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Profitability difference between listed bank and non-listed bank

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ABSTRACT

This study aims to analyze what factor that can affect the profitability of listed bank and non-listed bank. The impact factor are internal and external factors. The detail of internal factors of the bank consist of bank size, capital adequacy ratio, management efficiency, diversification income, liquidity risk, credit risk and external factors of bank consist of market concentration, inflation and gross domestic product. Measurement of bank profitability that used on this study is net interest margin. The sample of this research is banks that are listed in OJK consist of 42 public owned banks and 63 private owned banks. The research data are tested and analyzed with data panel regression using E-views. The results of this research prove that management efficiency, liquidity risk, and market concentration are giving a significant effect to bank profitability. The novelty of this research are approaching the different result between listed bank and non-listed bank profitability in order to find out whether there are different factor that are influencing listed bank and non-listed bank profitability.

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INTRODUCTION

Financial institutions play a very important role in the economic development of countries especially the banking industry. The main function of banking is to mobilize the resources of those who have excess funds, especially in the form of savings and deposits, and then channel the funds received to debtors who need funds and create productive investment opportunities for banks. Banks in carrying out these functions must be stable and profitable enough (Hasanov et al., 2018).

Banks are required to have the ability to improve the welfare of their owners as a goal of the company. Efforts to achieve a company's goals depend on its performance. Factors that give an effect on the performance of the bank can be divided into two, namely factors that can be controlled or referred to as internal factors and uncontrollable factors or referred to as external factors that have an effect on the bank's performance, namely macroeconomic conditions (Utu, 2018).

Internal factors are factors that can be controlled by the bank itself so that the bank can maintain its operational activities. The bank's internal factors consist of CAMEL (Capital, Asset, Management, Efficiency, Liquidity) which is a leading indicator in the level of health of the bank in carrying out its operations. External factors are factors that cannot be controlled by the bank itself, external factors of the bank consist of inflation and gross domestic product that cannot be emphasized by the bank, but the bank can achieve a high level of profitability if the bank can anticipate the inflation rate and gross domestic product.

Internal bank factors are still a problem, till now 2020 there are still 7 commercial banks that are still under BPK supervision, although it has been supervised by OJK, there are still weaknesses in its supervision. The seven banks are Bank Tabungan Negara (Persero) Tbk, Bank Yudha Bhakti Tbk, Bank Mayapada Tbk, Bank Papua, BPD Banten Tbk, Bank Bukopin Tbk and Bank Muamalat Indonesia Tbk which still have internal problems due to weak supervision by OJK (Agustiyanti, 2020). The problems that occur at the bank will have an impact on the lack of public trust in the placement of funds in the bank which leads to mass withdrawals of funds that will result in liquidity difficulties by the bank and reduce the profitability of the bank.

Many changes have been experienced by the banking world in Indonesia from time to time, where the causative factors can be from internal factors and external factors. In fact, many banks have been liquidated by Lembaga Penjaminan Simpanan (a government unit which function are to guarantee the safety of people saving in the bank) as many as 116 banks whose data is obtained from LPS because

those banks are unable to compete accompanied by the poor financial performance which they cannot return customer funds that have been collected by banks. The impact caused by the bank's failure to manage customer funds collected and distribute these funds is a sign that the need to analyze the bank's internal financial ratios so that it can be detected as early as possible so to minimize the risk of liquidation.

The research objectives are to analyze whether internal factors of bank that is measured by bank size, capital adequacy ratio, management efficiency, diversification income, liquidity risk, credit risk and external factors of bank that is measured by gross domestic product, inflation, market concentration has a significant impact on public owned and private owned bank profitability. The novelty of this research is by differentiate the research between listed bank and non-listed bank to see whether there are different factor influencing the public owned bank or private owned bank profitability which is differentiate this research with the prior research.

Profitability is the ability of a company to manage assets, liabilities and equity to generate profits. Companies that make large profits, can attract the attention of investors who want to invest in short-term or long-term stocks (Ozgur & Sehid, 2016). The high profitability of such banks can indicate that most of the bank's performance is said to be good because it is assumed that the bank has operated effectively and efficiently thus allowing the bank to expand its business (Putri & Dewi, 2017). It is very important for banks to maintain their profitability in order to increase public confidence to keep excess funds in the bank.

