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Predicting Year-End Financial Performance: Can Quarterly Earnings Be Used as an Indicator?

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Abstract: The main objective of this study is to analyze the ability of quarterly net income performance to make a prediction of year-end (Q4) net income growth in Indonesia's banking sector. By adopting the adaptive expectations theory, this study examines the influence of net income growth in the first quarter (NIQ1), second quarter (NIQ2), and third quarter (NIQ3) on the fourth quarter (NIQ4). The data includes 57 banking companies listed on the Indonesia Stock Exchange (IDX) from 2022 to 2023. Multiple linear regression was implemented to conduct the analysis, and is also supported by several classical assumption tests, such as normality, heteroscedasticity, and multicollinearity tests. The outcomes demonstrate that both NIQ1 and NIQ3 have a significant positive impact on NIQ4, while NIQ2, by contrast, does not show a significant relationship. The findings of this research confirm that quarterly growth patterns of banks' net income is able to be effectively estimated based on previous quarterly performances, particularly from Q1 and Q3. Thus, the findings provide broader insights for investors and company executives in making more informed decisions using available yet accountable historical information.

Keywords: adaptive expectations, banking sector, historical information, net income, quarterly performance

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INTRODUCTION

Between 2020 and 2023, the number of stock investors in Indonesia experienced a significant growth, with an increase of 210.01%, according to capital market statistics published by the Indonesian Central Securities Depository (Kustodian Sentral Efek

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Indonesia, 2025). This increase in investor participation has led to more focus on company performance. In general, investors allocate their capital to companies that demonstrate optimal performance, as doing so has the potential to maximize returns, minimize investment risks, and reduce reliance on intuition during the decision-making process (Meythi et al., 2011; Sambelay et al., 2017; Susilawati, 2013). Correspondingly, effective investment decisions are needed for funds invested for profit (Safrizal et al., 2024). According to Kohardinata & Aurelia (2024), historical information is considered a reliable basis for making investment decisions in a company. Consequently, financial statements serve as one of the primary and most objective sources of information for assessing a company's performance. The information contained within financial statements is crucial not only for investors but also for managerial decision-making processes. Financial statements function as comprehensive analytical tools for corporate financial management. They are used to detect or diagnose a company's financial health through the analysis of cash flow conditions and organizational performance, both on a partial and overall basis. Moreover, financial statements are essential in providing information for other stakeholders, such as investors, governments, financial institutions, and others (Ahmad, 2021; Blessing & Onoja, 2015).

The usage of financial statements as predictive tools for estimating future financial performance has been widely recognized. Prior studies have confirmed that previous quarterly financial reports can be used to estimate future cash flows (Zhou et al., 2021). Furthermore, other research has shown that predicting future cash flow performance by relying on the content of financial statements is feasible (Ball & Nikolaev, 2022). A study conducted by Wu et al. (2022), additionally, also makes use of the data presented in financial statements to predict whether upcoming financial distress is likely to occur. Further, Yohn (2020) emphasized that estimating future profitability can be done by leveraging predictive information in financial statements. According to past findings, artificial intelligence (AI) models trained on financial data have shown higher accuracy than general statistical practices in estimating future profitability and the likelihood of corporate insolvency (Kureljusic & Karger, 2024). In addition, a study conducted by Fuertes-Callén et al. (2022) found that financial statements of startups could be used to project their own survival prospects. The implementation of regression models and other statistical methods has enabled financial statement insights to be utilized to project corporate revenue and financial stability (Broby, 2022). Research by Kayakus et al. (2023) further highlights that financial statements are very important in predicting return on assets (ROA) and return on

equity (ROE). Hence, numerous past studies consistently validate the use of financial statements in predicting profitability, financial stability, corporate survivability, or bankruptcy risk.

One critical aspect of financial statement analysis is understanding how quarterly financial information can offer insights into year-end financial performance. Financial statements are presented quarterly, dividing the year into four reporting periods: First quarter (Q1), second quarter (Q2), third quarter (Q3), and fourth quarter (Q4). Each quarter accumulates the company's performance from the beginning to the end of the respective period. The fourth quarter (Q4) captures the cumulative results of the entire fiscal year and often serves as the primary reference for making major corporate decisions, such as dividend distributions, mergers and acquisitions, debt settlements, asset revaluations, and others. If an investor initiates investment activities in the fourth quarter, they are likely to be outpaced by traders or investors who have already anticipated a company's performance based on earlier information. Therefore, identifying which quarterly performance has the most significant influence on Q4 results is crucial for investors aiming to make earlier, more strategic investment decisions. Accordingly, this study seeks to examine the ability to predict future financial performance in the banking sector by leveraging past quarterly net income growth rates.

