

CHAPTER I

INTRODUCTION

1.1 Background

Digital technology currently plays a crucial role in supporting the growth of businesses, including those in the financial industries, or multi-finance companies. Digital technology transforms how business processes operate, deliver services, and interact with customers. However, the challenges faced by the multi-finance industry have become increasingly complex with the advancement of digital technology, making it crucial for multi-finance companies to remain competitive and meet the growing market demands. Therefore, it is important to identify the impact and benefits of implementing digital technologies, such as IoT, AI, and Blockchain, in improving operational efficiency, enhancing customer service, and managing risks more effectively [1][2]. The rapid growth of digital technology information systems continues to spur innovations in the development of digital systems to stay competitive with rivals. Many companies are transitioning to digital to meet the needs of the public and market segments. Specifically, the financial and financing industry has become one of the fastest-growing industries globally, adopting digital technology. The financing and lending sector based on digital technology is growing rapidly and holds significant potential to meet market needs. Many multi-finance companies in Indonesia generally require several days to approve financing applications through digital systems. This highlights the need for an analysis of digital platform systems and recommendations for system upgrades in infrastructure that can expedite the analysis process of customer financing applications and shorten credit approval times to just a few minutes.

The implementation of financial technology and its ecosystem needs to be continuously monitored and developed to support the creation of monetary stability, financial system stability, and an efficient, safe, smooth, and reliable payment system that fosters national economic growth [3]. The advancement of information technology increasingly facilitates and aids in determining diverse business models to meet

customer needs. This innovation development focuses on the progress of the financial segment by incorporating digital technology [4]. Multifinance companies in Indonesia leverage a variety of technologies tailored to their specific needs and technological progress. These include mobile applications and online services accessible through websites, enabling customers to access information about loans, payments, and other financial transactions without the need to physically visit branch offices. Business process automation enhances the efficiency of financing processes, while data analysis is employed to assess credit risk. Additionally, security technologies such as data encryption and user identification systems are implemented to safeguard data and reduce the risk of fraud. The multi-finance industry in Indonesia is experiencing steady growth and development. According to data from the Financial Services Authority (Otoritas Jasa Keuangan) in March 2024, there are a total of 146 financing companies in Indonesia (OJK, 2024). This growth is in line with the advancement of digital technology and the increasing market demand for financial services. The rapid expansion has resulted in intense competition among financing companies, prompting them to innovate and compete for market share consistently.

The multifinance sector is overseen by the Financial Services Authority (Otoritas Jasa Keuangan, OJK) in compliance with relevant laws and regulations. Due to the advancement of technology in these firms, specific regulations and supervision are necessary to ensure financial stability and safeguard customers. This oversight encompasses technological risk, cybersecurity, operational resilience, consumer protection, and data security. Data processing in the financial industry must be balanced with appropriate regulations, as customer involvement as data analysts can impact a company's ability to protect consumers' data. Regulatory aspects that need to be applied to a multi-finance company include obtaining a business license from the OJK and OJK's oversight of multifinance operations to ensure compliance with regulations. Additionally, ensuring data security and customer privacy involves secure data storage, appropriate technology, protection against data misuse, and adequate consumer protection [5].

Using consumer data in every business analysis, the need for proper data governance becomes critical. In the multifinance industry, data is vital for many business areas such as lending, fraud prevention, and consumer growth. Another

crucial aspect is ensuring that the use of this data complies with the law [6]. Companies need to take measures to ensure customer data security and prevent cybercrime. Existing digital technology provides various tools and methods to enhance data protection and secure business operations. The analysis conducted involves identifying the digital platforms used by major multifinance companies in Indonesia, based on user experience and digital system innovations. The goal is to obtain updated system models that can be recommended based on technological, regulatory, and economic aspects.

The system can be utilized to enhance operational efficiency by providing better and faster services to customers. Previous research has applied credit risk modeling techniques, comparing traditional logistic regression with machine learning approaches for financing products jointly offered by banks and fintech lending/multifinance companies. This study revealed that the integration of data from fintech lending and multifinance companies significantly impacts the Probability of Default model. Factors such as debtor credit profiles, financing product characteristics, and economic market conditions significantly influence credit risk levels within the portfolio. A case study on Bank ABC and other financial institutions demonstrated more efficient credit risk management in the context of cooperation with fintech lending and multifinance companies. The expected outcome of the research on "Analysis of Regulations and Techno-Economic in the Digital Multifinance Industry" is to provide a digital system solution that can expedite the credit approval process for the public with multifinance companies in Indonesia. This aims to enhance the efficiency and effectiveness of credit application services to meet public needs. Furthermore, the research will include an analysis of the technological, economic, and regulatory aspects, encompassing cost design and regulatory compliance concerning digital systems and credit scoring.

1.2 Problem Statement

Based on the issues raised in this study, the aim is to develop a business by implementing a credit scoring system to expedite the credit decision-making process for customer financing in multifinance companies, which currently takes several days,

making it more efficient. To achieve this objective, the study identifies issues related to regulation and techno-economic analysis, namely:

1. **Technological Analysis of Digital Multifinance to Enhance Operational Efficiency in Providing Credit Scoring Services:** This research aims to analyze the technologies available for digital multifinance that can be utilized to improve operational efficiency in delivering credit scoring systems. Additionally, it examines the models used in developing a credit scoring system employing machine learning technologies, ensuring that the system can effectively analyze the creditworthiness of potential clients for multi-finance companies in Indonesia.
2. **Economic Analysis of the Digital Multifinance Business Aspect in Recognizing Investment Feasibility Risks:** This study also focuses on the economic analysis of the business aspects of digital multifinance to identify investment feasibility risks. Moreover, it is crucial to understand the process of economic evaluation and how technology can assist multi-finance companies in expanding their market and enhancing marketing effectiveness in Indonesia.
3. **Regulatory Analysis of Digital Multifinance in Indonesia:** This research includes an analysis of the regulatory framework governing digital multifinance in Indonesia, which is primarily regulated by the Financial Services Authority (OJK), the Electronic Information and Transactions Law (UU ITE), and the Personal Data Protection Law. The study evaluates whether the current regulations adequately address the technological advancements in digital credit scoring systems. It also explores the necessity for policy recommendations to ensure robust customer data protection and support regulatory compliance for digital multifinance operations.