The size of a bank is a scale that determines how small or big a bank can be. Banks that have larger assets, are expected to deliver on the bank's performance due to the benefits derived from increased profitability, and larger banks have market power by using brand image and providing related services (Abel & Roux, 2016). The bigger the size bank, the bank can allocate fixed costs on a larger asset base, so as to reduce costs incurred or reduce risk by diversifying operations across product lines, sectors, and regions to increase profitability (Ram & Mesfin,2019). Larger bank size is expected to have better performance due to the resources that can be utilized in order to improve the bank profitability and quality of services (Aziz & Knutsen, 2019).

Capital adequacy ratio is a useful capital ratio to withstand the risks that can occur to losses that will be faced by banks. By having considerable capital, bank management has a wider scale in placing its funds into investment activities in the form of credit and deposits. Equity held by banks is also used to cover potential unexpected losses in the future (Hanifa, Trianto & Hendrich, 2019). A strong capital structure is essential to banks during unstable macroeconomic conditions and higher management quality (Aziz & Knutsen, 2019). Hasanov *et al.* (2018) stated banks with strong capital were able to counter the instability of the country's financial condition, banks that had sufficient capital gained more credibility and more had better future prospects that would push business forward.

Management efficiency is the ratio used to see how efficiently a bank emphasizes regarding spending on a bank's profitability. The higher ratio indicates the lack of bank efficiency in reducing costs incurred (Petria *et al.*, 2015). The smaller management efficiency ratio of bank management will increase the profitability of the bank. Widyastuti *et al.* (2017) stating that the bank cannot streamline the use of its operating costs thereby lowering profitability at the bank. Pahlevi & Ruslan (2019) stated banks must streamline the costs incurred in order to achieve the desired level of profitability. If the bank is unable to cover the operating costs incurred with the bank's own operating income then the bank is said to be inefficient (Febrini & Septiana, 2019).

Diversification income is considered as one of the factors that affect the profitability of the bank, diversification of income can be calculated from the amount of other operating income divided by the total assets owned by the company. Other operating income consists of net income from the sale of investment securities (shares), service fees, underwriting fees(appraisal), foreign exchange and also commission income (Rahman *et al.*, 2015). Ovi *et al.* (2014) stated that greater market forces with low competition in loans and deposit markets provide opportunities to banks in non-operating income from commission-based costs and products, but can only occur in high and middle-income countries, but not in low-income countries. Javid (2016) suggested that the bank was efficiently able to provide additional facilities to its customers resulting in an increase in bank profitability.

Liquidity risk is the ratio of loans as part of total deposits. This ratio indicates the extent to which a bank has lent its deposits in the form of credit. Bank loans are assumed to be the main source of profitability and are expected to affect profitability positively. If more deposits are converted into

loans, interest margins and profits will increase (Aziz & Knutsen, 2019). Prasanjaya & Ramantha (2013) stated that bank's performance will improve along with the increase in credit distribution to third parties. The more credit channeled by banks to debtors, the more interest income that increases bank profitability (Afriyeni & Fernos, 2018).

Credit risk is the ratio of default loans to total gross loans. Increased the burden of losing loans or interest payments can reduce the overall level of profitability. The percentage of credit risk may increase after a period of frequent credit distribution. When bank managers are under competitive market pressure, bank managers may use less stringent lending standards to meet short-term profit targets that can lead to a negative impact on profitability (Aziz & Knutsen, 2019). Problematic credit would result in bank losses due to the non-receipt of funds that have been channeled along with interest income that practices on total income (Hanifa *et al*., 2019). Every loan given and if the loan is in arrears, the bank will reserve the cost of reserve losses in the elimination of productive assets that will reduce the profitability of the bank (Dewi, 2018).

