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# ANALYSIS OF DEFAULT INTEREST RATES IN THE FINTECH LENDING INDUSTRY IN INDONESIA USING TWP90 AND TKB90 INDICATORS

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**Abstract**

The growth of the fintech lending industry in Indonesia continues to increase in line with the high public need for fast and easily accessible digital financing services. However, these developments are also accompanied by an increase in the risk of default that needs to be monitored periodically through the Financial Services Authority's official indicators, namely the 90-Day Default Rate (TWP90) and the 90-Day Payment Success Rate (TKB90). This study aims to analyze the development of these two indicators as a reflection of the level of credit risk in the fintech lending industry during the period from January 2024 to January 2025. The research uses a quantitative descriptive method by utilizing secondary data from OJK monthly publications. The results showed that throughout the observation period, TWP90 was in the range of 2.37%–2.96%, while TKB90 showed stable performance in the range of 97.05%–97.63%. The downward trend of TWP90 in mid-2024 indicates improved credit quality and the effectiveness of risk mitigation, while the increase in TWP90 at the end of the year indicates seasonal pressures affecting borrowers' ability to repay. In addition, the inversely proportional relationship between TWP90 and TKB90 was seen consistent throughout the study period. These findings confirm that although the fintech lending industry is in a relatively healthy and controlled condition, credit risk dynamics still need to be anticipated through the strengthening of risk assessment systems, billing strategies, and periodic monitoring by regulators and industry players.

## 1. INTRODUCTION

### Background Problem

The development of digital technology has driven significant transformation in the financial services sector, one of which is through the emergence of fintech lending or *peer-to-peer* lending. This innovation emerged in response to the public's need for faster, more practical, and more accessible financing services without having to go through a long process like in conventional financial institutions. In Indonesia, the fintech lending industry is experiencing very rapid growth with an increase in the distribution of funds and the number of users every year. This phenomenon is recognized as a form of accelerating national financial inclusion. Santoso (2020) [1] He said that the growth of digital financial services, including fintech lending, plays an important role in expanding access to financing for people who have not been touched by banking services. This digital financing model offers a more efficient process, because the entire process from submission, verification, to disbursement is carried out online, so that it can reach people who have not been served by formal financial institutions. In 2024, the position of fintech lending will be strengthened as a strategic instrument in encouraging digital economic growth in Indonesia.

However, behind the rapid growth of the industry, comes the main challenges associated with credit quality and increased risk of default. Unlike conventional financial institutions that apply credit analysis based on historical data, financial track record, and collateral, many fintech lending platforms rely only on *Alternative data* such as social media usage, digital transaction history, or other behavioral data. Wibowo & Putri (2021) [2] confirms that the use of *Alternative data* It does speed up the analysis process, but at the same time it has the potential to reduce the accuracy of risk assessments. This situation increases the potential for a default or default that has implications for the stability of the platform's operations. Hidayati & Nurhayati (2022) [3] also found that reliance on algorithms *Digital data-driven credit scoring* Without in-depth verification can increase credit risk, especially since most fintech loans are *Unsecured Loans*. Therefore, the quality of the risk assessment algorithm and the validity of borrower data are the main determinants of the success of this digital financing model.

To overcome these problems and maintain the sustainability of the industry, the Financial Services Authority has set two main indicators as a measure of the health of the fintech lending portfolio, namely 90-Day Default Rate (TWP90) and 90-Day Payment Success Rate (TKB90). TWP90 is used to assess the percentage of loans that are more than 90 days in arrears, while TKB90 shows the success rate of payment settlement within the same period. According to Prasetyo (2023)[4], these two indicators are very important metrics because they can directly describe credit quality and affect investor confidence in the platform. Sayuti & Ramadhani (2021) [5] added that fluctuations in TWP90 and TKB90 can be used as an early signal for increased credit risk in the industry, especially in times of economic uncertainty.

Based on the latest OJK data for the period January 2024-January 2025, TKB90 is in the range of 97.05%–97.63%, which shows that most loans can still be completed on time. However, the TWP90 which is in the range of 2.37%–2.96% indicates an increase in credit risk that needs to be considered. The fluctuations of these two indicators reflect the dynamics of credit risk that require in-depth analysis, both to understand the pattern of rising and falling default interest rates. Rahmawati national research (2022) [6] suggests that the TWP90 and TKB90 trends not only describe the health conditions of loans, but can also be used to predict the sustainability of the fintech lending industry in the medium term.

