

Strategy Development of Macroeconomics on Performance Financial Banking



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ABSTRACT: Banking has a major contribution to the success of the country's economy, because of its role as part of the financial system which acts as an intermediary to facilitate economic activity. This research aims to analyze the influence of internal macroeconomic factors that can formulate strategies for developing banking financial performance, and how much influence these factors have on banking financial performance. The research design used is explanatory research. The object of research namely; Conventional banks and Islamic banks in Bitung City, North Sulawesi, Indonesia, were selected by purposive sampling. The research was carried out from August to October 2022. The data used in this study are secondary data obtained from; financial reports of selected banks. Inflation, Interest Rates, Composite Stock Price Index, Exchange Rates, and Gross Domestic Gross (GDP), Capital Adequacy Ratio (CAR), and Return on Assets (ROA). Inflation, Exchange Rate, Capital Adequacy Ratio (CAR), and Return on Assets (ROA). The enormity of the influence of the variables of macroeconomic conditions on banking financial performance is 76.9%, while the remaining 23.1% is the influence of other variables outside this research.

KEYWORDS: Banking, finance, macroeconomics, performance

1. INTRODUCTION

Performance is the ability of an organization to take advantage of its environment to access limited resources which is done by measuring the perceptions, opportunities and challenges of various stakeholders in an organization (Kidron and Peretz, 2022). Banking financial performance is an illustration of the level of success achieved by banks in their operational activities (Najam *et al*, 2022). Banking financial performance is the main factor for analyzing the overall performance of the banking itself.

According to Uddin *et al* (2022), banking financial performance can be determined by calculating financial profitability ratios, so that bank performance can be determined by using profitability ratio analysis, namely; liquidity ratios, solvency, profitability, operational efficiency, and management. This ratio analysis is a technical analysis to determine the relationship between certain posts in the balance sheet and the bank's profit and loss statement individually or collectively (Parnes, 2022).

The liquidity aspect used in banking ratios can be determined by calculating the cash ratio, banking ratio and loan to asset ratio. According to Blake and Cairns (2021), financial ratios to measure a bank's solvency can be determined by calculating the *Capital Adequacy Ratio* (CAR), primary ratio, and capital ratio. Profitability ratios can be determined by calculating *Return on Assets* (ROA), *Return on Equity* (ROE) and *Net Profit Margin* (NPM). In addition there are three indicators that can assess the ratio of banking financial performance, such as liquidity, *Non Performing Loans* (NPL), *Credit*, *Third Party Funds*, Operating expenses to Operating Income, and profit (Abdesslem *et al*, 2022).

Implementation of profitability ratios as the only measure of banking financial performance is actually not quite right. The profitability ratio itself measures the effectiveness of management as a whole which is indicated by the size of the profit level obtained in relation to sales or investment (Colangelo *et al*, 2023). From the depositor's point of view, a bank's financial performance is said to be good if the bank's management is able to guarantee a sense of security to depositors for the amount of funds deposited in the bank.

Depositors will feel safe if the bank's capital in the form of a capital adequacy ratio and risk-weighted assets (ATMR) of a bank is in a position that is in accordance with the provisions of the Central Bank. For this reason, measuring the level of a bank's financial performance is not sufficient only to be proxied by profitability ratios, but it is also necessary to take into account capital, especially the capital adequacy ratio from the depositor's point of view.

According to Bank Indonesia Regulation Number 13/1/PBI/2011 concerning Rating of the Soundness Level of Commercial Banks, bank financial performance indicators consist of three factors, namely the implementation of good corporate governance,

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earnings, and capital, so that financial performance banking can be measured using the ratio of Return on Assets (ROA) as an element of profitability and the ratio of *Capital Adequacy Ratio* (CAR) as an element of capital.