Market concentration that is measured by Herfindahl-Hirschman Index (HHI) is calculated as the sum squared of a bank's market share. HHI is an appropriate concentration index because it accounts for each bank's share in the market and gives greater weighting to companies with greater market share (Petria *et al*., 2015). The higher the concentration of the bank's market in the market, the greater its ability to control the market which will increase the profitability of the bank. The higher intensity of competition will lead to higher bank creativity so as to encourage the public to utilize banking sources of funds that provide benefits for banks in the form of credit distribution (Utu, 2018). Pahlevi & Ruslan (2019) stated that banks with larger monopolies will reduce competitors so as to provide more profits for banks.

Gross domestic product reflects the economic conditions of the country, the higher the value of GDP, the better the country's economy will encourage economic activity so that increased demand for loans and deposits resulted in an increase in bank profitability (Javid, 2016). The existence of an important factor that determines a country's economy is the level of aggregate spending of consumer spending on goods and services (Purwohandoko & Iriani, 2021). If the economic condition of a country is stable, the consumption of private companies is also stable. This indicates that an increased income level will increase the rate of return on bank loans. Jadah *et al*. (2020) stated that a good economic environment could help banks earn higher profits.

Inflation is an increase in the price of goods in general that takes place continuously. The effect of inflation on bank profitability is felt through the effect on rising bank income conditions and costs. The higher the inflation rate, the higher the interest on loans and credit scores that will increase bank profitability (Petria *et al*., 2015). Islam & Nishiyama (2016) showed that bank managers anticipated inflation in the future but were not anticipated by the debtors themselves thus providing benefits for the bank. Banks are able to adjust loan interest and deposit interest in anticipation of inflation so that banks do not experience losses due to inflation (Batten & Vo, 2019).

RESEARCH METHODS

The research method includes the type of research, research population, research sample/subject, and technical data analysis. You can use multilevel numbering if necessary. Don't forget to provide a title and picture number (below the picture and serial number starting from number 1), as well as the title and table number (above the table with a serial number starting from number 1). (Times New Romance 11, before after 0).

The sample of this study are banks that registered with OJK or listed in IDX, as many as 105 all banks consist of 42 public and 63 non-public banks. The outlier test was carried out in advance, there are 30 outlier data for all banks, 11 outlier data for public banks and 18 outlier data for non-public banks. The data that will be used after substracting with outlier is 495 data for all banks, 199 data for public banks, 315 data for non-public banks.

The object of the research used in this study is the financial statements and annual statements of banks listed in the IDX and OJK. The sampling method is done by purposive sampling, which means that the selected samples fit certain criteria for research purposes. Based on the object of the study, it can be concluded that the data studied uses combined data between cross section data and time series data that forms in panel data. Cross section data is data taken at a certain time, time series data is data taken at a certain time interval.

Table 1 Variable Measurement

Variable	Measurement
Independent Variable	
Bank Size	Logarithm of Total Asset (log)
Capital Adequacy Ratio	(Tier 1 + Tier 2 Capital) / Risk-weighted Asset
Management Efficiency	Operational Cost/Operational Expense
Diversification Income	Other Operating Income / Average Total Assets
Liquidity Risk	Loans / Customer Deposits
Credit Risk	Impaired Loans / Gross Loans
Market Concentration	Herfindahl-Hirschman Index
Gross Domestic Product	Gross Domestic Product (annual %)
Inflation	Inflation (annual %)
Dependent Variable	
Net Interest Margin	Difference between interest income and interest expense / Total assets of the bank

Hypotesis

H_1 : Bank size has a significant positive effect on bank profitability.
H_2 : Capital adequacy ratio has a significant positive effect on bank profitability.
H_3 : Management efficiency has a significant negative effect on bank profitability.
H_4 : Diversification income has a significant positive effect on bank profitability.
H_5 : Liquidity risk has a significant positive effect on bank profitability.
H_6 : Credit risk has a significant negative effect on bank profitability.
H_7 : Market concentration has a significant positive effect on bank profitability.
H_8 : Gross domestic product has a significant positive effect on bank profitability.
H_9 : Inflation has a significant positive effect on bank profitability.