The banking sector was selected for this study because banks, as financial institutions, provide essential services to a wide range of economic activities, including manufacturing, mining, construction, retail, services, and technology (Muhidin & Situngkir, 2022; Zumaidah et al., 2018). Consequently, the performance of banking companies is highly influenced by the financial conditions of their diverse clientele across different industries. To support this study, it is crucial to also consider the credit composition by type of use in each quarter, as it reflects how funds are allocated within the economy and may relate to banks' financial outcomes. In terms of credit composition by type of use, there were some shifts from 2022 to 2023, although the overall structure remained quite stable. For investment credit in 2022, it started at 26.66% in Q1, then it dropped slightly to 26.32% in Q2, slightly increased again to 26.38% in Q3, and ended the year with 26.83% in Q4. In 2023, the figures were higher, starting at 27.13% in Q1, going down to 26.90% in Q2, then 26.95% in Q3, and closing the year at 27.06% in Q4. As for working capital credit in 2022, it made up the biggest share, starting at 45.14% in Q1, rising to 46.20% in Q2, slightly dropping to 46.13% in Q3, and finishing at 45.66% in Q4. In 2023, working capital credit started at 44.91% in Q1, increased to 45.45% in Q2, slightly rose again to 45.51% in Q3, and then settled at

45.54% in Q4. Finally, consumption credit in 2022 was 28.21% in Q1, then gradually declined over the next quarters, reaching 27.48% in Q2, 27.49% in Q3, and 27.52% in Q4. In 2023, it started at 27.96% in Q1, decreasing to 27.65% in Q2, and 27.54% in Q3, and finally remained at 27.39% in Q4.

To conduct this research, two contrasting theories are considered: adaptive expectations and rational expectations. To date, there remains considerable debate about the feasibility of predicting future performance based on information contained in financial statements. Research on future projections in capital markets by Colasante et al. (2017) suggests that adaptive expectations cannot fully predict the future because they fail to account for adjustments to new trends. Conversely, rational expectations have been found to be less relevant at the individual level but tend to show greater accuracy at the group level. Therefore, further research is necessary to ascertain whether predicting future financial outcomes based on historical financial data is indeed feasible.

The rational expectations theory proposes that expectations are equivalent to optimal forecasts—essentially, the best possible predictions of the future based on all available information, not merely historical data. On the contrary, the adaptive expectations theory emphasizes that past experiences or historical information are the ones that primarily shape expectations (Wardani & Supiati, 2020). According to Colasante et al. (2017), adaptive expectations are naturally retrospective and solely rely on historical information to predict future insights. However, in contrast, rational expectations are often considered a more reasonable forecast approach because they sort of incorporate every available information (Noviar, 2016). Further studies by Gertchev (2007), Lovell (1986), and Sargent (1995) suggest that both adaptive and rational expectations theories have their own advantages and disadvantages, so neither can be considered absolutely superior to the other. On the one hand, adaptive expectations have been criticized for being overly backward-looking because they rely solely on historical data to form future expectations, and are likely to fail to account for the complexity of individual decision-making under different circumstances. On the other hand, rational expectations are theoretically considered to be more effective, but if individuals are able to utilize all available information and economic theories perfectly to make accurate predictions, this approach is also practically unrealistic and unlikely to be done, because it assumes that individuals can always forecast the future rationally and without error. Moreover, empirical evidence suggests that adaptive expectations do not fully align with real-world behavior, while rational expectations often overlook the constraints of human ability and the extent to which psychological factors influence individual economic

decisions.