1.3 Scope of Problem

The scope limitations to support the research model on regulation and supervision of digital multi-finance are as follows:

1. The research aspect is focused solely on multifinance companies operating in Indonesia. As a reference, the author only considers examples from the largest

multifinance companies that implement digital systems. This study focuses on the Credit Scoring system approach that influences the credit decisions of digital multifinance companies in shortening the approval time for customer financing.

2. This research limits its focus to the impact of economic factors such as CAPEX, OPEX, and costs determined by financing digital systems. Additionally, it considers aspects such as business feasibility analysis for credit scoring system businesses in Indonesia.
3. The regulation of multifinance is based on OJK regulations governing finance companies, the Information and Electronic Transactions Law (UU ITE), and Law No. 27 of 2022 on Personal Data Protection. This includes regulating digital credit scoring systems and aspects of customer data protection within government regulations on technological development in credit scoring system businesses in Indonesia.

1.4 Research Objectives

This study aims to develop a business by creating a web-based credit scoring system for digital multifinance companies that can shorten the time required for the customer financing application and approval process for multifinance companies in Indonesia. It also includes an analysis of the regulations and techno-economic aspects of the credit scoring system, with recommendations for productive regulations for the multifinance industry. Additionally, the expected outcome of this research is to provide an overview of the business feasibility of multifinance ventures from various perspectives, including those of the multifinance companies, customers, and the government. The study also analyzes the contribution of digital multifinance to Non-Tax State Revenue (PNBP) through a techno-economic analysis.

1.5 Hypotheses

In line with the current digital revolution impacting the global finance industry, it is hypothesized that it can evolve into a technology-driven business capable of competing effectively [7]. The efficient application of digital technology in financing approval processes significantly reduces customer financing approval times, enhances operational efficiency in multi-finance companies, and lowers operational costs. The

effective use of digital technology in customer service significantly increases customer satisfaction levels, accelerates transaction processes, and improves accessibility to financing services for multifinance customers. Appropriate and sustainable regulatory compliance in the multi-finance industry significantly enhances operational efficiency, drives technological innovation, and ensures adequate consumer and data protection for multi-finance companies. This research aims to provide solutions for the effective use of digital technology in the multi-finance industry in Indonesia, as well as effective recommendations for technology infrastructure development and appropriate regulations to support sustainable and future-oriented growth. Regulation under POJK No. 77/POJK.01/2016 has not been fully effective due to comprehensively formulated norms lacking in providing security guarantees for P2P lending consumers. This is evidenced by legal gaps in setting loan interest rates and the absence of standardized debt collection mechanisms [8].

1.6 Methodology

The research methodology employed in this study is as follows:

1. Literature Review:

To comprehend the topic of this research, gathering data on user preferences for digital system services in multi-finance is essential.

2. Data Collection:

Data collection involves gathering research articles related to digital credit scoring systems and journals from relevant stakeholders in the multi-finance industry. Stakeholders include multi-finance companies, regulators, and other entities that may potentially influence multi-finance operations in Indonesia. Additionally, data collection may include gathering user sentiment data regarding existing digital systems in multi-finance companies.

3. Techno-Economic and Regulatory Analysis:

Feasibility study analysis is conducted based on three categories: technology, economic feasibility, and regulations concerning multi-finance companies.

4. Conclusion:

The research analysis outcomes are expected to provide recommendations and regulatory suggestions for relevant parties, particularly for fintech multi-finance in Indonesia.

1.7 Research Method

Research methods that can be utilized in this study include both qualitative and quantitative approaches. Here is an explanation of the research methods that can be applied to investigate the impact of digital technology on the multi-finance industry in Indonesia:

1.7.1 Qualitative Approach:

a. **Case Studies:**

Using case studies from several prominent multifinance companies in Indonesia to analyze how digital technology has been implemented in their operations, and to understand its impact on operational efficiency, customer service, and risk management. Through comparative studies among multifinance companies that have adopted digital technology with different business processes, these case studies aim to understand the performance differences, successes, and challenges faced by each multifinance company in implementing digital technology. This helps identify the best strategies that can be applied across the multi-finance industry.

b. **Analyzing OJK regulatory documents to understand the development of the multi-finance industry in Indonesia, as well as to comprehend the regulations that have been implemented and their implications on the use of digital technology in the multi-finance industry.**

1.7.2 Quantitative Approach:

a. **Through sentiment analysis using scraping techniques on user comments, this approach measures customer satisfaction levels with the digital systems used by multifinance companies. It gathers data on user experiences, perceptions of multifinance services that have been implemented, and preferences related to digital technology usage. This survey provides quantitative data useful for**

analyzing customer satisfaction levels and the impact of digital technology adoption on operational efficiency and effectiveness within the company.

- b. Developing a credit scoring system using Python scripting and the Django library to create a website-based digital credit scoring system. This includes conducting network structure analysis, and technological, economic, and regulatory analysis of the multi-finance business in Indonesia.

By employing both qualitative and quantitative approaches, this research aims to provide a comprehensive understanding of how digital technology influences the multi-finance industry in Indonesia. It seeks to offer effective recommendations regarding the development of technology and appropriate regulations to support the growth of this sector.