Although the OJK routinely publishes TWP90 and TKB90 statistics, national academic research that specifically analyzes trends in these two indicators is still very limited. Most previous research has focused more on the influence of internal borrower factors, the quality of scoring algorithms, and macroeconomic conditions as triggers for credit risk. Meanwhile, studies that focus on comprehensive descriptive analysis based on the latest regulatory data on the TWP90 and TKB90 trends have not been widely conducted. In fact, this kind of analysis is very important for regulators, industry players, and investors in assessing the stability of the fintech lending industry and determining more effective risk mitigation strategies.

Therefore, this study was conducted to analyze the default rate of the fintech lending industry in Indonesia using the TWP90 and TKB90 indicators as the main measure. The analysis of the movements of the two indicators during 2024 to early 2025 is expected to provide an empirical picture of the condition of credit risk in the fintech lending industry. In addition, this research is also expected to contribute to policy development, improve the effectiveness of risk management, and develop more adaptive operational strategies for fintech lending providers. With the increasing role of fintech lending in the digital financial ecosystem, a deeper

understanding of the TWP90 and TKB90 trends has become essential to ensure healthy, sustainable, and trustworthy industry growth.

**Problem Formulation**

1. How is the development of fintech lending default interest rates in Indonesia reflected through the TWP90 (90-day Default Rate) indicator during the research period?
2. How is the payment success rate (TKB90) of fintech lending growing in Indonesia, and what have been the trends in recent years?

**Research objectives**

Based on the background and formulation of the problems that have been compiled above, the purpose of this study is to find out and analyze how the development of the 90-Day Default Rate (TWP90) and 90-Day Payment Success Rate (TKB90) reflects the level of default risk in the fintech lending industry in Indonesia, as well as to see the dynamic relationship between the two indicators in describing the health of the financing portfolio during the study period.

## 2. LITERATURE REVIEW

**Fintech Lending**

Fintech lending is a form of digital financial service innovation that has grown rapidly in recent years. Financial Services Authority (2020)[7] defines fintech lending as an information technology-based money lending service that brings together lenders and borrowers without going through traditional financial institutions. This allows the financing process to take place faster, more efficiently, and more flexibly. Meanwhile, Arner, Barberis, and Buckley (2020)[8] Explains that Fintech Lending is a form of modern financial transformation that utilizes digital technology to automate the process of distributing funds, ranging from identity verification, risk assessment, to payment transactions. Both opinions affirm that fintech lending plays a role as an alternative financing instrument that not only accelerates access to credit, but also expands the reach of financial services to community groups that have not been served by banks.

Based on these two views, the author concludes that fintech lending is a digital financing platform that functions to bring together lenders and borrowers directly by utilizing technology to improve the speed, efficiency, and accessibility of national financial services.

**Credit Risk in Fintech Lending**

Credit risk is one of the main issues in the implementation of fintech lending. Financial Services Authority (2023)[9] Defining credit risk as the possibility of the borrower failing to meet his or her obligations to pay the principal and interest on the loan within the agreed term. This risk arises when the borrower's ability to pay decreases, either for financial reasons or due to changes in economic conditions. On the other hand, Putri and Sudarsono (2021)[10] stated that credit risk in fintech lending tends to be higher than traditional banking credit because the credit scoring model used is digital and highly dependent on *Alternative data*, such as app transaction history, social media data, and mobile usage behavior. Reliance on such non-traditional data often leads to inaccuracies in risk assessments, increasing the potential for default.

From this description, the author concludes that credit risk in fintech lending is the possibility of defaulting on disbursed loans. This risk is higher than that of traditional financial institutions because the risk assessment process is not entirely based on financial data, so it requires special measurement tools to monitor the health of financing.

**TWP90 and TKB90 Credit Risk Indicators**

**a. 90-Day Default Rate (TWP90)**

TWP90 is an official indicator used to measure the proportion of loans that are more than 90 days in arrears. OJK (2022) explained that TWP90 reflects the level of non-performing loans in fintech lending and is one of the benchmarks for the health of the industry. The higher the value of TWP90, the worse the quality of the credit portfolio managed by the platform. In line with this opinion, Wijaya (2023)[11] emphasized that TWP90 can be used as an indicator of predicting credit risk conditions because it tends to reflect the effectiveness of the credit scoring system and risk mitigation strategies implemented by fintech lending platforms. An increase in the value of TWP90 indicates a decrease in the borrower's ability to repay and potential losses for lenders.