Findings from Lovell (1986) further emphasize that past data can anticipate prediction errors under expectations, which are systematic most of the time, contradicting the fundamental idea of rational expectations that errors are random and non-systematic. This finding reinforces the criticism that the rational expectations model is unrealistically optimistic in assuming individuals could perfectly understand and process information. Thus, while rational expectations are generally viewed as offering a more realistic explanation of economic behavior compared to adaptive expectations, empirical research demonstrates that the actual formation process of expectations is far more complex and does not fully support the rational expectations framework. A study conducted by Zhou et al. (2021) shows that forecasting future operating cash flow using quarterly financial reports is more effective than annual reports. This particular phenomenon can be explained by two primary factors: industry asset intensity and earnings smoothness. Industries with more asset possessions often benefit more from quarterly reporting because they are larger in scale and have far more complex operational cycles, whereas industries with more stable earnings, on the other hand, show higher prediction accuracy compared to other industries with more fluctuating income. Similarly, Ball & Nikolaev (2022) found that accrual-based earnings data, extracted from the financial statements of U.S. companies from 1988 to 2019, reveal stronger predictive ability for future operating cash flows. One compelling reason is that accrual-based earnings serve as a more effective tool in evaluating corporate financial health and stability by more accurately reflecting economic performance, thereby reducing estimation biases and enhancing prediction precision.

Further, Yohn (2020) highlighted the importance of financial statement information in improving the accuracy of corporate profitability forecasts. His study explored numerous approaches to predicting profitability, such as applying mean reversion models for return on equity (ROE)—indicating that companies with initially low ROE tend to experience improvements—and disaggregating earnings information, by separating operational and non-operational revenues, given that different components in financial statements exhibit varying degrees of persistence toward future profitability.

Research by Wu et al. (2022) found that the accuracy of predicting financial distress risks, offering valuable insights for investors, financial managers, and regulators in anticipating potential bankruptcies, can be significantly enhanced by combining the traditional Z-score method with an artificial neural network (MLP-ANN). This research utilized financial statement data from various companies listed on the Shenzhen and

Shanghai Stock Exchanges during the 2016–2020 period. The developed model compared three approaches: the traditional Z-Score method, a multilayer perceptron artificial neural network (MLP-ANN), and a hybrid model integrating both methods. The hybrid model achieved the highest classification accuracy rate (99.40%), outperforming the traditional Z-score (86.54%) and the pure MLP-ANN method (98.26%). The Z-score provides strong financial indicators for early detection of financial risks, while the neural network enhances the model's capacity to capture complex non-linear patterns within financial data.

Research by Fuertes-Callén et al. (2022) revealed that financial statement analysis holds significant predictive ability regarding the survival of companies. Their findings showed that startups with strong financial indicators, such as high liquidity ratios, better profitability, and controlled leverage, have greater chances of survival, whereas startups with lower financial performance face higher risks of insolvency. This may stem from the startups' ability to manage cash flows and meet operational demands effectively—crucial indicators in navigating uncertainty and market dynamics during the early stages. Additionally, a study conducted by Kayakus et al. (2023) found that applying machine learning practices to quarterly financial statement analysis of 13 steel and iron companies operating in Poland, Russia, and Turkey considerably improved the accuracy of profitability forecasts, specifically for return on assets (ROA) and return on equity (ROE). The study showed that Artificial Neural Networks (ANNs) achieved the highest accuracy in predicting ROA (86.4%) and ROE (85.8%), followed by Support Vector Regression (SVR) with 79.9% accuracy for ROA and 80% for ROE, while Multiple Linear Regression (MLR) saw lower accuracy rates (74% for ROA and 63.8% for ROE). Many previous studies indeed use profitability ratios like ROA and ROE to measure performance. However, this study chose net income instead because it provides a direct and straightforward link to dividend distribution, which serves as the return of an investment. Net income is the amount of income after all expenses, taxes, and costs, making it the actual earnings that could potentially be distributed as dividends to investors. As highlighted by Zelalem & Abebe (2022), dividends are a portion of a company's net profit that is distributed to shareholders as a return on their investment in the form of cash or stock. This means that investors are more likely to watch net income trends to make investment decisions because it determines how much of the profit will potentially be received by them.

This study chooses adaptive expectations over rational expectations after considering both theories' pros and cons. Rational expectations assume people use all information, which includes past data, market signals, and future trends, to predict perfectly. But this is

often unrealistic and inhumane to be done, where uncertainties exist. In the banking sector, performance depends a lot on seasonal business activities, which fit better with the nature of backward-looking adaptive expectations. Also, Lovell (1986) points out that rational expectations see errors as random, yet real financial data often shows systematic patterns. Adaptive expectations, on the other hand, take into account how people tend to rely on past trends due to limited information and behavioral factors. This makes it more practical and matches the findings in this study, where Q1 and Q3 patterns help predict year-end performance in Indonesia's post-pandemic economy. Therefore, this study emphasizes the adaptive expectations theory, suggesting that information reflecting past performance can be used to predict future performance. Accordingly, the hypotheses proposed in this study are as follows:

H1: Net income growth in Q1 positively influences net income growth in Q4.
H2: Net income growth in Q2 positively influences net income growth in Q4.
H3: Net income growth in Q3 positively influences net income growth in Q4.