Bank financial performance can be influenced by two factors, namely internal factors and external factors. Internal factors are the competitiveness possessed by banks, so that one bank with another bank has different characteristics (Lian *et al*, 2022). While external factors are general macro conditions such as movements in interest rates, inflation and exchange rates (exchange rates). External factors, namely macroeconomic conditions have characteristics that fluctuate easily and are difficult to predict. When macroeconomic conditions are conducive, a favorable business climate will be created, thereby encouraging the growth of the banking sector. In contrast, the condition of external factors that are volatile, such as; Exchange rate instability and inflation will lead to market risks and credit risks that cause disruption of banking financial performance. (Walmsley *et al*, 2023).

There is uncertainty about Indonesia's macroeconomic conditions caused by high inflation rates, the weak exchange rate of the rupiah against several foreign currencies, and the Covid 19 pandemic causing disruptions to bank financial performance, which has an impact on the economic system and development. To answer this, research on " Strategy Development of Macroeconomics on Performance Financial Banking" needs to be carried out as an effort to provide scientific information on the importance of macroeconomic policy management in improving banking financial performance.

The purpose of this study is to analyze the influence of internal macroeconomic factors that can formulate strategies for developing banking financial performance, and how much influence these factors have on banking financial performance.

II. RESEARCH METHODS

The research design used is explanatory research which describes quantitatively a symptom, event and incident that occurs factually, systematically and accurately (Franz, 2023). This research was carried out from August to October 2022. The research objects are; Conventional banks and Islamic banks in Bitung City, North Sulawesi, Indonesia, were selected by purposive sampling.

The data used in this study are secondary data obtained from; the financial statements of the selected banks as research objects supported by secondary data from the Website of the Ministry of Finance of the Republic of Indonesia, the Website of the Ministry of BUMN of the Republic of Indonesia, the Website of Bank Indonesia, the Website of the Financial Services Authority, and the Website of the Central Bureau of Statistics.

The data in this study were analyzed using the Partial Least Square (PLS) analysis method through the smartPLS application. The path analysis model of all latent variables in Partial Least Square (PLS) consists of three sets of relationships. (1) Inner model that specifies the relationship between latent variables or a structural model, (2) Outer model that specifies the relationship between latent variables and their manifest variables or a measurement model, and (3) produces a consistent factor weight relationship. The relationship between the measurement model and the structural model of the macroeconomic development strategy on banking financial performance is described in Figure 1.

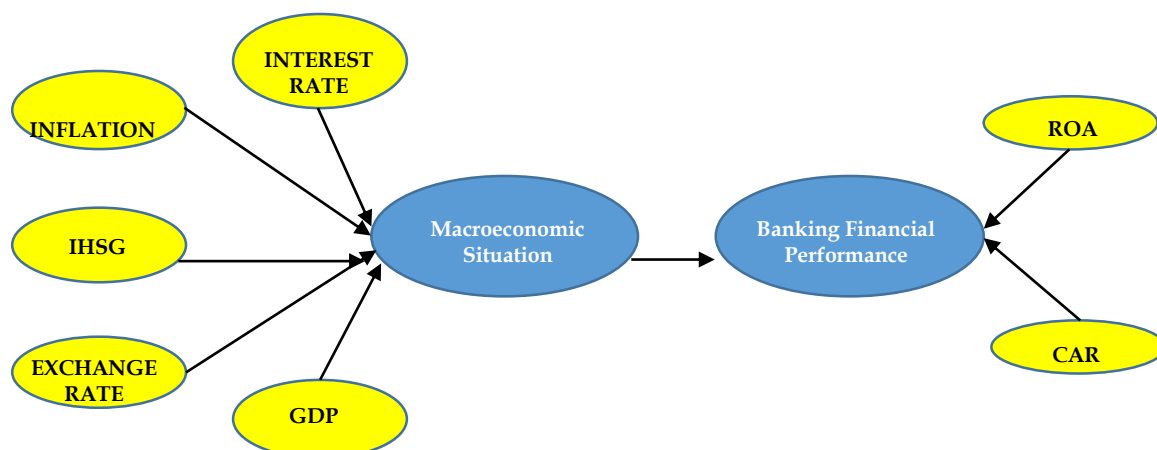


Figure 1. The relationship between measurement model changes and structural models of macroeconomic development strategies on banking financial performance

