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The Effect of Macroeconomic Factors on Banking Credit Risk Study on Commercial Banks in Indonesia

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ABSTRAK

Melalui analisis kualitatif, penelitian ini menyelidiki hubungan yang rumit antara variabel makroekonomi dan risiko kredit di bank-bank komersial Indonesia. Dengan bantuan perangkat lunak NVIVO, analisis tematik dari wawancara mendalam dan analisis dokumen mengungkapkan tema-tema tingkat makro yang terkait dengan variabel-variabel ekonomi internasional serta topik-topik spesifik Indonesia terkait dengan lingkungan regulasi dan ekonomi negara. Kesimpulan utama menunjukkan bahwa risiko kredit sangat dipengaruhi oleh perkembangan ekonomi, inflasi, tingkat suku bunga, dan pengangguran, dengan poin-poin kecil yang perlu mendapat perhatian khusus. Muncul sebagai pengaruh yang menstabilkan, sistem regulasi Indonesia mengarahkan prosedur manajemen risiko. Kesulitan ekonomi tertentu, seperti ketergantungan pada komoditas dan ketidakstabilan mata uang, menyoroti perlunya penilaian risiko sektoral. Pentingnya penilaian risiko yang dinamis dan evaluasi peraturan yang sedang berlangsung ditekankan, bersama dengan implikasi untuk prosedur manajemen risiko dan saran-saran untuk pembuat kebijakan. Studi ini menyoroti interaksi antara isu-isu makroekonomi dengan kualitas sistem perbankan Indonesia yang berbeda, dan memberikan wawasan yang signifikan ke dalam area ini.

Kata Kunci: Risiko Kredit, Faktor Makroekonomi, Bank Umum, Manajemen Risiko, Indonesia

ABSTRACT

Through a qualitative analysis, this study investigates the intricate relationship that exists between macroeconomic variables and credit risk in Indonesian commercial banks. With the aid of NVIVO software, thematic analysis of in-depth interviews and document analysis reveals macro-level themes linked to international economic variables as well as Indonesia-specific topics concerning the country's regulatory and economic environment. The main conclusions *show that credit risk is greatly influenced by economic development, inflation, interest rates, and unemployment, with the finer points needing careful attention. Emerging as a stabilizing influence, Indonesia's regulatory system directs risk management procedures. Particular economic difficulties, such as reliance on commodities and currency instability, highlight the necessity of sector-specific risk assessments. The significance of dynamic risk assessment and ongoing regulatory evaluation is emphasized, along with implications for risk management procedures and policymaker suggestions. The study highlights the interaction of macroeconomic issues with the distinctive qualities of Indonesia's banking system, offering significant insights into the area.*

Keyword: Credit Risk, Macroeconomic Factors, Commercial Banks, Risk Management, Indonesia

INTRODUCTION

A country's ability to maintain long-term economic prosperity depends critically on the stability and robustness of its banking industry. The efficient handling of credit risk in commercial banks is essential to this stability (d'Alessandro et al., 2017; Rong et al., 2023). Numerous macroeconomic factors might have an impact on credit risk or the possibility that borrowers won't be able to fulfill their financial obligations (Arruñada, 2011; Fayyaz et al., 2021; Xiaoli & Nong, 2021). Indonesia's banking industry faces particular opportunities and challenges in the face of shifting macroeconomic conditions because it is a growing nation with a dynamic financial landscape (Agung Zulfikri, 2022; Fitrayanto Nugraha et al., 2023). By attempting to clarify the complex relationship between these macroeconomic variables and credit risk, this study adds to the corpus of information already available on risk management in commercial banks.

The importance of understanding the relationship between macroeconomic variables and credit risk is highlighted by the fact that it affects financial institutions and the economy as a whole. To create efficient risk mitigation plans and guide wise policy choices, it is essential to comprehend the interactions between economic growth, inflation, interest rates, unemployment, and credit risk (Achyar & Hakim, 2021; Anidiobu et al., 2018; Elshifa et al., 2023; Rivera et al., 2020). This study attempts to offer context-specific insights into the complex nature of this interaction within a quickly changing economic landscape by concentrating on commercial banks in Indonesia.