METHOD

The data used in this study consist of financial reports from 57 banking companies listed on the Indonesia Stock Exchange (IDX) that have complete year-on-year (y-o-y) quarterly net income growth data from Q1 to Q4 for the period 2022 to 2023. During data preparation, 11 companies had to be excluded because their financial statements were incomplete or missing for certain quarters. So only 46 companies with complete data for the whole period were kept for conducting the analysis, which is the source of the initial total observations of 92. After that, outliers were also checked to see whether they could affect the results, and then 8 extreme values were removed. This left only with a final dataset of 84 observations.

The sample, which uses the saturation sampling method, is sourced directly from the official financial reports published by the Indonesia Stock Exchange. This research employs multiple linear regression analysis to help examine the effects of Q1, Q2, and Q3 net income growth on Q4 net income growth in the banking sector. Additionally, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, were also conducted to ensure the reliability and validity of the multiple linear regression model.

Measurement of Variables

In this study, the variables used are net income growth in each quarter, calculated on a year-on-year basis. The first variable, NIQ1, refers to the net income growth in the first quarter compared to the same quarter in the previous year. Then NIQ2 shows the net income growth that happens in the second quarter compared to the prior year. After that, NIQ3 refers to the growth of net income in the third quarter, also compared to the same quarter last year. Finally, NIQ4 represents the net income growth in the fourth quarter on a year-on-year basis.

RESULTS

Table 1 presents the descriptive statistics for the variables used in this study, based on 84 observations. The descriptive results show that the banking industry experienced a year-on-year (Y-O-Y) decline in net income during the first quarter (Q1), with a mean value of -0.7496076 (-74.96%) and a standard deviation of 11.39058 (1,139.06%). The minimum and maximum values for Q1 were -101.592 (-10,159.2%) and 15.41766 (1,541.76%), respectively. In the second quarter (Q2), the average net income recorded a positive value of 0.4653986 (46.53%), with a standard deviation of 3.924842 (392.48%). The range of net income values in this quarter was narrower compared to Q1, with a minimum of -25.41187 (-2,541.18%) and a maximum of 18.11852 (1,811.85%), indicating an improvement in net income among some companies. Meanwhile, in the third quarter (Q3) and fourth quarter (Q4), a sizeable decline in net income occurred. The average net income for Q3 was -3.03433 (-303.43%), with a relatively high standard deviation of 33.62091 (3,362.09%). A significant volatility in the financial performance of banking companies during this period was shown from the range of net income values, which was notably wide, with a minimum of -306.8597 (-30,685.97%) and a maximum of 12.12192 (1,212.19%). In Q4, the average net income remained negative at -0.3340077 (-33.40%), with a standard deviation of 4.314303 (431.43%). The range of net income in Q4 was more controlled compared to Q3, with a minimum value of -38.75955 (-3,876.0%) and a maximum value of 3.080277 (308.03%). Overall, these results show considerable fluctuations in net income growth within the banking sector during 2022–2023, with greater reductions occurring in Q1 and Q3 compared to Q2 and Q4.

Table 1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
Q1	84	-0.7496076	11.39058	-101.592	15.41766
Q2	84	0.4653986	3.924842	-25.41187	18.11852
Q3	84	-3.03433	33.62091	-306.8597	12.12192
Q4	84	-0.3340077	4.314303	-38.75955	3.080277

Table 2 presents the results of the normality test, heteroscedasticity test, and multicollinearity test conducted to ensure the fulfillment of classical assumptions in the regression model. The normality test yielded a value of 0.0883, exceeding the significance level of 0.05, indicating that the residuals are normally distributed. The heteroscedasticity test resulted in a value of 0.3896, also above 0.05, suggesting that the regression model does not suffer from heteroscedasticity and that the residual variance is constant. Furthermore, the multicollinearity test produced a value of 1.81, which is well below the threshold of 10, indicating no multicollinearity issues in the regression model.