Source: Research data after processing. (2022)

III. RESULTS AND DISCUSSION

Outer Model Test

On the analysis models *smartPLS*, the first step is to test the outer model or measurement model. The outer model test aims to specify the relationship between latent variables and their indicators. In this study, the relationship between model indicators and

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latent variables is assumed to be uncorrelated, so that an internal measure of reliability coherence is not needed to test the reliability of formative constructs. This is different from reflexive indicators which use three criteria to assess the outer model, namely; convergent validity, composite reliability, and discriminant validity.

The smartPLS analysis model is formative which requires multicollinearity tests of latent and manifest variables. The multicollinearity test is carried out by looking at the outer VIF values resulting from the estimation of structural models and measurement models with VIF multicollinearity-free criteria <10. Each latent variable must be able to explain the variance of each indicator by at least 50%. Therefore the absolute correlation between the latent variables and the indicators must be > 0.7 (the absolute value of the outer standard loadings or called outer loadings). Reflective indicators if they have external standard loadings below 0.4 should be removed from the measurement model. Based on this, the results of the estimation analysis of the measurement model using smartPLS are described in Figure 2.

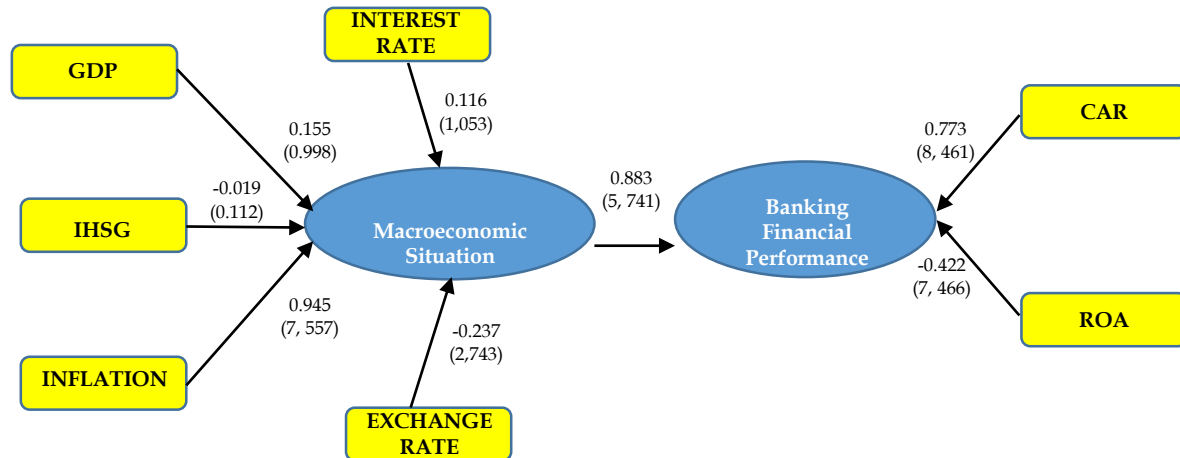


Figure 2. Results of estimation of measurement models and structural models of macroeconomic development strategies on banking financial performance

Source: Research data after processing. (2022)

The results of the study in Figure 3 show that the indicator of the exogenous latent variable of macroeconomic conditions that has the greatest outer weight value is the inflation indicator which is equal to 0.945 with a *t-count* value of 7.557. Meanwhile, the indicator of the endogenous latent variable of banking financial performance that has the greatest outer weight value is the Capital Adequacy Ratio (CAR) of 0.773 with a *t-count* value of 8.461. The *t-test* criteria required for smartPLS analysis are *t-test* > 1,66, or by using a *P-Value* > 0.05 ($\alpha = 5\%$). The results of the smartPLS analysis of the estimated Outer Weight value as a whole are described in Table 1.