There are multiple main goals for the research. First and foremost, it seeks to thoroughly examine how macroeconomic variables and credit risk relate to each other in Indonesian commercial banks. Secondly, the study aims to pinpoint important variables from macroeconomic determinants that significantly impact credit risk in the Indonesian banking industry. Thirdly, the study aims to investigate the methods by which the aforementioned macroeconomic factors influence credit risk. Finally, by offering practical suggestions suited for decision-makers in government, risk management, and finance, the research hopes to support well-informed choices. These suggestions, which aim to improve risk management tactics and direct wise policy choices in the ever-changing environment of the Indonesian banking sector, are based on the nuanced insights obtained from the qualitative study.

LITERATURE REVIEW

a. Macroeconomic Factors and Credit Risk

There has been a lot of scholarly discussion on the complex relationship between macroeconomic variables and credit risk. According to economic theory, credit risk in the banking industry can be greatly impacted by changes in macroeconomic conditions. The foundation for comprehending how economic factors, especially those about market conditions, affect the likelihood of default was laid by (Rubin & Segal, 2015; Sukmayana et al., 2022). Numerous studies have since added to and improved upon this framework, pinpointing important macroeconomic variables that are crucial in determining the dynamics of credit risk (Arifah & Hidayat, 2022; Basyariah et al., 2021; Borts, 1988; Morales-Zumaquero & Sosvilla-Rivero, 2008; Riristuningsia et al., 2017).

b. Economic Growth

One important macroeconomic factor affecting credit risk is economic growth. As enterprises expand, unemployment rates decline, and consumer income levels rise, an expanding economy typically creates favorable conditions for creditworthiness (Ayyagari et al., 2007; Beck et al., 2005, 2008). The relationship is complex, though, since quick economic growth can also result in reckless lending practices and higher borrower leverage, which raises the chance of default (Azam et al., 2021; Hamed, 2023; Mokodenseho & Puspitaningrum, 2022; Sun et al., 2022).

c. Inflation

The pace of overall price increases for goods and services, or inflation, adds complexity to the credit risk environment. The ability of borrowers to service debts may be impacted by high inflation, which can reduce the real value of loan repayments (Boyd et al., 2001; Morales & Reding, 2021; Ramlan & Suhaimi, 2017). On the other hand, low or deflationary settings can cause banks to become less profitable, which might increase credit risk by raising the likelihood of default (Cairó & Sim, 2020; Fikri, 2019; Morales & Reding, 2021; Roubini & Sala-i-Martin, 1995).

d. Interest Rates

Credit risk and interest rates have a complex relationship. Higher interest rates make borrowing more expensive for both consumers and businesses, which could increase credit risk. On the other hand, lenders who are looking for larger yields may take excessive risks as a result of consistently low-interest rates, which would increase credit risk (Cairó & Sim, 2020; Ferreira et al., 2009; Kallianiotis, 2020; Lange et al., 2001). Credit risk dynamics are also influenced by the yield curve's form and the difference between short- and long-term interest rates (Faiqoh et al., 2022; Pahlavani et al., 2005; Ramlan & Suhaimi, 2017; Rostin et al., 2019).

e. Unemployment

Rates of unemployment are a crucial measure of the state of the economy and, by extension, of credit risk. High unemployment can make it harder for people and businesses to satisfy their financial responsibilities, which can result in a rise in loan delinquencies and defaults (Leasiwal, 2021; Murjani, 2019; Pal et al., 2021; Satrio et al., 2023). Low unemployment rates, on the other hand, could lower credit risk but also breed complacency and promote riskier lending practices (Feriyanto et al., 2020; Mohseni & Jouzaryan, 2016)(Rahmanudin & Sabil, 2022).

