



Effect of competition and sustainable financial performance application on the profitability at banking industry in Indonesia

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ABSTRACT

The aims of this study are to determine the competition effect and the application of sustainable financial performance on the profitability of the banking industry in Indonesia. Purposive sampling was used on the Indonesian Stock Exchange in 2018-2021. The analysis used the panel data regression method. Return on Assets was used as the dependent variable, and the independent variable used banking competition and the application of sustainable financial performance, while the control variable used Net Interest Margin, Capital Adequacy Ratio, Loans to Deposit Ratio, and Non Performance Loans. For the results, the right model is used Fixed Effect effect model, with market share, economic performance, environmental performance, and Net Interest Margin having a positive and significant effect on the profitability of the banking industry, while the Herfindahl-Hirschman Index has a negative and significant effect on the profitability of the banking industry. However, governance performance, social performance, Capital Adequacy Ratio, Loans to Deposit Ratio, and Non Performance Loans have no effect on banking industry profitability.

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1. INTRODUCTION

The October 1988 Policy Package became the driving force for banking development in Indonesia (Winarti & Rinardi, 2020). The aim of this policy is to accelerate national economic growth (Onder & Ozyildirim, 2013). But, the 1997 monetary crisis and the 2008 global financial crisis, resulted in a revival of this sector that could not last long (Hamid, 2009). For this reason, the government needs to play a role in maintaining financial system stability (Horvath & Vaško, 2016). This crisis indicates an error in financial management. The monetary policy implemented still has opportunities for risks to arise in the financial sector, especially the banking sector (Houben et al., 2004).

Banking plays a major role in maintaining the stability of the country's economy (Kashyapa & Siegert, 2020). In order to maintain their existence, banks need to improve their performance (Soeharjoto & Hariyanti, 2019). Until now, efficiency has been used as one of the most important indicators of banking performance (Soekapdjo, 2020). Bank conditions, directly affect the structure and level of competition in the banking industry

(Widyastuti & Armanto, 2013). However, good and bad market performance depend on the market structure (Bain, 1959). In Structure, Conduct Performance (SCP) approach, it was revealed that a decrease in the level of market concentration has a positive impact on market efficiency (Kusumo & Novasari, 2017). This is due to the increasing market concentration, which will increase the company's ability to raise prices above marginal costs (Wang & Li, 2021). This means the market power it has gained is becoming greater and greater. Therefore, high and low market power can indicate a high level of competition. However, in an industry, the relationship between Structure Conduct Performance has different basic characteristics as well as a relationship with market share, concentration, and profitability (Neuberger, 1997).

Market power depends on the phenomenon of an increase in the banking industry (Lubis, 2012). This increase is because of the efficiency that occurs in the industry. At banking sector, efficiency can be done by taking into account operational costs and operational receipts (BOPO) indicators, as well as net interest margin (NIM) (Soeharjoto et al., 2023). Market power is often used to analyze market competition, because it is more focused on the study of industrial economics (Fahmi et al., 2012). However, in analyzing an industry, the individual behavior of a bank should not be separated from its market structure. This means that the competition and efficiency analyses of banks need to refer to their internal analyses. For this reason, banks can conduct price competition with interest rates, as well as non-price competition by implementing product differentiation and service optimization for customers. Banks can do efficiency by maximizing profits, and revenues, or minimizing costs (Rahmawati, 2015). Capital Adequacy Ratio (CAR) is used as an indicator to determine the bank's ability to bear the risk of each productive asset at risk (Hariyanti et al., 2022). CAR has a positive influence on profitability, which is reflected in Return on Assets (ROA) (Yuliani, 2007). But the Loan to Deposit Ratio (LDR) and Non Performing loans (NPL) also play a major role in profitability to support the existence of banks. In the Harvard paradigm, the relationship between structure and SCP performance is the main determinant of performance, and in the Chicago paradigm, the efficiency of each individual in an organization will improve company performance, which will affect its structure. Market concentration is one of the determinants of profitability (Yu & Wenner, 2005). Research on monetary policy effectiveness has been widely conducted, but it is still rare for researchers to specifically discuss banking behavior in Indonesia. Companies need to be efficient so they can create market share, which will result in their market being more concentrated.