Table 1. The results of the estimation of the outer weight value of the macroeconomic development strategy on banking financial performance

Variable	Outer Weight	Standard deviation	<i>t-Test</i>	<i>P-Values</i>	VIF	Information
CAR	0.773	0.095	8,461	0.000	1,551	t. tes> t. table
ROA	-0.422	0.202	7,466	0.000	1,551	t. tes> t. table
Infation	0.945	0.172	7,557	0.000	1,551	t. tes> t. table
Interest Rate	0.116	0.109	1.013	0.254	3,476	t. tes<t. table
IHSG	-0.019	0.147	0.112	0.905	5,433	t. tes<t. table
Exchange Rate	-0.237	0.092	2,743	0.005	3,623	t. tes> t. table
GDP	0.155	0.129	0.998	0.411	4,717	t. tes<t. table

Source: Secondary Data After Analysis with SmartPLS. (2022)

The results of the research in Table 1 show that the estimation results of the five indicators that formulated the latent change of exogenous macroeconomic circumstances were only two indicators that met the significance requirements. The inflation indicator is proven to be significant, because it meets the requirements for a *t-test* value of 7,557 (> 1,661), and a *p-value* of 0,000 (<0.05),

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the highest outer weight value is 0.945. Meanwhile, the exchange rate indicator has an outer weight value of -0.237 with a *t-test* value of 2.743 (> 1.661) and a *p-value* of 0.000 (< 0.05). The negative outer weight value generated by the exchange rate indicator indicates that there is a negative relationship between the exchange rate indicator and latent variables of macroeconomic conditions as exogenous variables from endogenous latent variables of banking financial performance. Meanwhile, three other indicators, namely interest rates,

Two indicators of endogenous latent variables, namely *Return on Assets (ROA)* and *Capital Adequacy Ratio (CAR)* significant influence in formulating banking financial performance. The CAR indicator has an outer weight value of 0.773 with a *t-test* value of 8.461 (> 1.661), and a *p-value* of 0.000 (< 0.05). Meanwhile, the ROA indicator also proved significant by having an outer weight value of -0.422 with a *t-test* of 7.466 (> 1.661), and a *p-value* of 0.000 (< 0.05). The multicollinearity test reflected in the outer VIF value shows that all indicators of exogenous latent variables or endogenous latent variables are free from multicollinearity. This can be seen from the VIF values of all indicators which are far below the multicollinearity standard (< 10).

Inner Model Test

The Inner Model test or structural model is a test in smartPLS analysis that specifies the relationship between latent variables. Testing of the inner model or structural model is carried out to see the relationship between the constructs, the significance value and the *R-square* of the research model. The structural model was evaluated using the *R-square* for the dependent construct, the *Stone-Geisser Q-square* test for predictive relevance and the *t-test* and the significance of the structural path parameter coefficients. The results of the *R-square* estimation with the SmartPLS application are described in Table 2.

Table 2. Estimation of the *R-square* value on the inner model test of the macroeconomic development strategy on banking financial performance

Inner Model Test	Banking Financial Performance
R-Square	0.769
R-Square Adjusted	0.748

Source: Secondary Data After Analysis with SmartPLS. (2022)

The results of the research in Table 2 show that the *R-square* value of banking financial performance is 0.769, meaning that the latent variable of macroeconomic conditions is able to fundamentally influence the latent variable of banking financial performance by 76.9%, while the remaining 23.1% is the influence of other variables outside the model. This is a fundamental or strong category in explaining banking financial performance.