f. Banking Sector in Indonesia

Examining the distinctive characteristics of Indonesia's banking industry is necessary to comprehend the dynamics of macroeconomic variables and credit risk in that country. Given its varied economic and regulatory environment, Indonesia offers an ideal setting for examining the relationship between national and international macroeconomic factors and the credit risk profile of commercial banks.

g. Regulatory Framework

The regulatory framework has a significant influence on how commercial banks manage risk. The central bank was designated as the main supervisor and regulator of the banking industry by the Bank Indonesia Act of 1999, which also included prudential measures to guarantee financial stability. Comprehending the regulatory framework is necessary to place the management of macroeconomic issues within the Indonesian banking sector in context.

h. Economic Challenges

Being an emerging market, Indonesia has unique economic difficulties that may raise credit risk. The relationship between macroeconomic conditions and credit risk in Indonesian banks may take on new dimensions due to factors including currency volatility, reliance on commodity exports, and sensitivity to external shocks (Arifqi, 2021; Catlett et al., 2019; Huaicun et al., 2023; Morales & Reding, 2021; Perdana et al., 2023).

i. Synthesis and Critical Analysis

Although previous research offers insightful information about how macroeconomic variables affect credit risk on a worldwide scale, the unique dynamics of the Indonesian banking industry are still not well understood. Effective risk management in the face of national economic transitions requires a grasp of the interactions between global macroeconomic variables and specific economic difficulties as well as regulatory frameworks. There are significant gaps in the body of knowledge on macroeconomic variables and credit risk, which this study aims to fill. The Indonesian banking industry has received little attention, especially when it comes to qualitative studies that delve into the complex connections between credit risk and macroeconomic factors. By offering context-specific insights and revealing the factors that influence credit risk in Indonesian commercial banks, this study seeks to close this gap.

RESEARCH METHODS

a. Research Design

This research adopts a qualitative research design to delve into the intricate relationship between macroeconomic factors and credit risk within the commercial banking sector of Indonesia. Qualitative research methods are particularly suited for exploring complex and context-specific phenomena, allowing for a deep understanding of the mechanisms and dynamics involved (Creswell, 2013).

b. Sampling

A purposive sampling technique will be employed to select participants who possess the necessary expertise and experience to provide valuable insights into the research topic. Key informants will include risk managers, economists, financial analysts, and other professionals directly involved in assessing and managing credit risk within commercial banks. The goal is to ensure a diverse range of perspectives and experiences that enrich the qualitative data collected (Patton, 2015).

c. Data Collection

1. In-Depth Interviews
   In-depth interviews will serve as the primary method for data collection. Approximately 10 key informants from various commercial banks in Indonesia will be interviewed. The semi-structured nature of the interviews will allow for flexibility in exploring emergent themes while ensuring consistency in the core areas of investigation (Creswell & Poth, 2017). The interview questions will be developed based on the research objectives, covering topics such as the impact of economic growth, inflation, interest rates, and unemployment on credit risk, as well as the mechanisms through which these factors influence risk management strategies.
2. Document Analysis
   In addition to interviews, relevant documents and reports from commercial banks and regulatory authorities will be collected and analyzed. These documents may include annual reports, risk management policies, and economic outlook assessments. Document analysis will provide supplementary insights, validate information obtained from interviews, and offer a comprehensive understanding of how macroeconomic factors are formally addressed within the banking sector.

d. Data Analysis

Thematic Analysis

Thematic analysis, as outlined by Braun and Clarke (2006), will be employed to analyze the qualitative data gathered from interviews. The analysis will involve several stages:

1. Data Familiarization: Immersion in the data through repeated readings of transcripts and documents to gain a comprehensive understanding of the content.
2. Initial Coding: Systematically coding the data to identify patterns, recurring themes, and relevant information related to the impact of macroeconomic factors on credit risk.
3. Theme Development: Grouping codes into broader themes that capture the essence of participants' responses and insights.
4. Review and Refinement: Iteratively reviewing and refining themes to ensure coherence and accuracy in representing the data.
5. Report Writing: Present the findings in a narrative form, supported by direct quotes and excerpts from interviews, to convey the richness and depth of the qualitative data.