Based on this theory, the authors conclude that TWP90 is the main indicator for assessing the default rate in fintech lending. The high value of TWP90 indicates high credit risk and a decline in the quality of financing portfolio management.

**b. 90-Day Salary Success Rate (TKB90)**

TKB90 is an indicator that shows the percentage of payment settlement by borrowers within a period of 90 days. According to OJK (2024), TKB90 is used to measure borrowers' ability to pay and the operational performance of fintech lending providers. A TKB90 value that is close to 100% indicates that most loans are well settled. Meanwhile, Pratama (2022)[12] stated that TKB90 is also an indicator that describes the platform's reliability in mitigating credit risk, as the value of this indicator is inversely proportional to TWP90. When the TWP90 increases, the value of the TKB90 usually decreases, signaling a weakening of the industry's resilience to default.

The author concludes that TKB90 is an indicator that shows the success rate of loan repayment in fintech lending platforms. TKB90 values are a direct reflection of the health and stability of the industry, so it is very important to be analyzed with TWP90.

**c. Factors Affecting TWP90 and TKB90**

TWP90 and TKB90 as credit risk indicators are influenced by various factors. Ramadan (2021)[13] stating that the characteristics of the borrower such as age, income, employment history, and credit track record have a great influence on the ability to repay. Borrowers with unstable income or no credit history tend to have a higher risk of default. In addition, Nuryanti et al. (2022)[14] added that the quality of credit scoring algorithms plays an important role in determining the accuracy of risk assessments. An under-optimal algorithm will result in inaccurate borrower ratings, thereby increasing the default rate. External factors such as macroeconomic conditions, inflation, and economic pressures also affect the borrower's ability to meet his obligations.

From this explanation, the author concludes that the dynamics of TWP90 and TKB90 are greatly influenced by internal borrower factors, the platform's ability to mitigate risks, and external economic conditions. Changes from these factors will affect the movement of default interest rates and payment success in the fintech lending industry.

## 3. RESEARCH METHODS

**Types and Approaches to Research**

This study uses Types of quantitative descriptive research. Descriptive research aims to provide an objective, systematic, and factual picture of the phenomenon being studied without manipulating variables (Sugiyono, 2020)[15]. The design of this study does not test causal relationships or provide treatment to the object of research, but aims to explain the actual conditions based on the available data.

The quantitative approach is used because this study analyzes objective percentage figures, namely the 90-Day Default Rate (TWP90) and the 90-Day Payment Success Rate (TKB90) officially published by the Financial Services Authority (OJK). Through this approach, researchers can interpret credit risk conditions through measurable statistical data.

This approach was chosen because it is in accordance with the research objectives, which is to analyze the trend of credit risk fluctuations in the fintech lending industry from January 2024 to January 2025 descriptively. Thus, the results of the study can provide an empirical picture of the health dynamics of the fintech lending financing portfolio based on the latest regulatory data.

**Research Location and Time**

In this study, the location of the research was not physical because all data was obtained online through the official website of the Financial Services Authority (OJK). As a research using the online documentation method, data collection activities do not require field observation, but focus on searching for digital documents and official publications published by the OJK.

The research period includes two main stages. First, the data collection period lasts from January 2024 to January 2025. Second, the data analysis period will be carried out from January 2025 to February 2025. Thus, the overall research time reflects the systematic process from information collection to the preparation of comprehensive analysis results.

**Data Types and Sources**

The type of data used in this study is secondary quantitative data, namely numerical data that describes the condition of credit risk in the fintech lending industry. Data is obtained through:

a. Monthly Publication of the Financial Services Authority (OJK)
b. Fintech loan statistics report
c. Supporting documents from the official websites of fintech regulators and associations

The use of secondary data makes it easier for researchers to see the development of credit risk indicators objectively and measurably.

**Research Variables and Operational Definitions**

This study uses two main variables, namely:

a. 90-Day Default Rate (TWP90)

TWP90 is an indicator used by the OJK to measure the proportion of outstanding loans that are more than 90 days in arrears.