Estimation of the model parameters gives the results of the coefficient values of the influence of the construct of macroeconomic conditions on the construct of the bank's financial performance. The limit of rejecting or accepting this effect is on the criteria for *t-test* values $> 1,661$ (*t-table* for $n = 84$ $k = 5$), a significance level of $\alpha = 5\%$. Estimated model parameters for the inner model test values are described in Table 3.

Table 3. Estimation results of the inner test value of the macroeconomic development strategy model on banking financial performance

Inner Model Value	inner Weight	standard Deviation	<i>t-Count</i>	<i>P-Values</i>	Information
Banking → Financial Performance Macroeconomic situation	0.877	0.029	35,146	0.000	t. tes $>$ t. table

Source: Secondary Data After Analysis with SmartPLS. (2022)

The results of the research in Table 3 show that, the measurement equation model and structural equations can explain macroeconomic development strategies on banking financial performance, this is influenced by the fairly high *R-square* value of the model with a *t-test* value of 35,146 ($> 1,661$), and a *p-value* of 0.000 (< 0.05).

Effect of Macroeconomic Variables on Macroeconomic Conditions

The macroeconomic situation is an external factor that can affect the banking financial performance. Fromentin (2022) stated that the movement of macroeconomic factors can be used to predict stock price movements, but each researcher uses different macroeconomic factors, because there is no consensus on which macroeconomic factors influence stock prices. Mai Le *et al* (2021) explained that macroeconomic variables, such as high interest rates, high inflation rates, and high exchange rate fluctuations cause

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companies to experience financial difficulties that can reduce their financial performance, thus impacting the decline in company performance. The influence of macroeconomic conditions on bank financial performance, aligning macroeconomic variables consisting of Industrial Production Index, Inflation, Interest Rates, Exchange Rates, Jakarta Composite Index, and world crude oil prices are in the same contribution to macroeconomic conditions (Ashraf *et al*, 2021).

Inflation is an increase in the price of goods and services in general and continuously over a certain period of time, due to an imbalance in the flow of money and goods, as well as an increase in demand for certain types of goods or services. price increases (Huawei, 2022). According to Buyukbasaran *et al* (2022), inflation is a macroeconomic variable that influences economic growth, people's purchasing power, and people's tendency to invest.

The results of the research in Table 1 show that the value of the inflation proxy indicator contributes the most and is positive to the situation macro economics banking financial performance. The results of this study are in line with the results of research from Aursland *et al* (2020) which explain that inflation will disrupt the function of money, weaken the spirit of saving, increase the tendency to shop, and lead to non-productive investments. Furthermore, the results of research from Huang *et al* (2021) concluded that, the inflation rate has an impact on increasing raw material prices, increasing the selling price of goods, reducing people's purchasing power, and increasing various company operational costs, resulting in a decrease in company sales, profits and financial performance of the company have decreased.

The results of the research in Table 1 show that the exchange rate proxy indicator value has a negative effect on the situation macro economics banking financial performance, this indicates that currency exchange rates (exchange rates) will change at any time based on the economic conditions of a region. The results of this study are in line with the results of research from Frohm (2023) which explains that, the value of a currency will tend to increase if the demand is greater than the available supply, while the value of the currency will decrease if the demand is less than the supply of goods available.

The results of research from Yildirim (2022), Alquist *et al* (2022), and Chernov *et al* (2023) concluded that, the fall in the exchange rate (depreciation), and the increase in the rate (appreciation) affect a country's exports, when the currency exchange rate against the dollar experiences total depreciation, then a country's exports will increase. The increase in exporters' income will increase the country's gross domestic product, exporters will try to finance in banks, thus affecting banking financial distribution.