To enhance the rigor and efficiency of the thematic analysis, NVIVO software will be utilized. NVIVO provides a systematic platform for organizing, coding, and analyzing qualitative data, facilitating a more streamlined and transparent process (QSR International, 2022). The software will be employed to manage the large volume of qualitative data, track coding consistency, and assist in the identification of emerging themes.

Ethical considerations are paramount in qualitative research. Informed consent will be obtained from all participants, ensuring they are fully aware of the research objectives, procedures, and potential implications. Participants will be assured of confidentiality, and data will be anonymized during the analysis and reporting phases. Additionally, the research will adhere to the ethical guidelines set forth by relevant institutional review boards.

RESULTS AND DISCUSSION

The findings of the qualitative analysis are presented in this section, offering a thorough examination of the revelations gleaned from in-depth interviews and document analysis. NVIVO software helped with the thematic analysis, which revealed important themes and patterns on how macroeconomic variables affect credit risk in Indonesian commercial banks.

Themes at the Macro Level

The impact of macroeconomic factors on credit risk inside Indonesian commercial banks was the subject of notable macro-level topics that emerged from the thematic analysis of in-depth interviews. The themes that have been identified are explored and interpreted in detail in the ensuing subsections.

Theme: Association Relationship between Credit Risk and Economic Growth

Participants repeatedly underlined how the banking industry's credit risk dynamics are shaped by economic growth. The consensus was that credit risk tends to decline during times of strong economic development. This is explained by growing consumer expenditure, prospering firms, and improved borrower creditworthiness.

"In general, economic expansion lowers credit risk, but we must exercise caution. There is occasionally a tendency to take on riskier clients during boom times." - Individual 1

Notwithstanding the favorable correlation in general, the participants emphasized subtleties within the relationship. Expansion of the economy too quickly could encourage reckless lending practices and raise credit risk. This intricacy emphasizes the necessity of having a sophisticated grasp of how credit risk management techniques are impacted by economic growth.

Theme: The Complex Effects of Inflation on Credit Risk

The issue of inflation's influence was found to be complex, as participants recognized the various ways in which it can affect credit risk. Most people thought that moderate inflation was doable, but severe inflation may be difficult for borrowers. On the other hand, low or deflationary economies can result in lower bank profitability, which might increase the risk associated with credit.

Different debtors are affected by inflation. It's manageable for some, but a challenge for others. The industry and the type of loans determine this." - Participant 5: Participants emphasized the significance of taking sector-specific differences in the relationship between inflation and credit risk into account. While certain industries might be more insulated from the effects of inflation than others, others would find it harder to pay down their debts.

Theme: Interest Rates as an Important Factor

Interest rates have become a crucial factor in determining credit risk in the commercial banking industry. Increased borrowing costs for both individuals and corporations were regularly linked to higher interest rates, which may have the effect of increasing credit risk. On the other hand, if interest rates remain low for an extended period, financial institutions may be encouraged to take on more risk when making loans.

"Interest rates are quite important. Borrowers suffer if they're too high, and there's a chance of taking on too much risk in an attempt to maximize returns if they're too low." - Participant 8

To reduce credit risk, participants emphasized the significance of controlling interest rates in a balanced manner. Optimizing interest rates to guarantee that borrowers can afford loans while preserving the bank's profitability is the difficult part.

Theme: The Direct Association Between Credit Risk and Unemployment

In the banking industry, unemployment rates were regularly found to be positively connected with credit risk. Higher rates of unemployment were linked to higher rates of loan defaults and delinquencies, illustrating the financial difficulties that people and businesses encounter when the economy is uncertain.

"Credit risk inevitably increases when people lose their jobs. People and companies find it difficult to fulfill their commitments." - Third Party

One identified credit risk-reducing element is a stable work environment. The significance of keeping an eye on unemployment rates as a crucial gauge of the state of the economy as a whole and its possible bearing on credit risk was emphasized by the participants.

