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The Influence of Macroeconomic Indicators on Profitability: A Case Study of Regional Development Banks in Indonesia

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Abstract

Regional banks are said to be the backbone of any economy as it has a direct bearing with financial and economic development. Profitability of the banks, especially in regional banks, is imperative, since it leads to the financial stability of a nation. This study investigates factors affecting the profitability of 189 Regional Development Banks with research information from 2012 to 2020. The results of the study show that external factors have a positive and very significant effect on profitability, meaning that economic growth, inflation, and bank certification are important in increasing the profitability of Regional Development Banks (RDBs). Internal factors give a large negative value when a large bank provides minimal profitability. Government intervention will reduce the profitability value. The Policies of Bank Indonesia and the Financial Services Authority (FSA) have a positive effect on RDBs' profitability but are not a major factor. The findings of this study suggest banks receive a major part of their net income from interest income but they can also earn income from non-interest income that makes a big contribution to bank profitability. The study results however show that banks non-interest income does not have an optimal effect on the banks' profitability although interest income optimally impact banks' profitability.

Keywords: Internal Factors, External Factors, Intervention, Profitability

JEL Classification Code: D8, L1, L2, L22

1. Introduction

The banking system has a significant role to play in the rapid growth of the economy. It has a significant role to play in the rapid growth of the economy through the economy. A banking institution is indispensable in modern society. The banking sector is the lifeline of the economy. It is one of the most important financial institutions in a financial system. It plays a vital role in the success or failure of an economy. The regional development banks (RDBs) are multilateral financial institutions that provide financial and technical assistance for development in low and middle-income countries within their regions. Finance is allocated through low-interest loans and grants for a range of development sectors such as health and education, infrastructure, public administration, financial and private-sector development, agriculture, and environmental and natural resource management. The development of regional banks is still not maximized, seen from its profitability. Regional Development Banks (BPD), which is part of the national banking industry must also show the performance of the optimal efficiency to fully support the financing of regional development (Olilingo & Putra, 2020). A strong banking sector is argued to be capable of confronting negative shocks in the financial system. Factors both internal and external affect the performance of banks. Internal factors are management decisions on financial statements, size of the bank, capital, gearing levels, risk levels, and expenses management affect profitability directly (Kapaya & Raphael, 2016; Riaz et al., 2017).

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External factors are economic in nature; these are inflation, interest rates, market concentration, and industry size and ownership status (Almazari, 2014; and Knoll et al., 2021).

There are generally three sets of factors that are known to affect bank profitability. Firm-specific factors which are inherent to the firm, industry-specific factors which are extrinsic to the firm but innate to the type of industry, and macroeconomic factors that sweep the economy in which banks are operating (Tidhar & Eisenhardt, 2020). There are many prior investigations that have been conducted to examine profitability determinants of banks in different countries (Al-Homaidi et al., 2020); Duraj & Moci, 2015); Kadioglu et al., 2017; Eriksson et al., 2020; Ghosh, 2020).

Regional development bank (RDB) in Indonesia is a financial institution for the purpose to strengthen the regional economy through financial inclusion. It is mandated on Act 13/1962 about the main rules of RDB in Indonesia. RDBs are positioned as an institution encouraged to carry out the process of value creation as the basis for developing a competitive advantage. The objective is to respond to changes in the external environment (both from competitors and customers) by relying on strengthening internal resources and organizational capabilities (Dagunga et al., 2020; Ratnawati, 2020).

In addition to running the activities of commercial banks, RDBs also function as a cashier administration, such as the realization of budget funds. Thus, BPD has different characteristics from other banks (state-owned, private, foreign, and joint venture) which is most of the Third Party Funds (TPF) is government-owned funds, especially local government. The establishment of the BPD is to encourage development in the area. BPD is directed to support infrastructure development, is directed to support infrastructure development, agriculture, and other economic activities within the framework of regional development. (Wu et al., 2019; Chrobak et al., 2021; Ramos et al., 2020; Pueyo et al., 2020) Financial Services Authority of Indonesia (Otoritas Jasa Keuangan) is an Indonesian government agency that regulates and supervises the financial services sector. The OJK is an autonomous agency designed to be free from any interference, having functions, duties and powers to regulate, supervise, inspect, and investigate. Bank Indonesia (BI) acted as regulator and supervisor of banks in Southeast Asia's largest economy until the end of 2013 when the Financial Services Authority (OJK) assumed the role (Tangngisalu et al., 2020; Khan et al., 2020).