Contribution of *Return on Assets (ROA)* and *Capital Adequacy Ratio (CAR)* to Banking Financial Performance

The results of the research in Table 1 show that the results of the estimation of the outer weight of the latent variable of the bank's financial performance, the *Capital Adequacy Ratio (CAR)* have a greater contribution to the bank's financial performance than the *Return on Assets (ROA)*. *Capital Adequacy Ratio (CAR)* has a positive outer weight value, and *Return on Assets (ROA)* has a negative outer weight value. This indicates that the *Capital Adequacy Ratio (CAR)* is a financial ratio related to banking capital, where the amount of a bank's capital will affect whether or not a bank is able to efficiently carry out its activities. The results of this study are in line with the results of research from Berger *et al* (2023) which explains that the capital owned by banks must be able to absorb inevitable losses, so that banks can manage all their activities efficiently, so that the bank's wealth and shareholders' wealth are expected to increase. The results of research from Ogawa (2022) concluded that the capital owned by a bank must basically be sufficient to cover all business risks faced by banks.

The results of the research in Table 1 show that, the estimated outer weight Return on Asset (ROA) is negative. This indicates that companies or banks should streamline the expenditure of funds by measuring the rate of return of businesses that use company assets. The results of this research are in line with the results of research from Mamba *et al* (2023) which explains that companies must be able to manage their funds or assets to be infested in generating profits as capital to support the company's operational activities. The results of research from Chen *et al* (2023) concluded that, the negative influence of *Return on Asset (ROA)* is caused by investors unable to measure the total value of their investments to get profit by optimizing the use of assets in maintaining *Good Corporate Governance (GCG)*.

The Effect of Macroeconomic Conditions on Banking Financial Performance

Unstable macroeconomic circumstances will adversely affect the general financial performance of the company. The very high condition of the development of a bank, be it a Islamic Banks or a Conventional Bank cannot be used as a guarantee that the bank is vulnerable to the risk of failure in carrying out business activities, so the macroeconomic situation is very important to be considered by banks in carrying out business activities carried out in order to maintain financial stability.

The results of the research in Table 1 show a significant influence between macroeconomic conditions and bank financial performance. This is evidenced by the inner weight test which shows the direction of the positive relationship on the significance of the t-table value and the high *R-square* value. This positive relationship means that the higher the value of macroeconomic conditions from the five macroeconomic variable indicators, the more financial performance of banks that have *Capital Adequacy*

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Ratio (CAR) and *Return on Assets* (ROA) indicators. This means that if interest rates increase, inflation fluctuations, the composite Stock Price Index decreases and *Gross Domestic Product* (GDP) increases and the exchange rate depreciates, it will cause the bank's financial performance to improve.

The results of this research are in line with the results of research from Tian *et al* (2022) which explains that the banking sector is one of the companies that must show efficiency in the financial sector, because the improvement in bank financial performance, both conventional banks and Islamic banks will not be separated from macroeconomic factors. Furthermore, the results of research from Ayeni and Fanibuyan (2022) concluded that macroeconomic factors that fluctuate in one country will affect the financial performance of banks as reflected in financial statements, making investors reduce the amount of demand for company shares in the bank.

The results of the research in Table 1 explain the partial relationship between the change in macroeconomic conditions and the financial performance of banks. The first variable or indicator of macroeconomic conditions is inflation, in this study inflation has been shown to contribute positively and significantly to macroeconomic conditions and banking financial performance, because the latent variables of macroeconomic conditions are exogenous latent variables of banking financial performance variables. This relationship also applies to all variables of macroeconomic conditions which are indicators of latent variables of macroeconomic conditions.

The results of this research are in line with the results of research from Tarkom and Ujah (2023), explaining that high inflation will cause real interest rates to fall and banks will raise deposit rates. An increase in deposit interest rates will be followed by an increase in lending rates which will then increase credit risk and impact on increasing Non Performing Loans (NPLs) which will lead to a decline in bank financial performance, both in terms of profitability and capital. Furthermore, the results of research from Benbouzid *et al* (2022), concluded that a high inflation rate has an impact on reducing the number of bank assets as well as credit risk, higher inflation can have a negative impact on the income of debtors, thereby damaging the credit quality of banks. If the credit distribution effect proves to be stronger, then a higher inflation rate could result in banks taking less risk on the bank's balance sheet.

