the participants. Five participants expressed the importance of understanding the industry, including customer needs, products, and services. B2 stated: "Knowing the business and the products offered is critical to the bank's success or failure. I work continuously to improve the knowledge of my team and emphasize continuous knowledge improvement."

Participants' responses supported Zhao's (2016) findings, which noted that intangible resources of knowledge, organizational learning, market image, and organizational culture are some of the most valuable and competitive resources in the current knowledge-based economy. Participants highlighted that bank managers and senior executives could use the knowledge gained from prior loan review experience to create value and effectively manage risk. C1 stated:" Based on the risk analysis response from analyzing an application, bank managers can better analyze systemic risk based on prior experience." Otubanjo (2018) suggested that banks develop and implement service strategies by providing adequate staff training to ensure consistency in the delivery systems and enhance customer service.

Lonial and Carter (2015) suggested that robust risk assessment methodologies add value to a bank and are part of the organization's base of knowledge and information. Managers should enable access and sharing of information across departments by establishing relationships and obtaining a shared understanding without delay and distortion (Dubey et al., 2018). Participants indicated that a well-written and descriptive credit policy is the cornerstone of sound learning. A1 stated, "It is essential to maintain and continuously update credit policies to adhere and learn from the process."

Participants acknowledged that bank managers should also clearly articulate the vision, values, and beliefs that guide that institution's lending activities. C2 stated: "bank managers must emphasize their vision, values, and objectives to guide their lending practices." Gupta (2016) suggested that firms promote and reward employees who provide exceptional quality services to customers. A good leader should know how to use lending techniques and maintain a positive attitude in a competitive industry (Barley, 2015; Chen & Fong, 2015). Participants discussed how being a good role model and leading by example is essential to motivate employees to work harder and treat customers with care and respect. B1stated that "a robust risk management culture occurs when the board of directors is not afraid to challenge management and is involved in facilitating an ethical culture throughout the organization." A further review of participating annual reports revealed policy statements and actions which support the case for business knowledge and continuous improvement. Banks continue to emphasize the need for updated policies and continuous improvements in the 10Ks and policy documents. On reviewing management discussion and analysis of the financial position and operating results in the entities 10K, we identified them stress the importance of robust policies and continuous improvements.

The theme of business knowledge and continuous improvement aligns with the ERM framework. In the context of the ERM framework, continuous improvements could reduce the inherent risk in retail loan portfolios (Berry-Stölzle & Xu, 2018). Delivering consistency between leadership, employees, and alignments with other processes is essential for banks in developing a risk culture (Mohtashami & Ghiasvand, 2020). Relationships between management and employees with coordination among other departments on ERM implementation can develop banks' risk-averse environments (Orabueze et al., 2020). The internal environment sets the foundation for risk management (Tomas et al., 2017). In a work environment, the ERM framework could include educational training and continuous improvement for employees to understand the business and improve its business processes (Gupta, 2016).

Theme 3: Enhance Credit Analytics

Six participants recognized that establishing a banking relationship and granting loans are associated with various advantages and risks. Credit risk management solutions require securing, storing, categorizing, and searching data based on various criteria. Participants discussed the need for any database to be updated in real-time to avoid potential outdated information and be keyword optimized to ensure the accessible location of information. D1 stated that: "the accessibility with real-time information makes it easy to decide on an application." Participants acknowledge that a complete and comprehensive risk assessment scorecard should quickly identify strengths and weaknesses associated with a loan. B2 stated:

> Robust stress-testing capabilities and model management that spans the entire modeling lifecycle ensure accurate risk assessment. We use data analysis to come up with the best available situation for each given loan application. We all work with external vendors to run analyses of customers' information. As the manager, we require data analysis presented in an intuitive, clean, and visualized way. Stripping away irrelevant data, analysts and I.T. professionals can help zero in on the most patent information for the loan decision-making process.

B1 revealed that data definitions are not always consistent among operations, I.T., and risk units. Users do not always follow data set naming conventions. Thus, it is hard to find a suitable data set, understand its purpose, or be sure which is the most recent one. Data updates may be sporadic, and data quality might be below par. Also, D2 indicated:

> A useful credit risk model is very vital to manage loan portfolios successfully. We produce speed and precise business results in this digital age using data analytics and big data. Many banks still use manual processes for loan underwriting, subject to human bias and inconsistency, leading to poor decisions and underperforming loans. Banks that make more accurate credit decisions models will maximize revenue and minimize default.

We also reviewed the 10K reports for companies A, B, C, and D. We found that the companies' charge-off late payments for consumer loans were relatively low. During our interviews, participants A1, B2, and C1 demonstrated their respective analytical software works. Participants described how they get personal credit information from credit report companies based on a prescribed criterion. From this information, the banker assesses individual profiles as low, medium, or high risk.