Based on the above findings, the purpose of this study is to analyze the influence of internal factors, to analyze the influence of internal local government interventions, to analyze the influence of external factors on the profitability of regional development banks in Indonesia.

2. Literature Review

2.1. Internal Factors, External Factors, and Profitability

Almazari (2014) and Knoll et al. (2021) investigated the internal factors that affect the profitability of banks. The main objective was to compare the profitability of the banks by using the internal factors for estimations. Nguyen and Nguyen (2020) showed firm size has a positive impact on both ROA and ROS, especially ROA but it has the opposite effect on ROE, (2) Adequacy ratio impacts positively on ROA and ROS but negatively on ROE, (3) Financial leverage considerably negative influences on ROE and ROS but positively impacts on ROA, (4) Liquidity has a positive effect on both ROA and ROE but a negative one on ROS and (5) Solvency has a positive impact on ROA and ROS but the negative impact on ROE. The non-interest income is the revenue income generated from the non-core activities by the banks and financial institutions (loan processing fee, late payment fees, credit card charges, service charges, penalties, etc.) and plays a vital role in its overall profitability (Tidhar & Eisenhardt, 2020; Al-Homaidi et al., 2020; Duraj & Moci, 2015). Most businesses that are not banks rely entirely on non-interest income. Financial institutions and banks, on the other hand, make most of their money from loaning and re-loaning money. As a result, these firms view non-interest income as a strategic line item on the income statement. This is especially true when interest rates are low since banks profit from the spread between the cost of funds and the average lending rate. Low interest rates make it difficult for banks to make a profit, so they often rely on non-interest income to maintain profit margins (Riaz et al., 2017; Kapaya & Raphael, 2016; Chinigo, (2013).

Rjoub et al. (2021) found the significant moderating role of "financial development" in the relationship between "economic growth" and carbon emissions, capital formation and carbon emissions, and urbanization and carbon emissions. The environmental–financial related policies were suggested for the policymakers in Turkey to aid the reduction of carbon emission with the view of improving environmental quality. Jadah and Alghanimi (2020) showed that bank size, the equity to total assets and total loans to total assets ratios, GDP growth, and government effectiveness have a significant and positive impact on the profitability of Iraqi banks. Meanwhile, credit risk, inflation, interest rate, unemployment, and political instability have a significant negative influence on bank profitability. Profitability is an indicator of the capacity of commercial banks to cope with their risk and/or capital growth, showing their competitiveness and measuring the quality of management. Credit risk is one of the significant risks of commercial banks by the nature of their activities.

By effectively managing the exposure of commercial banks to credit risk, they not only support the viability and profitability of their business but also contribute to the system, stability, and efficient allocation of capital to the economy. Hallunovi and Berdo (2018) determined whether there is a relationship between credit risk management and profitability in commercial banks in Albania. In this paper, there were four variables: ROA and ROE are the dependent variables, whereas non-performing loans (NPLs) and capital adequacy (CAR) are the independent variables.

Hoque et al. (2018) identified notable patterns and limitations in previous empirical studies. Specifically, despite increasing interest in Islamic banking customer behavior, prior research has not given much attention to exploring moderating effects on the customer attitude–intention link. This has left researchers and bank managers with very limited information to explain the conditions that enhance. Fortin and Richardson (2017) stated that the internal factors such as the management decisions on (balance sheets and/or profit and loss accounts), size of the bank, capital, risk management, and expenses management affect the profitability of the bank directly because most of these factors remain confidential. The findings of Sawitri et al. (2020) and Garmaise and Natividad (2013) revealed that among internal factors only bank size and asset composition significantly influences the profitability of banks whereas in the external determinants only real interest rates and GDP growth rates have a significant effect on the profitability of banks.