Table 2 Classical Assumption Test

Classical Assumption Test	Value
Normality Test	0.0883
Heteroscedasticity Test	0.3896
Multicollinearity Test	1.81

The multiple linear regression model also showed that the overall model is highly significant, with a Prob > F value of 0.000, demonstrating strong predictive capability. Additionally, the R-squared value of 0.9752 indicates that 97.52% of the variability in NIQ4 can be explained by the independent variables NIQ1, NIQ2, and NIQ3. The Adjusted R-squared value of 0.9743, which is very close to the R-squared, further suggests that the independent variables are reliable indicators for explaining variations in NIQ4.

Table 3 presents the hypothesis testing results using multiple linear regression analysis to examine the effects of NIQ1, NIQ2, and NIQ3 on NIQ4. NIQ1 had a coefficient of 0.0237291 with a p-value of 0.001, indicating that an increase in NIQ1 positively and significantly contributes to an increase in NIQ4. Similarly, NIQ3 had a coefficient of 0.1288105 with a p-value of 0.000, suggesting that an increase in NIQ3 also positively and significantly impacts NIQ4, with a larger effect than NIQ1. In contrast, NIQ2 had a coefficient of -0.0294055 with a p-value of 0.310, indicating that the relationship between NIQ2 and NIQ4 is not statistically significant. Thus, hypotheses H1 and H3 are accepted,

while H2 is rejected.

Table 3 Hypotheses Test Results

NIQ4	Coef.	Std. Err.	P > |t|
NIQ1	0.0237291	0.0066835	0.001
NIQ2	-0.0294055	0.0288007	0.310
NIQ3	0.1288105	0.0033609	0.000
Constant	0.0883187	0.0786661	0.265
Prob > F		0.0000	
R-squared		0.9752	
Adj R-squared		0.9743	

DISCUSSION

The results of the study indicate that NIQ1 has a significant positive influence on NIQ4, consistent with the adaptive expectations theory. This theory suggests that future performance expectations can be estimated based on historical information. To understand how historical information in Q1 forms expectations for Q4 performance, it is essential to further explore the conditions and patterns of net income growth as well as credit utilization in the first quarter. In the first quarter (Q1), aggregate net income growth recorded a decline, with an average value of -0.7496076 (-74.96%). However, according to the credit composition data by type of use of commercial banks presented in the Indonesian Banking Statistics 2022-2023 (Otoritas Jasa Keuangan, 2025), credit growth in the investment sector during the same period showed a positive increase of +0.47%. This phenomenon can be explained by examining the average composition of credit usage in Indonesia's banking sector, where the largest share comes from working capital loans (45.57%), followed by consumer loans (27.65%) and investment loans (26.78%).

Considering that the working capital sector contracted by -0.23% and the consumer sector by -0.24%, the positive growth in the investment sector had a relatively smaller impact on total aggregate performance, due to its lower weight compared to the other two sectors. This reflects that sectors with larger credit contributions have a dominant influence on the overall direction of net income growth, such that the positive performance of the investment sector was insufficient to offset the negative pressures from the working capital and consumer sectors. In addition, the decline in aggregate net income in Q1 can also be linked to seasonal patterns in corporate business cycles, particularly related to working capital loan applications. Typically, the beginning of the year marks a period when many

companies (borrowers) across various industries formulate and update their annual budgets. During this phase, applications for working capital loans tend to increase as an initial step to fund operational activities for the year. However, the credit Composition data by type of use of commercial banks provided by the Indonesian Banking Statistics 2022-2023 show that despite this period being expected to serve as a growth momentum, the working capital sector instead experienced a contraction of -0.23% (Otoritas Jasa Keuangan, 2025). This suggests that many companies began the year with a lower demand for credit compared to the previous year.

A contextual factor reinforcing this phenomenon is that 2022 and 2023 represent the post-COVID-19 period, during which nearly all aspects of daily life normalized and national economic activity began to recover. Data from Indonesia's Central Statistics Agency for the years 2015-2024 (Badan Pusat Statistik, 2025) show that the country's GDP, which had sharply contracted by -2.07% in 2020, consistently recovered, recording growth of 3.7% in 2021, increasing further to 5.31% in 2022, and stabilizing at 5.05% in 2023. This recovery indicates that many companies had regained healthy cash flow positions and, therefore, became less reliant on working capital loans to support their operations. Conversely, with increasing business confidence in the post-pandemic era, companies were more inclined to utilize credit facilities for long-term investments—this trend is reflected in the 0.47% growth in investment loans during the first quarter, even though aggregate net income remained negative due to the dominance of the working capital and consumer sectors.