TWP90 Calculation Formula:

$$TW\ P\ 90 = \frac{\text{Outstanding Pinjaman Macet (>90 Hari)}}{\text{Total Outstanding Pinjaman}}\ X\ 100\%$$

Operational indicators:

1) Calculator, the total value of loans that are more than 90 days in arrears.
2) The caller is the total outstanding value of active loans in the current month.
3) Unit, Percentage (%)

The higher the TWP90, the greater the risk of default.

b. 90-Day Salary Success Rate (TKB90)

TKB90 is an indicator of the borrower's ability to complete payment obligations within a period of no later than 90 days.

TKB90 Calculation Formula (OJK):

$$TW\ P\ 90 = 100\% - TW\ P90$$

Operational indicators:

A value close to 100% indicates a high payment success and a low level of credit risk.

**Data Analysis Techniques**

The data analysis technique used is quantitative descriptive analysis. This analysis aims to provide an overview of the development of credit risk through fluctuations in TWP90 and TKB90. The Analysis steps are as follows:

a. Monthly data collection of TWP90 and TKB90 from OJK reports.
b. Recalculate the TWP90 and TKB90 values when needed using the following formula:
c.

$$TWP90 = \frac{\text{Outstanding macet > 90 hari}}{\text{Total outstanding}} \times 100\%$$

$$TKB90 = 100\% - TWP90$$

c. Compile a monthly progress table to see fluctuating patterns.
d. Create trend charts for TWP90 and TKB90 to facilitate visualization of credit risk dynamics each month.
e. Interpret the results by attributing the change in the indicator to:
1) the condition of the fintech lending industry,
2) economic factors, and
3) potential credit risk in the current period.
f. Draw conclusions about the credit health condition of the fintech lending industry based on the trends of the two indicators.

## 4. RESULTS AND DISCUSSION

### Results

This study analyzes the development of credit risk indicators in the fintech lending industry in Indonesia using two main metrics, namely the 90-Day Default Rate (TWP90) and the 90-Day Payment Success Rate (TKB90). These two indicators are used to assess the health condition of the financing portfolio and the risk of default during the period from January 2024 to January 2025. Data obtained from the OJK official report is presented in Table 1 below.

**Table 1 Development of Fintech Lending TWP90 and TKB90**

| MONTHS | TKB 90 | TWP 90 |
|---|---|---|
| January 24 | 97,05% | 2,95% |
| 24 February | 97,05% | 2,95% |
| March 24 | 97,06% | 2,94% |
| 24 April | 97,21% | 2,79% |
| 24 May | 97,09% | 2,91% |
| 24 June | 97,21% | 2,79% |
| 24 July | 97,47% | 2,53% |
| August 24 | 97,62% | 2,38% |
| 24 September | 97,62% | 2,38% |
| 24 October | 97,63% | 2,37% |
| November 24 | 97,48% | 2,52% |
| 24 December | 97,40% | 2,60% |
| January 25 | 97,48% | 2,52% |

Source: OJK, processed (2024–2025)

### TWP90 Development Analysis

TWP90 is an indicator that describes the rate of late payments of more than 90 days and is the main measure of default risk. Based on the table above, it can be seen that at the beginning of 2024 the TWP90 will be at a relatively high level of 2.95% in January and February. This value then began to decline gradually in March and April 2024 to 2.94% and 2.79%. This decline indicates an improvement in credit quality which may be influenced by the increase in the effectiveness of credit scoring and the strengthening of risk mitigation policies by fintech operators.

This positive trend continued until July 2024 with a value of 2.53%, and reached the lowest point in August, September, and October 2024, at 2.38%, 2.38%, and 2.37%, respectively. This condition illustrates that in mid to late 2024, the fintech lending industry will be in the lowest credit risk period. However, after October 2024, TWP90 again showed an increase to 2.52% in November and a further increase to 2.60% in December. This value then improved slightly in January 2025 with a figure of 2.52%. The increase at the end of the year is generally due to seasonal factors such as increased year-end consumption, decreased borrowers' ability to pay, and high demand for consumptive loans.

Overall, the development of TWP90 reflects a significant improvement in the middle of the year, but there is still an improvement in credit risk dynamics at the end of the year. This shows that although credit quality is improving, the industry still faces fluctuations that need to be anticipated through the strengthening of risk mitigation systems.