The results of the research on the second macroeconomic state variable, such as in Table 1 is the interest rate, where the value of the outer weight estimation result, the interest rate variable proxied by the BI-rate does not contribute significantly to the macroeconomic situation or has no significant relationship to the financial performance of the banking. The results of this research are in line with the results of research from Fasanya and Adekoya (2022) which explains that changing the macroeconomic situation regarding interest rates does not affect the bank's financial performance, because interest rates are proxied with the BI-rate and not the real interest rate. Furthermore, the results of research from Cieslak and Schimpf (2019) explained that the interest rate is an implementation of the BI-rate that reflects the attitude or monetary policy set by the central bank and announced to the public.

The results of the research on the third macroeconomic state variable, as in Table 1 is the Composite Stock Price Index, where the estimated value of the outer weight has no significant effect on contributing to macroeconomic conditions, or there is no significant relationship to banking financial performance. The results of this research are in line with the results of research from Wing Fong *et al* (2022) which explain that an advanced stock market will affect the financial performance of companies in a country, because stocks have an important meaning for investors to get capital gains and dividends earned in companies that have good financial performance. Furthermore, the results of research from Sasu *et al* (2022) concluded that the value of good company performance will maximize shareholder wealth. If the stock price is high, it will increase the value of the company, this will increase investor confidence in the company that issued the shares.

The results of the research on the fourth variable of macroeconomic conditions, as shown in Table 1, are exchange rates, where the estimated value of the outer weight has a significant effect and contributes negatively to macroeconomic conditions, or there is a significant relationship to banking financial performance. This means that when the value of the rupiah exchange rate against the US dollar depreciates or decreases in value, it will cause the banking financial performance to increase. The results of this study are in line with the results of research from Zhan *et al* (2021) which explain that a weakening of a country's currency triggers the central bank in a country to raise its benchmark interest rate, this changes the investment map, because investors are more interested in investing in deposits. and bonds, so that the money in circulation can be withdrawn to stabilize the country's currency. Furthermore, the results of research from Wang *et al* (2022), concluded that the banking sector, as one of the sectors that conducts transactions in foreign currencies, so that its performance is considered to be affected by changes in foreign currency exchange rates.

The results of the study on the fifth macroeconomic state variable, as in Table 1 is *Gross Domestic Product* (GDP), where the contribution is very small to indicators of macroeconomic conditions or there is no significant relationship to banking financial performance. The results of this study are in line with the results of research from Thanh Ha (2023) which explains that *Gross*

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Domestic Product (GDP) is the value of goods and services produced by a country using production factors owned by the public or companies of other countries. Furthermore, the results of research from Szczepaniak *et al* (2022) concluded that, if *Gross Domestic Product* (GDP) increases, it will increase people's income, so that the ability to save will increase, so that it will affect the financial performance of banks.

IV. CONCLUSIONS

Based on the results of research and discussion, this study can be concluded that, macroeconomic internal factors that can formulate a strategy for developing banking financial performance, consisting of Inflation, Interest Rates, Composite Stock Price Index, Exchange Rate, and *Gross Domestic Product* (GDP), *Capital Adequacy Ratio* (CAR), and *Return on Assets* (ROA). Inflation, Exchange Rate, *Capital Adequacy Ratio* (CAR), and *Return on Assets* (ROA) significantly contributed to the development strategy of macroeconomic conditions. The magnitude of the influence of the variables of macroeconomic conditions on banking financial performance was 76.9%, while the remaining 23.1% is the influence of other variables outside this study.

The results of this study can scientifically suggest that state financial institutions, such as; Ministry of Finance, Ministry of State-Owned Enterprises, Financial Services Authority, and Bank Indonesia can pay attention to macroeconomic movements and growth, especially in the Inflation and Rupiah exchange rate sectors to adopt development implementation policies through banking financial performance management.

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