Furthermore, the trend of stabilizing economic growth aligns with a significant increase in the money supply (M2). According to the data from Bank Indonesia for the years 2016-2024, M2 showed a relatively stable growth trend from 2016 to 2020 (Trading Economics, 2025). However, during the 2021 to 2023 period, this trend accelerated more sharply, indicating a loosening of liquidity in the market. Consequently, the increase in M2 signals a substantial rise in market liquidity, enabling companies to finance investment activities more freely through bank credit without relying heavily on short-term loans to fund working capital needs. Meanwhile, NIQ2 did not show a significant influence on NIQ4, contrary to the predictions of the adaptive expectations theory. To understand why the second quarter failed to provide predictive contributions to year-end performance, it is important to further examine the dynamics of profit growth and credit distribution patterns during this period. In the second quarter (Q2), aggregate net income growth recorded an increase, with an average of 0.4653986 (46.53%), even though the sector with

the largest credit share—working capital (45.57%)—experienced a considerable negative growth of -0.76%.

This phenomenon suggests that the positive performances of the investment (+0.58%) and consumer (+0.17%) sectors were sufficient to offset the negative impact from the decline in the working capital sector. This finding is particularly interesting, as despite the working capital sector having the largest share in the credit composition, its downturn did not necessarily drag aggregate profit growth into negative territory. One plausible explanation is that the investment and consumer sectors, although smaller in credit share (26.78% and 27.65%, respectively), may have contributed profits more efficiently or strategically during the quarter. In other words, the more stable and consistent positive growth from these two sectors successfully counterbalanced the negative pressure from the working capital sector, which faced its greatest stress in Q2 compared to Q1 and Q3. Moreover, the decline in working capital loans during Q2 was likely a residual effect of the credit applications submitted by many companies in the first quarter. As is well-known, the beginning of the year (Q1) typically represents an active period for companies to prepare and implement their annual budgets, including securing working capital loans. Consequently, in Q2, the demand for working capital credit declined as most short-term financing needs had already been met in the previous quarter, as reflected by the -0.76% decrease in working capital loans.

Additionally, during 2022 and 2023, Q2 coincided with the Ramadan and Eid al-Fitr periods, which historically drove an increase in consumer spending. This seasonal trend is reflected in the +0.17% growth in consumer credit, likely disbursed to support household consumption needs during that time, such as purchases of electronics, motor vehicles, and lifestyle-related goods ahead of the festive season. Thus, the sharp decline in working capital loans amidst rising consumer credit illustrates a shift in financing focus from short-term productive sectors to the consumption sector, further explaining the significant contraction in working capital loans during the second quarter. Therefore, although Q2 recorded positive aggregate net income growth, its influence on Q4 performance became insignificant. This is primarily because the nature of growth in Q2 was more driven by seasonal momentum, such as Ramadan and Eid al-Fitr, where the surge in consumer activities was temporary and did not reflect a long-term business trend. Moreover, the profit increase during this period mainly originated from the consumption sector rather than sustainable productive expansion or long-term investment, which typically drives growth in subsequent quarters. Consequently, Q2's contribution to predicting Q4 performance

remains limited, as the growth drivers were temporary and insufficient to shape expectations regarding year-end profitability.

Subsequently, NIQ3 exhibited a significant positive influence on NIQ4, supporting the adaptive expectations theory. This influence can be further examined by reviewing the empirical conditions observed during the third quarter, particularly regarding the distribution of net income growth and the dominant role of credit sectors in shaping aggregate trends. In the third quarter (Q3), aggregate net income growth once again experienced a contraction, with a mean value of -3.03433 (-303.43%), even though two of the three main credit sectors—investment and consumption—showed positive growth, at +0.57% and +0.05% respectively. This overall decline was primarily driven by the working capital sector, which continued to record negative growth of -0.62%. Although the contraction in the working capital sector was slightly less severe compared to the previous quarter, its impact on total aggregate net income performance remained significant due to the sector's dominant share within Indonesia's banking system (45.57%). The fact that positive growth in the investment and consumption sectors was insufficient to offset the aggregate decline indicates that the large weight of the working capital sector continues to be the primary driver of aggregate net income movements. This demonstrates that, despite signs of recovery from other sectors, the pressure from dominant sectors like working capital remained strong enough to pull the overall trend into negative territory. One logical explanation for the decline in net income during Q3 of 2022 and 2023 is the decrease in the consumption momentum that surged in the previous quarter due to the Ramadan and Eid al-Fitr periods. In Q2, household spending tended to rise due to increased consumption needs leading up to the festive season, as reflected in the positive growth of consumer credit. However, after this period ended, consumption activity weakened, leading to a decline in the demand for consumer credit in Q3.