### TKB90 Development Analysis

TKB90 is an indicator that shows the percentage of success of borrowers in completing payment obligations no later than 90 days. Throughout the study period, TKB90 was at a relatively high and stable level, in the range of 97.05% to 97.63%. At the beginning of 2024, the TKB90 value of 97.05% indicates the stability of borrowers' ability to pay. This value then increased gradually in March, April, and June 2024 by 97.06% and 97.21%, respectively.

A sharp increase was seen in July 2024 with a value of 97.47% and continued until August and September 2024 which reached 97.62%. The highest peak of TKB90 during the research period occurred in October 2024 with a value of 97.63%, indicating that most borrowers were able to meet their obligations on time. However, in line with the increase in TWP90 at the end of the year, TKB90 experienced a slight decline in November and December 2024, namely 97.48% and 97.40%, respectively. This value will increase again to

97.48% in January 2025. Despite small fluctuations, TKB90 which is consistently above 97% confirms that the fintech lending industry is in a relatively healthy condition and still has a high payment success rate.

**Discussion**

The analysis of TWP90 and TKB90 shows an inverse proportional relationship between the two indicators. While TWP90 declined in mid-2024, TKB90 actually increased, indicating an improvement in the quality of the financing portfolio and the ability of borrowers to pay. In contrast, when TWP90 increased at the end of 2024, TKB90 experienced a slight decline. This relationship is in line with credit risk theory which states that a high default rate will be directly proportional to a decrease in the rate of payment success.

In terms of industrial health, a stable TKB90 value above 97% shows that the majority of borrowers are able to meet their payment obligations. Meanwhile, the TWP90 which remained below 3% during the study period suggests that the level of fintech lending credit risk is still within controllable limits. However, fluctuations at the end of the year show that the industry is still affected by seasonal economic conditions, rising consumption costs, and financial pressures experienced by borrowers.

Factors that are likely to influence these dynamics include internal borrower factors such as income stability and seasonal consumption patterns, platform operational factors such as the effectiveness of credit scoring and collection strategies, as well as macroeconomic factors such as inflation and changing economic conditions. These findings provide implications for regulators, fintech loan providers, and investors to pay more attention to these fluctuation patterns to strengthen risk mitigation in the future.

## 5. CONCLUSIONS

Based on the results of research on the development of the 90-Day Default Rate (TWP90) and 90-Day Payment Success Rate (TKB90) in the fintech lending industry during the period from January 2024 to January 2025, it can be concluded that the credit health condition of the fintech lending industry is in a relatively stable and controlled situation. This is shown by the TWP90 value which is consistently below 3%, despite fluctuations especially at the end of 2024. The TWP90 decline in the middle of the year reflects the improvement in credit quality and the effectiveness of the risk mitigation strategies implemented by fintech lending providers. Meanwhile, the increase in TWP90 at the end of the year shows the influence of seasonal factors, such as an increase in public consumption and an increase in demand for consumptive financing. On the other hand, the stable value of TKB90 in the range of 97% proves that the success rate of borrowers is still very high. The inverse proportional relationship between TWP90 and TKB90 was evident throughout the study period, where an increase in TWP90 was followed by a decrease in TKB90 and vice versa. This is in line with credit risk theory which states that an increase in bad loans has a direct impact on a decrease in payment success. Overall, the results of this study show that the fintech lending industry in Indonesia is still able to create positive credit performance and maintain good financing quality.

## 6. SUGGESTIONS

Based on the results of the research and analysis that has been carried out, some suggestions that can be given to various related parties are as follows:

a. For Fintech Lending Operators
   1) Improve credit scoring accuracy, especially by improving the validation of borrower data and expanding the use of relevant historical data.
   2) Strengthen billing strategies, especially in the year-end period to anticipate an increase in the risk of seasonal defaults.
   3) Develop an early warning system, so that potential defaults can be identified early.
b. For Regulators (OJK)
   1) Conduct more intensive monitoring of the TWP90 trend at the end of the year, as the period shows a consistent increase in risk.
   2) Encourage transparency of financing data so that empirical research is easier to conduct and the industry can improve the quality of risk management.
   3) Improve digital financial literacy, so that borrowers have a better understanding of payment obligations and financial management.
c. For Investors

1) Consider the movements of TWP90 and TKB90 as key indicators in assessing investment risk, especially on platforms with rising default rates.
2) Prepare a financing diversification strategy, taking into account the dynamics of credit risk at the end of the year that can affect the rate of return.

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