Dubey et al. (2018) suggested that firms operating in competitive environments should have the ability to respond quickly to external changes and share information effectively using technology. The participants' responses indicated the importance of enhanced credit analysis and big data to create and build models on customer profiles to predict their preferences, risk level, and tolerance. D2 stated that: "enhanced credit analytics and the use of third-party company make the loan review process fast, efficient and effective."

In the context of the ERM framework, enhanced credit analytics such as the ability to secure, store, categorize, and search data based on various criteria could mitigate the risk of granting loans with a higher risk of default. ERM is not a process to eliminate risk or to enforce risk limits. By implementing an ERM process, banks are able to take a broad look at the risk factors, understand the interrelationships among those factors, define an acceptable level of risk, and monitor areas to ensure that the risk threshold is achieved (Tittle, 2018). Enhanced systems and continuous modification in credit analytics are vital to combat risk and uncertainty in banking activities (Naseem et al., 2020). Jean-Jules and Vicente (2020) stated that banks embracing enterprise risk management and enhanced credit analytics today could respond quickly to unforeseen circumstances in the future.

Theme 4: The Use of Technology

Participants acknowledged that leveraging technology and the internet is essential to implementing and mitigating retail loan portfolio risks. Participants indicated that by leveraging modern technology, they could increase customer interactions and evaluate their needs. Five participants supported this theme. C2 stated that "with the advent of advanced technology, interaction with clients and understanding their needs have been effortless. We can easily monitor customers' accounts to understand their risk profiles and other valuable information. All participants disclosed that cloud integration provides immediate access to relevant data sources for credit, employment, identity, and income verification without the burden of costly, protracted programming. A1 stated that "cloud computing technology is disruptive and a game-changer to the banking sector." B2 noted, "our bank is fast transitioning to the cloud space for data management and storage." Cloud integration reduces the need for manual verification and results in faster application processing (Bilgihan & Wang, 2016). Tileaga et al. (2016) suggested that firms gain market share, control, and competitiveness by using information technology to market products to internet users and effectively manage risk (Tileaga et al., 2016). Firms can use technology to enhance their service quality and deliver superior services that improve performance and increase profitability (Pantano et al., 2018). All participants disclosed that cloud integration provides immediate access to relevant data sources for credit, employment, identity, and income verification without the burden of costly, protracted programming. A1 stated that "cloud computing technology is disruptive and a game-changer to the banking sector." B2 noted, "our bank is fast transitioning to the cloud space for data." C1 stated, "automation and technology accelerate lending processes and facilitate consistency in decisions." C2 noted, "automated decision rules enable lenders to eliminate manual steps, replacing them with data-driven processes." D2 stated, "cloud computing and AWS services make processing time more efficient and effective."

Participants noted that technology and software updates on the cloud are fast and frequent, allowing lenders to immediately take advantage of bug fixes and functional improvements made in response to customer requests. Participants acknowledged that they use technology to strengthen the enterprise and streamline the loan process to mitigate risk. A2 stated: "technological advancement plays an important role for the entire enterprise and helps in streamlining the loan process," technology and application present new opportunities for banks to increase digital engagement through popular emerging channels (Kulathunga et al., 2020). Customers' access to digital tools enables community banks to keep up with big banks and rivals (Anton & Nucu, 2020). Dubey et al. (2018) suggested that firms operating in control environments should have the ability to respond quickly to external changes and share information effectively using technology.

Participants noted that digitizing and automating actions within the credit process speeds up the time it takes to process loan applications more efficiently and effectively. Technology improves data integrity through the integration of external and internal systems and data sources. A1 stated: "Loan officers and underwriters use standardized analytical software to speed up the verification and approval process with the help of data integration."

Employing technology helps improve efficiency, manages credit risk, and increases competitive advantage. Technology helps streamline the credit analysis, share credit risk information efficiently among departments, and deploy technology-based learning. During the walkthrough, A1 explained to me a test on how the analytical tool works. A1 stated that: "we depend on third party credit companies' information on loan applicants for review and analysis." In the ERM framework, technology use plays a significant role in mitigating inherent risk in loan portfolios. Brustbauer (2016) noted that enterprise risk could include various factors potentially impacting the banks' activities, processes, and resources. B2 mentioned that a robust information technology infrastructure could be very beneficial in the risk mitigation process. B2 views can be associated with the ERM framework because a successful information technology platform identifies, captures, and communicates in a timeframe and Form that enables users to make informed decisions. Effective communication occurs when information flows horizontally and vertically across the entity (COSO, 2017; Rubino et al., 2017).

This finding supports the ERM framework that new technology use and digital information revolutionized the global business environment. Organizations use sophisticated technologies to create a collaborative work atmosphere by providing workers with the ability to use technology to share information fast to manage risk and address uncertainties (Kulathunga et al., 2020). The ERM framework outlines how managers can have greater confidence in addressing critical 21st-century business challenges as they navigate evolving markets, segments, rapid technological change, and heightened regulatory and compliance focus (Lam, 2016). The ERM framework helps drive value creation by enabling management to use technology to respond promptly, efficiently, and effectively to future events that create uncertainty and represent significant threats or opportunities (Anton & Nucu, 2020).