Although the descriptive statistics data show that the consumption sector still recorded positive growth of +0.05% in the third quarter, this figure was much lower compared to the previous quarter and insufficient to support the overall net income performance in the banking sector. The weakening momentum of consumer spending after the extended holiday period was a significant factor contributing to the continued contraction in net income growth. Furthermore, Indonesia's economic performance in 2022 and 2023 demonstrated a strong post-pandemic recovery, as reflected in the GDP growth rates returning above 5%, specifically at 5.31% in 2022 and 5.05% in 2023. Additionally, this solid economic performance was accompanied by a significant increase in

the money supply (M2), which surged more sharply compared to growth trends in previous years.

Under these conditions, companies that are clients of the banking sector tend to have more stable and healthy cash flows, thereby reducing their reliance on working capital loans to meet their operational needs. This situation helps explain why, in the third quarter (Q3) of 2022 and 2023, working capital loan growth recorded a contraction of -0.62%. Conversely, with relatively strong cash positions and an improving economic outlook, many companies opted to utilize banking credit facilities for long-term expansion, as reflected by the +0.57% growth in investment loans during the same period. Although the consumption and investment sectors recorded positive growth, the dominance of working capital loans—which constituted 45.57% of the overall banking credit structure—remained the primary drag on aggregate performance, causing the banking sector's net income to continue contracting in the third quarter.

This study has some important implications, both from a theoretical and a practical point of view. From the theoretical perspective, the results that support adaptive expectations in Indonesia's banking sector prove that historical financial data has relevance to predict future financial performance. This also supports other studies, which say that quarterly financial statements can give insights for forecasting future financial performance (Zhou et al., 2021; Ball & Nikolaev, 2022). Also, on the practical side, these findings can be useful for company management because they can use quarterly net income trends, especially in Q1 and Q3, as early signals to help them check their interim performance better and make strategy adjustments before Q4 comes. Additionally, this can also help investors, in particular, to make earlier, smarter decisions by facilitating them to improve their investment decision-making and determining when to invest their money, as dividends are paid to shareholders from a portion of a company's net income, eventually allowing them to allocate their investment more strategically, instead of just relying on groundless intuition.

Conclusion, Limitations, and Suggestions

The results of this study indicate that net income growth in the first quarter (NIQ1) and third quarter (NIQ3) has a significant positive influence on year-end net income growth (NIQ4), whereas the second quarter (NIQ2) does not exhibit a statistically significant effect. These findings support the application of the adaptive expectations theory, wherein historical information can be utilized to predict future performance. This

phenomenon highlights that a weak start in the first quarter and adjustment conditions in the third quarter can create a dominant effect on year-end performance. Conversely, net income growth in the second quarter is more influenced by seasonal factors, such as Ramadan and Eid al-Fitr, which are insufficient to shape long-term expectations. Thus, predictions of Q4 performance are likely to be more accurate when based on the growth patterns observed in Q1 and Q3, which better reflect sectoral dynamics and the more sustainable structure of credit utilization within Indonesia's banking sector. Next, there are 2 primary compelling limitations to this study. Firstly, this study focuses solely on the banking industry, which may not be applicable to other sectors such as technology, retail, construction, or even manufacturing. Furthermore, this particular research only covers a two-year period (2022-2023). Thus, the relatively short timeframe may limit the reliability of the findings, since these years represent the post-COVID-19 recovery phase, which could introduce unusual patterns. Applying a similar model to non-banking industries, such as retail, energy, or construction, for future research could be beneficial for companies, governments, and society. Moreover, in order to improve accuracy and consistency in predicting patterns across different economic cycles, upcoming studies could also consider using a longer timeframe of over 5 to 10 years.

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