RESULTS AND DISCUSSION

Table 2 Descriptive statistics of public banks

Variable	Minimum	Maximum	Mean	Std. Deviation
BS*	664.673	1.511.804.628	164.630.499,23	310.969.636,63
CAR	0.1	0.66	0.22	0.73
ME	0.43	1.81	0.91	0.20
DI	0.00	0.09	0.01	0.01
LR	0.39	1.78	0.87	0.19
CR	0.00	0.22	0.04	0.03
MC	0.00	288.33	18.67	55.47
GDP	-0.02	0.05	0.04	0.03
INF	0.02	0.04	0.03	0.01
NIM	0.00	0.10	0.04	0.02

* = In Million Rupiah

Table 3 Descriptive statistics of non-public banks

Variable	Minimum	Maximum	Mean	Std. Deviation
BS*	664.673	172.351.233	27.732.140,71	31.416.045,45
CAR	0.11	8.21	0.32	0.52
ME	0.30	1.34	0.80	0.16
DI	0.00	0.09	0.01	0.01
LR	0.00	9.72	1.07	0.67
CR	0.00	0.15	0.03	0.02
MC	0.00	4.31	0.26	0.63
GDP	-0.02	0.05	0.04	0.03
INF	0.02	0.04	0.03	0.01
NIM	0.01	0.11	0.05	0.02

* = In Million Rupiah

From the table 2 and 3, the data stated that in term of bank size, public bank owned the highest value and statistically public bank size are mostly bigger than non-public bank. Capital adequacy ratio averagely non-public bank are leading with 32% than public bank 22% which means that in term of financial health of CAR ratio of banking, non-public bank is better than public bank. But in term of management efficiency is leaded by public bank with 91% than non-public bank with only 80%. For diversification income both public and non-public bank are on the same level which is 1%.

Liquidity risk for public bank are 87% and non-public bank are 107%, according to the Indonesia Central Bank Regulation, commercial bank liquidity risk are around 72% till 98% which is means that non-public bank have a higher liquidity risk than public bank. Credit risk of public banks are 4% and non-public bank are 3% which is mean both public and non-public bank are still in the range of regulated credit risk standardized by Indonesia Central Bank which is 5%.

Market concentration for public bank are 18,67 and non-public bank are 0,26 which is mean that that public bank have the higher market share than the non-public banks this could be indicate that the people of Indonesia are more trusting a listed bank than non-listed bank. Net interest margin for public bank are 4% than non-public bank which is 5% which mean in profitability alone, non-public are more able to generate more profit than public banks.

Table 4 Hyphotesis Test

Variable	Public banks			Non public banks		
	Coefficient	Prob.	Summary.	Coefficient	Prob.	Summary
BS	-0,00	0,31	Not Significant	-0,00	0,08	Not Significant
CAR	0,04	0,01	Significant	-0,00	0,27	Not Significant
ME	-0,03	0,00	Significant	-0,01	0,13	Not Significant
DI	-0,16	0,11	Not Significant	0,02	0,88	Not Significant
LR	0,01	0,02	Significant	-0,00	0,00	Significant
CR	0,01	0,82	Not Significant	0,20	0,00	Significant
MC	5,87	0,01	Significant	-0,00	0,33	Not Significant
GDP	0,04	0,49	Not Significant	0,03	0,54	Not Significant
INF	0,51	0,04	Significant	0,13	0,57	Not Significant

As we can see in the hypothesis test table for the public bank we can get that Bank Size, Diverisified Income, Credit Risk, and GDP are not giving a significant impact toward bank profitability but Capital Adequacy Ratio, Management efficiency, Liquidity Risk, market concentration and inflation are giving a significant impact toward bank profitability. But for private owned bank we only got 2 variable that are able to giving significant impact to bank profitability which is liquidity risk and credit risk.

Table 5 Adjusted R-Squared test

	Adjusted R Square
Public Banks	0.39
NonPublic Banks	0.14

From table 5, Adjusted R-Squared result for public banks are 39% which is means our regression model are able to describe 61% of public bank profitability and for the private owned bank profitability, our adjusted r-squared are only 14% which is means there are still a lot of other factor can being use to define private owned bank profitability.

