主論文の要約

（Abstract of Dissertation）

論文題目：　Competition and Bank Performance in Indonesia

氏　名：　Nuraini Yuanita

論文内容の要約：

1. Introduction

The number of banks tends to decline as a result of consolidation, mergers, and acquisition. The same tendency also happens in the Indonesia banking sector. The Asia Financial crisis has decreased the number of banks in Indonesia significantly. Following the crisis, the Indonesia Banking Supervisory Authority through Indonesia Banking Architecture encouraged banks to consolidate. The consolidation process was done slowly. Hence the authority further encourages banks to consolidate through Indonesia Financial Service Master Plan 2014-2019. The number of banks will further decrease. A decrease in bank number affects bank competition.

On the other hand, the bank as the source of finance still plays an important role in Indonesia. Analyzing bank performance can contribute to the economic development in Indonesia. In that regard, this study tries to describe competition in Indonesia and find the relationship between competition and bank performance.

The literature on bank competition mentioned that there are two main groups of competition measurement — structural and nonstructural measures. This research uses both structural and nonstructural measures of competition. The structural measure uses information on the structure of the market in describing competition such as the number of banks, market concentration, and market shares. This study calculates CR_4 and HHI as a measurement of competition. Moreover, this research also employs the SCP hypothesis. For the nonstructural measure, this study calculates the Lerner index.

This research`s calculation on CR_4 and HHI show that competition in the Indonesia banking sector tended to increase since 2003 and slightly decreased during the global financial crisis in 2008.

This research employs SCP hypothesis framework using CR4 and HHI as market concentration measures. The standard SCP hypothesis suggested that the structure of the market would affect market behavior, and market behavior affects bank performance. Therefore, this research conducted 3 regressions to find relation between (1) market structure that is represented by CR4 as well as HHI with bank behavior that is represented by bank price; (2) bank behaviour that is represented by price with bank performance that is represented by bank profitability; and (3) market structure with bank profitability. Moreover, high banking profitability with high fluctuation can create instability in the economy. Hence, this research also tries to find the relationship between competition and stability.

2. Structural Measure of Competition

The result of the regression between market structure and bank price shows that an increase in concentration ratio causes a decrease in price. The negative relationship between market structure and price is contrary to the standard theory. The argument for the negative relationship is because an increase in bank size will improve bank economy of scale so that the bank can have a lower marginal cost and provide a better price. In order to support the argument, this research analyzed individual merger bank as merger increased bank size. Regression results also suggest that the relationship between market structure and price form a U curve. In that regards, the negative relationship stops at the inflection point, above the inflection point the relation between market structure and price changes.

Moreover, the result of the market structure-profitability relationship shows that CR_4 is negatively associated with bank profitability. Increase in CR_4 is mostly derived by the biggest four banks to acquire a bigger market share. In order to increase market share, the biggest four banks need to do an expansion that needs an additional budget and reduce bank profitability. From the market structure-price relationship we can find that an increase in size will give an opportunity to the bank to reduce its marginal cost. Having lower marginal cost will give the bank a choice, either to decrease its price to attract more customers or to increase the margin. The regression result suggests that banks tend to reduce its price to increase its size further and decrease its profitability. The decreasing in profitability in the Indonesia banking sector is possible as Indonesia banking sector has relatively high profitability. To further support the above argument this study conducted a regression for each bank group. Under the Indonesia Financial Service Agency Regulation, a commercial bank in Indonesia is classified into four groups. BUKU 1 is the group with limited banking activities that are small in terms of size while BUKU 4 is the group for a bank that gets full banking license that is big in terms of size. The result shows only regression for BUKU 4 have a significant result for a negative relationship between CR_4 and ROA.

As a measurement of market concentration, this study also calculated HHI. The regression result between HHI and ROA shows that HHI is not a significant variable for ROA. Moreover, this study further conducted a regression for each bank group and found that HHI is negatively related to ROA for bank BUKU 3. One of the reasons for an increase in HHI is the merger process. Hence this study analyzed individual merger process.

.