H1: *Internal Factors positively affect the profitability.*
H2: *External Factors positively affect the profitability.*

2.2. Local Government Intervention and Profitability

Local government intervention refers to how the local governments affect firms and financial institutions; there has been a long-term debate over government interventions since the classical economic theory (Ramos et al., 2020; Al-Homaidi et al., 2020; Rjoub et al., 2021). Agbeja et al. (2015) stated economic decentralization motivates all levels of local governments to develop their local economies. As the growth of the local GDP is the benchmark for a nation's performance evaluation systems, decentralization also directly drives and strengthens local governments' interventions in local business investment activities. To achieve rapid GDP growth, local governments resist strict financial regulations that might slow the development of the local economy. They directly intervene in local financial institutions through deregulation or alternative policies to provide guarantees for enterprises' financing and investment activities. The impact of local government on local enterprises' investment behaviors depends on the enterprises' ownership structures and governance modes (Ide & Tubi, 2020; Dagunga et al., 2020). The frequent changes in government policy and regulations and the fluctuating levels of government control of the economy increase the uncertainty of the economic environment (Ratnawati, 2020; Salazar, 2020).

H3: *Local Government Intervention has a positive effect on the profitability.*

2.4. Policies, Services Authority, and Profitability

Government regulation affects the banking industry in many ways, but the specific impact depends on the nature of the regulation. Increased regulation typically means a higher workload for people in financial services, because it takes time and effort to adapt business practices that follow the new regulations correctly. The Financial Services Authority was formed so that the whole activities in the financial services sector are working in order, fair, transparent, and accountable manners; able to create a financial system that grows continuously and in a stable manner, and able to protect the interests of consumers and the society (Velandia et al., 2020; Ramos et al., 2020; Pueyo et al., 2020). Since 2013, OJK by virtue of Law No. 21 of 2011, took over the regulatory and supervisory government functions in the financial services sector, including banking, from BI, and becoming the primary regulatory authority responsible for overseeing banks. Bank Indonesia's authority since then is limited to macroprudential surveillance. However, banks are still subject to Bank Indonesia's supervision in certain matters, among others, reporting obligation in relation to foreign loan obtainment (Putra et al., 2020). Bank Indonesia (BI) acted as regulator and supervisor of banks in Southeast Asia's largest economy until the end of 2013 when the Financial Services Authority (OJK) assumed the role (Widjaja et al., 2020; Ahmad et al., 2020; Gunadi et al., 2020).

NPA affects the profitability of the banks. The banks get their income from the loans and advances that are disbursed and if these loans are not repaid then it is not possible for them to receive profits. If the banks' profitability is affected then the total economy is affected (Tangngisalu et al., 2020; Petrovich et al., 2021). Banks mainly make money from the interest they charge on loans, and when they are unable to collect the owed interest payments from NPLs, it means that they will have less money available to create new loans and pay operating costs (Garmaise & Natividad, 2013). Banking System is sound with stable CAR, continuous credit expansion, and low NPL. Capital Adequacy Ratio (CAR) is also known as Capital to Risk (Weighted) Assets Ratio (CRAR),[1] is the ratio of a bank's capital to its risk. FSA and Bank Indonesia track a bank's CAR to ensure that

it can absorb a reasonable amount of loss and complies with statutory Capital requirements. It is a measure of a bank's capital. It is expressed as a percentage of a bank's risk-weighted credit exposures. The enforcement of regulated levels of this ratio is intended to protect depositors and promote the stability and efficiency of banks (Manu et al., 2020; Phan et al., 2020; Al-Absy et al., 2020; and Agbeja et al., 2015).

H4: *The policy of the Bank and the Financial Services Authority positively affects the profitability.*

Based on the description of empirical studies, the author created a framework based on several models done by previous research as follows (Figure 1):

3. Research Method

This research is quantitative. Quantitative research is a research strategy that focuses on quantifying the collection and analysis of data. It is formed from a deductive approach where the emphasis is placed on the testing of theory, shaped by empiricist and positivist philosophies This examination utilizes optional information or data got prepared by factual strategies utilizing Warp PLS programming and information investigation strategy utilizing PLS (Partial Least Square). The study population is 189 Regional Development Banks in Indonesia, with research information from 2012 to 2020, based on purposive sampling. Purposive sampling (also known as judgment, selective or subjective sampling) is a sampling technique in which the researcher relies on his or her own judgment when choosing members of the population to participate in the study.