Discussion

Bank size are not making any significant impact toward bank profitability either public bank or non-public bank, this outcome could be bank diversified its assets in the form of unproductive assets so that the assets did not provide any positive benefits for the bank such as collateral taken over from debtor who could not pay off their credit so as to give the collateral to the bank for sale. Its could be also because Indonesia structured bank regulation which is making the customer of the bank will not care whether the bank size are big or small or the reputation of the bank since all the bank are in the same regulation under Indonesia Central Bank.

Public bank can easily increase their financing by issuing new share unlike nonpublic bank which their source of funding are from their debt which will increase their cost of funding and lower their profit which is why capital adequacy ratio will give a significant impact toward public bank profitability and not able to give significant impact toward nonpublic bank profitability.

Public bank management efficiency are able to giving a significant impact toward their profitability this could be listed bank are already in the bottleneck of their potential revenue which is why they can only focusing efficiency cost in order to maximize their profit unlike non-public bank which is still middle or small size which their potential revenue are still unexplored which is why they need to highly investing in their budget cost to maximize their potential revenue or profit.

Both public bank or non-listing bank diversification Income are not giving a significant impact toward profitability this result could be due to Indonesian commercial banks are more focus on interest income compared to other operating income.

As we can see liquidity risk are still having a significant impact toward both bank profitability this result are also the answer that Indonesia banking are competing in a very tight environment for business. Which the regulation required the bank to limits their liquidity risk from 78% to 92% in order to minimize the risk of bank.

Credit risk are not able to give significant impact toward public bank profitability. Difference result for nonpublic bank, as the data showed that credit risk are able to give a significant impact toward nonpublic bank profitability, this result could be because the size between public bank and non-public bank and market concentration, this could because the diversified customer of public bank rather than focused customer of nonpublic bank make them are more vulnerable when there is one customer are having a default credit.

Market concentration are able to giving a significant impact to public bank profitability because the bigger their market share will be able to leverage their profit unlike nonpublic bank, their market concentration are most likely regional which is not big enough to give them a huge or significant impact toward their profit.

National GDP are not able to giving any significant impact to both public bank and non-public bank profitability, this result could be explained that Indonesia credit business demand are becoming a defensive product which is no longer rely on the economy or consumer purchasing power which result that no matter how was the GDP. It will no longer affecting the bank profitability.

From the inflation variable, the result show that public bank profit is influenced significantly by the national inflation unlike private owned bank, this result could be due to the vast wide market share owned by public bank than private owned bank because mostly public bank already penetrates their product and services to cover almost all of Indonesian area. Unlike private owned bank which their product and services are still located in first tier city of Indonesia so their profit are not fully depend on the national inflation.

CONCLUSION

Indonesian banks are required to comply with BI requirements in order to protect banks from an unexpected turn of events such as monetary crisis that happened in 1998 and 2008 that caused a huge impact on Indonesian economy. The purpose of this research is to find out and analyze the difference profitable characteristics of public bank and non-public bank. This research found out that profitable characteristics of public bank and non-public bank are different. This public bank profitability is depends on more variable rather than non-public bank. Public bank profitability is significantly affected by Capital Adequacy Ratio, Management efficiency, Liquidity Risk, Market Capitalization and Inflation. Unlike public bank, non-public bank profit is only significant affected by Liquidity Risk and Credit Risk. The reason behind this finding we concluded that public or listed bank are more open to new source of funding and other than central bank regulation, public bank also needs to commit to the regulation of Stock Exchange Center. Non-public bank which is only needs to commit with the regulation of central bank.

The limitation of this research is the external factor that are being used are only a minor of economy indicator. From the internal factor this research approach is mostly from financial fundamental side of the bank itself.

Recommendations that can be given for future research are expand the variable of external factor could be also the Indonesia stock exchange index growth rate which could be help the market value and easiness of external funding of the bank, Indonesia purchasing power which is also a factor that will need to support the revenue and paying power of the bank. From the internal factor sides, further research can approach non-financial fundamental variable which is firm reputation, CEO characteristics and CEO Reputation.

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