Agency theory revealed that each party has conflicting interests, so in order to avoid conflicts, companies need to separate the management and ownership functions of the company (Jensen & Meckling, 1976). However, in order to minimize the conflict, it is necessary to enter into an employment contract agreement. This policy resulted in better performance and increased company profits. The signal theory reveals that the signals given by management can reduce the occurrence of asymmetric information (Soeharjoto et al., 2021). For this reason, the management will try to improve its performance so that the signal becomes positive and has an impact on increasing profits. In measuring management effectiveness, companies often use profitability (Brigham & Houston, 2018).

In this era, the existence of a country depends on achieving stable, inclusive, and sustainable economic growth (Niekerk, 2020). This requires support from the financial system that can prevent investment practices in business activities that use excessive resources because it will increase social inequality and cause environmental damage. For this reason, the financial system needs to apply sustainable principles, in order to be able to create economic, social, and ecological value in its models, processes, and practices while still contributing to the achievement of sustainable development goals. This condition requires better management and prevention of social and environmental risks. Sustainable finance principles applications in the financial institution system in Indonesia are an implementation of Law Number 32 of 2009, concerning environmental protection and

management to develop and implement environmental economic instruments, including environmentally friendly policies in the banking, capital market, and non-bank financial industries. The application of sustainable finance principles is a tangible form of Indonesia's commitment to the international community, by providing funding sources for climate change mitigation and adaptation. At this time, Financial Services Authority Regulation Number 51 is a reference for the implementation of sustainable finance. Banking's implementation of sustainable finance will improve the conditions of its business existence and increase its profitability.

Banking plays a major role in supporting economic growth. This makes the bank, as an intermediary institution, need to increase its profitability, in order to finance its operations and business development. A bank's profitability depends on its ability to win the competition and the implementation of sustainable financial performance. Therefore, it is necessary to conduct research on the effect of competition and the application of sustainable financial performance on the profitability of the banking industry in Indonesia.

2. RESEARCH METHOD

This quantitative research uses the panel data regression method. The dependent variable uses ROA, while the independent variable uses banking competition and the application of sustainable financial performance, while the control variable uses NIM, CAR, LDR, and NPL. Market share and the Herfindahl-Hirschman Index are used to measure banking competitiveness. The Economic, Environmental, Social, and Governance (EESG) disclosure index is used to implement financial performance in accordance with OJK Regulation No. 51/POJK.03/2017 about the use of sustainable finance for financial service institutions, issuers, and public businesses. Purposive sampling will be used in the sampling process, and the criterion will be banking stocks with comprehensive data that are continuously listed on the Indonesian Stock Exchange in the years 2018 through 2021. Data is sourced from the Central Bureau of Statistics, Bank Indonesia, and the Financial Services Authority. However, in the application of financial performance, data is obtained from the company's annual reports, then entered according to the criteria of its index. The research equation model is:

Model 1 : overall

$$\Pi_{it} = \beta_0 + \beta_1 t \text{ MS} + \beta_2 t \text{ HHI} + \beta_3 t \text{ EESG} + \beta_4 t \text{ NIM} + \beta_5 t \text{ CAR} + \beta_6 t \text{ LDR} + \beta_7 t \text{ NPL} + \varepsilon_{1T}$$

Model 2 : Dimensi EESG

$$\Pi_{it} = \beta_0 + \beta_1 t \text{ MS} + \beta_2 t \text{ HHI} + \beta_3 t \text{ ECO} + \beta_4 t \text{ ENV} + \beta_5 t \text{ SOS} + \beta_6 t \text{ GOV} + \beta_7 t \text{ NIM} + \beta_8 t \text{ CAR} + \beta_9 t \text{ LDR} + \beta_{10} t \text{ NPL} + \varepsilon_{2T}$$

Where:

Π = Return on Assets.

MS = Market Share.

HHI = Herfindahl-Hirschman Index.

EESG = Economics, Environment, Social and Governance.

ECO = Economic Index.

ENV = Environment Index.

SOC = Social Index.

GOV = Corporate Governance Index.