Summary of Analysis

The findings from this study are relevant to improved business practice. Participants provided additional information on bank managers' and leaders' strategies to mitigate inherent risk in retail loan portfolios. First, we found that bank leaders and managers may acquire new perspectives and improved understanding to mitigate loan default. Secondly, bank managers can foster the principle of knowing their customers to manage inherent risk. Bank managers can respond to market challenges and customers to foster and sustain competitiveness (Okeyo et al., 2018). Bank managers may consider service quality, business knowledge, and enhanced credit analytic strategies to gain effective internal control in the marketplace (Arshad & Su, 2015). The finding may provide bank managers with information on developing and implementing strategies to manage the retail loan portfolio's inherent risk.

Productivity and perceptions of quality improve customer services (Rew et al., 2020). Bank managers can optimize resource allocations that align with practical strategies, improve performance, and integrate the volatility in today's markets and environment (Liu & Liang, 2016). Liu and Liang’s (2016) study's findings concurred with the ERM framework to evaluate the control environment, risk assessment, control activities, information, and monitoring. Bank managers and leaders can use the ERM framework to analyze internal control mechanisms to manage loan portfolios' inherent risk. The findings are relevant to professional practice. Bank managers may obtain helpful information on effectively managing inherent risk and improving the internal control environment to mitigate inherent risks.

Recommendations for Action

Banks and financial institution leaders may consider their strategies against those outlined in the themes uncovered in this study. A potential borrower looking to acquire a loan may consider the lending organization's offerings on interest rates and terms before deciding (Lugo, 2014). Establishing business knowledge and taking advantage of technology might mitigate and ensure guardrails within retail loan portfolios. Advance technology and business knowledge will help provide in-build control to manage risk with the loan portfolios better. If these efforts are not in operation within the bank or financial institutions, leaders and managers should implement or improve similar ideas related to business knowledge and technological advancements.

For this study, we discovered strategies to mitigate inherent risk in retail loan portfolios. We recommend that managers implement education and training programs to foster business knowledge and continuous improvement based on the study findings. A simple education and training program might be welcoming by bank employees to better understand and deliver their services to their clients efficiently and effectively, thereby encouraging employees at all levels of the bank to work together to better address risks. Also, bank managers should emphasize using advanced technology to evaluate and mitigate inherent risk in loan portfolios. Technological advancement is critical for bank managers to better utilize and capture relevant information for the decision-making process. With innovation and disruptive technologies, responding to inherent risk will be quick and readily accessible.

Findings from this study are vital to bank managers, credit officers, and underwriters. Credit analytics, especially in the retail loan portfolio, is essential for a bank to mitigate loan portfolios' inherent risk. Moreover, all stakeholders involved in mitigating retail loan portfolios may draw interest in the study findings. Understanding this study's results may be particularly beneficial to current bank executives with authoritative decisions on loan approvals. Furthermore, the need for consistent innovation and proactive risk measures might aid in the mitigation of inherent risk in loan portfolios while improving economic growth.

Recommendations for Further Research

The findings from this study provide strategies for additional exploration in retail loan portfolio risk. The reduction of loan volume may be more substantial as the loan portfolio's riskiness increases (Pausch & Welzel, 2017). Therefore, researchers should conduct future studies to explore issues not addressed in this study, such as credit underwriting, risk reduction behaviors, and financial risk-sharing. We recommend exploring those banks that offer retail loans and endured the financial ramifications of the COVID-19 pandemic, especially as these ramifications relate to the increase in working from home.

CONCLUSION

In this research, bank managers revealed specific challenges that exist in banking. The function of risk management in banking is complicated. Banks managers continue to look for the best risk assessment tools and practices to mitigate the high level of inherent risk in their loan portfolios (Thakor, 2018). To compete in a changing economic environment, bank managers should stay current with business knowledge, enhanced credit analytics, and technology to mitigate risk in loan portfolios. These findings might impact businesses to understand better and implement strategies to enhance and mitigate loan portfolio risks. Adopting a holistic perspective and advancement in technology can be very vital to mitigate risks. In addition, a better understanding of banks' control environment would benefit banks as they mitigate risk, protect their reputation, and minimize loss to stakeholders.

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APPENDIX A: INTERVIEW QUESTIONS

1. What strategies have you used to mitigate the level of inherent risk in your retail loan portfolios?
2. How does your organization assess the level of inherent risk in the retail loan portfolios?
3. What were the key barriers your organization encountered when implementing your strategies for mitigating the level of inherent risk in your retail loan portfolios?
4. How did your organization address the key barriers to implementing your successful strategies for mitigating the level of inherent risk in your retail loan portfolios?
5. How has your organization assessed the effectiveness of your strategies for mitigating the level of inherent risk in the retail loan portfolios?
6. How does your organization develop risk assessment in the retail loan portfolio?
7. What additional information can you share regarding strategies to mitigate the level of inherent risk in the retail loan portfolios?