3. Non-Structural Measure of Competition

In order to have a better understanding of banking competition, this research calculates the Lerner index as a nonstructural measurement of competition. The calculation result shows that the competition in Indonesia commercial banks is relatively stable over the observation period. However, when each bank groups is analyzed, there is a different pattern in each bank group. The hardest competition is in BUKU 4 even though the number of banks is the smallest. The lowest competition occurs in BUKU 1 where most banks stay in that group. However, the banks are classified based on ownership; the result shows that a bank that is owned by a foreigner is more competitive than a bank that is own by domestic owner. When banks are classified by the central government, regional government and privately-owned banks, this study found that regional government-owned banks are the least competitive, while central government and privately-owned banks have relatively the same level of competition.

4. Merger Bank

Merger bank analysis shows that 4 out of 5 mergers in BUKU 3 experienced a decline in profitability during the merger. On the other side, merger in BUKU 1 and 2 showed a heterogeneous result. The findings support analysis of regression for each bank classification.

Moreover, the case study of bank mergers explains that 78% of the merger experience a decline in marginal cost after the merger. Having lower marginal costs give banks option to decrease price, increase its margin or having both a decreasing price and increase its margin at the same time. All banks that experience a decline in marginal cost also experience a decline in its price. A decrease in price is not bad as it also gives benefit to customers and the economy. The analysis on merger bank supports regression results on the market structure-price relationship.

5. The Relationship between Competition and Performance

Moreover, using the Lerner index as the competition measurement, this study found the negative relationship between competition and bank profitability. Lerner index measures competition by the profit margin above the marginal cost, as a result, a positive relation between the Lerner index and ROA is expected. The regression result of Lerner-ROA relationship is in line with the theoretical background. High Lerner index shows low competition. Less competition in the market will give bank higher market power hence reap higher profitability. The different regression result between market structure-ROA and Lerner-ROA regression shows that different measurement of competition can lead to a different result. Hence, defining the competition based on the objective of the research is crucial in determining the research result. The regression result also suggests that Lerner index explains competition better in comparison to market structure. By employing a market structure measurement, it is assumed that the more concentrated market, the less the competition. That assumption does not always hold in every market. Some markets are concentrated but have severe competition. The Lerner index calculation suggests that bank in BUKU 4 that consist of 4 banks is more competitive in comparison to BUKU 1.

High profitability with high deviation will cause instability for the bank as well as for the economy. Hence, this research tries to find a relationship between competition and stability. The result shows a negative relationship between the Lerner index and stability. Higher competition is associated with instability. Moreover, this study also finds that the relationship between the Lerner index and stability forms an inverse U curve.

In addition to the competition, this research also measures the relationship between concentration ownership and profitability as well as stability. Concentrated ownership is associated with low profitability as well as low stability. This finding also supports consolidation policy; however, it gives a warning for a single presence policy that was implemented by the authority. In that regard, the single presence policy needs to be supplemented with a good corporate governance system such as improvements in transparency.

6. Policy Recommendation

Moreover, there is some limitation in this study. Some limitations among others are an assumption that bank product is only loans. In the Lerner index calculation, this research calculates Lerner index based on a trans-log cost function that uses the loan as the output. Some other bank products may have different level of competition. For example, margins in loan markets are not always the same as margins in payment system business. Hence, different types of Lerner index can be produced to explain more details of competition in the banking sector.

Table 1. Summary of Findings and Policy Recommendation

Research Questions	Findings	Policy Recommendation
How is the state of competition in the Indonesia banking sector evolving?	Competition in Indonesia banking sector tends to be stable.	Support further consolidation policy and conduct research on the number of banks that is optimal for the Indonesia banking sector.
	Structural measure and non-structural measure of competition provide a different result. Increase in market concentration cause a decline in price, it suggests that merger bank increase its economy of scale. Merger bank experience a decline in ROA during merger and decline in marginal cost in the first, second and third year after the merger.	Monitor several different competition indicators. The merger is expensive; providing an incentive such as tax exemption can help merger bank
What is the relation	Lerner index is positively related to profitability.	Support further consolidation

between competition and bank profitability in Indonesia banking sector?		policy
	Disperse ownership associated with higher profitability.	Monitor the implementation of single presence policy. Improve the corporate governance implementation especially improving checks and balances.
What is the relation between competition and bank stability in Indonesia banking sector?	Higher competition is associated with lower stability. The relationship between stability and market power forms an inverse U curve.	Support further consolidation policy
	Disperse ownership associated with higher stability.	Monitor the implementation of single presence policy. Improve the corporate governance implementation especially improving checks and balances.