NIM = Net Interest Margin.

CAR = Capital Adequacy Ratio.

LDR = Loans to Deposit Ratio.

NPL = Non Performance Loans.

3. RESULTS AND DISCUSSIONS

In 2018–2021, the value of ROA, MS, HHI, NIM, CAR, LDR, and NPL varies. The average ROA was 0.64, with the highest value in BBMD in 2021 of 4.31 and the lowest in AGRO in 2021 of -14.75 with a standard deviation of 2.66. MS averaged 2.52 with a standard deviation of 4.48, which had an all-time high of 19.37 on BBRI in December 2019 and a low of 0.04 on BSWD in December 2020. HHI has an average value of 0.12 with a standard deviation value of 0.01, which in 2021 had a high of 0.12 and a low of 0.11 in 2018. The average NIM value was 4.02 with a standard deviation of 2.36, with the highest value in 2021 at PNBS of -7.37 and the highest in 2018 at BTPN of 11.30. CAR has an average of 23.57 with a standard deviation of 10.23, which has an all-time high of 98.07 in December 2021 in BSWD and a low of 9.01 in BEKS in December 2019. The average LDR value is 84.98 with a standard deviation of 22.23, which has the lowest value in 2021 in BACA of 12.35 and the highest in BTPN in 2019 at 163.00. NPL averaged 3.72 with a standard deviation of 2.91 and had a high of 22.27 on BEKS in 2020 and a low of 0.00 in BACA in 2020 and 2021.

Table 1. Average, Maximum, Minimum, and Standard Deviation of ROA, MS, HHI, NIM, CAR, LDR, NPL Banking Stocks in Indonesia Listed on IDX in 2018-2021.

Information	ROA	MS	HHI	NIM	CAR	LDR	NPL
AVG	0.64	2.52	0.12	4.02	23.57	84.98	3.72
MAX	4.31	19.37	0.12	11.30	98.07	163.00	22.27
MIN	-14.75	0.04	0.11	-7.37	9.01	12.35	0.00
STD	2.66	4.48	0.01	2.36	10.23	22.23	2.91

Source: Financial Services Authority (Data processed), 2023

ECN, GOV, SOS, and ENV values vary. The average ECN value is 53.49, with a standard deviation of 34.98, a maximum value of 34 shares, and a minimum of 18 shares. GOV has an average value of 70.88 with a standard deviation of 40.21, which has a maximum value of 77 shares and a low of 25 shares. SOS has an average value of 75.00 with a standard deviation of 25.66, which has a maximum value of 37 stocks with a minimum value of 4 shares. ENV has an average value of 36.09 with a standard deviation of 27.85, which has a maximum value of 9 stocks and a minimum value of 9 shares.

Table 2. Average, Maximum, Minimum, and Standard Deviation of ECN, GOV, SOS, ENV Banking Stocks in Indonesia Listed on IDX in 2018-2021.

Information	ECN	GOV	SOS	ENV
AVG	53.49	70.88	75.00	36.09
MAX	100.00	100.00	100.00	100.00
MIN	0.00	0.00	6.67	0.00
STD	34.98	40.21	25.66	27.85

Source: Financial Services Authority (Data processed), 2023

The results of the Chow test obtained a p-value from the Cross-section chi-square of $0.0031 < 0.05$, so the right model is the Fixed Effect Model. The results of the LM test obtained a p-value from a random cross-section of $0.0021 < 0.05$, so the selected model is the Fixed Effect Model.

The results of the coefficient of determination test obtained an Adjusted R-Square value of 0.9474, which means that variations in individual variables, namely market share, HHI, economic pillars, governance pillars, social pillars, environmental pillars, NIM, CAR, LDR, and NPL, are able to explain variations in the dependent variable, namely profitability (ROA), of 94.74 percent, while the remaining 5.26 percent are variations from other independent variables that affect ROA but are not included in the model. These results show that the model used has a goodness of fit. The results of the F test obtained a p-value

of $0.0000 < 0.05$, which means that it is proven that there is at least one independent variable that has a significant effect on the dependent variable.