Indonesia-Specific Themes

Examining Indonesia-specific issues, such as the legal system and economic obstacles, clarifies the distinct contextual elements that influence the correlation between macroeconomic variables and credit risk in Indonesia's commercial banking industry.

Theme: The Regulatory Structure as a Foundation for Stability

Participants and document analysis repeatedly emphasized how important Indonesia's regulatory structure is to reducing credit risk and preserving the country's financial stability in the banking industry. It has been acknowledged that the Bank Indonesia Act of 1999 and other ensuing regulations played a significant role in directing risk management procedures.

"Regulations provide us a structure. They support the stability of the banking industry and assist us in better risk management." - Individual 6

The significance of regulatory compliance was underscored by the participants as a means of supporting risk management methods. By guaranteeing that commercial banks followed set policies and procedures, the regulatory framework offered an organized method that strengthened the environment for risk management.

Theme: Handling Particular Economic Difficulties

One important subject that emerged was Indonesia's unique economic concerns, namely its reliance on commodity exports and currency instability. Participants agreed that these difficulties added another level of complexity to risk evaluations in the banking industry.
As residents in Indonesia, we must overcome certain obstacles. Our risk estimates are further complicated by currency changes and our reliance on commodities." - Individual 9
To take into consideration the impact of certain economic issues, participants emphasized the significance of undertaking sector-specific risk assessments. Customized risk management techniques are required because different industries may be more or less impacted by changes in the dynamics of the commodities and currency markets.

Discussion

The findings shed light on the complex interplay between macroeconomic variables and credit risk in the banking industry of Indonesia. It has been found that the interaction between unemployment, interest rates, inflation, and economic growth has a substantial impact on credit risk, with contextual differences based on particular economic circumstances (Joaqui-Barandica & Manotas-Duque, 2023; Khan & Gunwant, 2023; Khyareh et al., 2019).

The results are consistent with previous research, highlighting the significance of taking into account the complex interactions between macroeconomic factors and credit risk (Fayyaz et al., 2021; Fitrayanto Nugraha et al., 2023; Xiaoli & Nong, 2021). The elements that are unique to Indonesia particularly highlight how the regulatory environment and particular economic difficulties influence the field of risk management.
The themes that have been found offer significant perspectives for risk managers and regulators to navigate the intricacies of credit risk in the Indonesian banking environment. Important lessons include the need to keep an eye out for potential hazards during times of economic expansion and the significance of keeping inflation and interest rates in check.

Implications for Risk Management

The results suggest several implications for risk management practices within commercial banks in Indonesia:
Dynamic Risk Assessment: Risk managers need to adopt a dynamic approach to risk assessment, recognizing that the impact of macroeconomic factors on credit risk may vary across different economic scenarios.
Regulatory Compliance: Adherence to the existing regulatory framework is vital for ensuring the stability of the banking sector. Regular updates and revisions to regulations may be necessary to address emerging challenges.
Sector-Specific Considerations: Recognizing the diverse impact of macroeconomic factors across sectors is crucial. Tailoring risk management strategies based on the unique characteristics of borrowers can enhance credit risk assessment.

Limitations and Future Research

Although the study offers insightful information, some limitations should be noted. The results may not be entirely generalizable because they are context-specific to the chosen participants. The sample size might be increased in subsequent studies, and a longitudinal approach could be used to record shifts in the correlation between macroeconomic variables and credit risk over time.

CONCLUSION

In summary, this study offers a thorough examination of the connection between macroeconomic variables and credit risk in Indonesian commercial banks. The macro-level themes of unemployment, interest rates, inflation, and economic growth highlight the complex dynamics that affect credit risk. Themes specific to Indonesia highlight how important the regulatory system is as a stabilizing force and how important it is to navigate certain economic issues. The integration of these results advances a comprehensive comprehension of credit risk management within the banking industry in Indonesia. The necessity of flexible tactics and ongoing regulatory review is emphasized in the implications for risk management procedures and policymakers' suggestions. The study's conclusions provide insightful advice to stakeholders on how to sustain financial stability and efficiently manage credit risk as Indonesia's economy develops.

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