Table 3. Test t Results (Partial Test)

Variable	Coefficient	t-Statistic	Prob.
MS	0.3063	2.7994	0.0031**
HHI	-31.693	-5.7229	0.0000**
ECN	0.0016	1.5800	0.0588*
GOV	-0.0032	-1.3417	0.0915
SOS	-0.0039	-2.7878	0.0032
ENV	0.0037	3.6933	0.0002**
NIM	0.1177	1.6964	0.0466**
CAR	-0.0002	-5.6708	0.0000
LDR	-0.0001	-5.7813	0.0000
NPL	-0.0103	-0.7803	0.2186

*= α 10% **= α 5%

Source: Processed data, 2023.

The processing results for partial testing can be seen in Table 3. The effect of market share on profitability obtained an estimated coefficient value of 0.3063 with a p-value of $0.0031 < 0.05$, which means that it is proven that a high market share will increase the profitability of the banking industry. The effect of HHI on profitability obtained an estimated coefficient value of -31.693 with a p-value of $0.0000 < 0.05$, which means that it is proven that the higher the HHI, the lower the average profitability owned by banks. This result is in accordance with the research of Gumilar & Mulyana (2022) but contrary to the research of Hendra & Hartomo (2017). The effect of Economic Performance on profitability has an estimated coefficient value of 0.0016 and a p-value of $0.0588 < 0.10$, which means that it is proven that higher economic performance will increase banking profitability. The positive effect of governance performance on profitability has an estimated coefficient value of -0.0032, which means that it is not proven that governance performance has a positive effect on profitability. The effect of social performance on profitability is estimated to be -0.0039, which means that social performance has no positive effect on profitability. The effect of environmental performance on profitability has an estimated coefficient value of 0.0037 and a p-value of $0.0002 < 0.05$, so it can be concluded that environmental performance has a positive effect on profitability. The positive effect of NIM on profitability has an estimated coefficient value of 0.1177 and a p-value of $0.0466 < 0.05$, so it can be concluded that NIM has a positive effect on profitability. This is in accordance with the findings of Anggriani & Suryaningtias (2017) research. The effect of CAR on profitability has an estimated coefficient value of -0.0002 and a p-value of $0.0000 < 0.05$, which means that it is not proven that CAR has a positive effect on profitability. This condition is contrary to research conducted by Nugroho et al. (2019), but in accordance with Nurhayati & Safri (2023) research. The effect of LDR on profitability has an estimated coefficient of -0.0001 with a p-value of $0.0000 < 0.05$, which means that LDR is not proven to have a positive effect on profitability. This condition is contrary to Malik (2020) research but in accordance with Pratama (2021). The negative effect of NPL on profitability is estimated at -0.0103 with a p-value of $0.2188 > 0.05$, so it is not proven that NPL has a negative effect on profitability. This result is contrary to the research of Putriarningsih & Yulianto (2016) but in accordance with the research of Pinasti & Mustikawati (2018). Therefore, in order for the existence of the banking industry to survive and contribute to national development, banks need to improve their ability to compete in banking, implement sustainable financial performance, and control other variables in order to obtain profitability. This success can be realized if the company applies signaling theory by implementing agency theory so that banking profitability becomes more optimal. However, banking conditions are inseparable from

global macroeconomic changes such as exchange rates and the COVID-19 pandemic, so they need to be included as a moderation variable.

4. CONCLUSION

The study was conducted using the panel data regression method using the Fixed Effect Model. For the outcome of market share, economic performance, environmental performance, and NIM have a positive and significant impact on the profitability of the banking industry in Indonesia, while HHI has a negative and significant influence on the profits of the Banking Industry in Indonesia. However, governance performance, social performance, CAR, LDR, and NPL have no impact on the profitability of the banking industry in Indonesia. The research carried out has contributed to sustainable financial performance by implementing OJK Regulation No. 51/POJK.03/2017. In order to support the sustainable profitability of the banking industry in Indonesia, in addition to paying attention to the ratio of finance and competition, it is also necessary to implement the regulations of OJK No. 51/POJK.03/2017. For further research, it is advisable to be able to develop a broader and more detailed financial performance index, as well as include COVID-19 rates and pandemics as moderation variables.

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