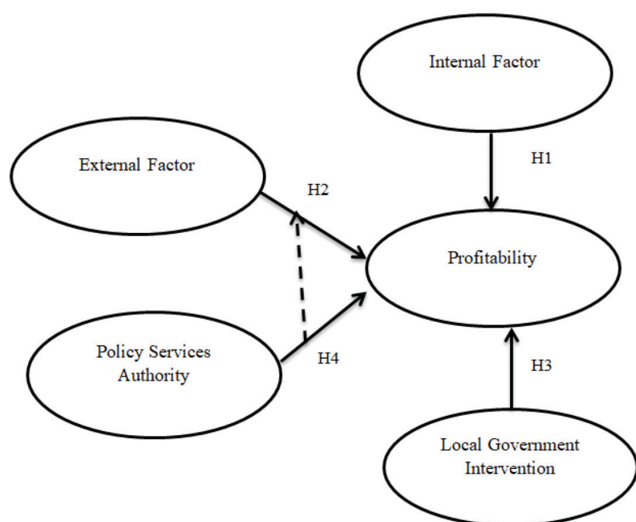

Figure 1: Conceptual Framework of the Hypothesis

The study variables are Internal Factor (X_1), which are factors that occur within the Bank which may affect the profitability of the bank. These factors are the size of the bank and interest/non-interest income (for the 2012–2020 period). External factors (X_2) are external factors that will have an impact on bank policies. External factors affecting the bank's profitability are economic growth, inflation, and Bank Indonesia certificates auctioned by Bank Indonesia for the 2012–2020 period. Regional Government Intervention (X_3), an intervention issued by the local government to optimize regional finances, and the regions play a major role as shareholders. The indicators used are: board of commissioners and third-party funds. The policies of Bank Indonesia and the Financial Services Authority (X_4) was formulated to ensure that activities in the financial sector are carried out in an orderly, fair, transparent, and accountable manner. Indicators of policies of the Bank Indonesia and Financial Services Authority are: Minimum statutory reserves and ratio of non-performing loans. In this study, the number of non-performing loans with the quality category is used: substandard, doubtful, and bad to the total credit provided by the minimum statutory reserve for the 2012–2020 periods. The capital adequacy ratio (CAR) is a measure of how much capital a bank has available, reported as a percentage of a bank›s risk-weighted credit exposures. The purpose is to establish that banks have enough capital on reserve to handle a certain amount of losses, before being at risk of becoming insolvent. In this case, risk-weighted assets are obtained from the amount of credit granted by the minimum statutory reserve for the period 2012–2020.

4. Results

WarpPLS is software with a graphical user interface for variance-based and factor-based structural equation modeling using the partial least squares and factor-based methods. The software can be used in empirical research to analyze collected data and test hypothesized relationships.

Internal factor variables with the indicators company size ($X_{1.1}$) has a value of 0.912 and Income other than interest ($X_{1.2}$) has a value of 0.912. Both bank size and non-interest income have the same values which means neither of the two is a dominant indicator. External factor variable with economic growth indicator ($X_{2.1}$) has a value of 0.240; inflation indicator ($X_{2.2}$) has a value of 0.822, and Bank Indonesia certificate indicator ($X_{2.3}$) has a value of 0.775. The inflation indicator is the dominant indicator because it has a high value among other indicators. The government intervention variable with the board of commissioner's indicator ($X_{3.1}$) has a value of 0.698, and the indicator of third party funds ($X_{3.2}$) has a value of 0.698, and there is no dominant indicator because both indicators have the same value. The Policy of Bank Indonesia and Financial Service

Authority indicator with the statutory reserve requirement indicator ($X_{4.1}$) has a value of 0.712, the non-performing loan ratio indicator ($X_{4.2}$) has a value of −0.125, and the capital adequacy ratio indicator ($X_{4.3}$) has a value of 0.765. The highest indicator is the minimum statutory reserves indicator so that it becomes the dominant indicator. The profitability variable is influenced by the return on assets (Y_1) indicator, which has a value of 0.842, and the return on equity (Y_2), which has a value of 0.842. Both indicators have the same value so neither indicator is a dominant indicator.

4.1. Direct Effect

The WarpPLS processing tool performs tests for variable path directions through path coefficients and *p*-values. The test was carried out with the *t*-test, and if the obtained *p*-value < 0.10 (alpha 10%, 90% confidence level) it means that the significant level is weak, whereas *p*-value < 0.05 (alpha 5%, 95% confidence level) means it is significant, and if the obtained *p*-value < 0.01 (alpha 1%, 99% confidence level), it means that it is very significant. Figure 2 is the test result.

From Table 1, the description is as follows:

(1) Internal factors have a negative and significant effect on the profitability of regional development banks in Indonesia with a coefficient value of −0.218 and the significance can be determined by comparison (0.05 > 0.003), so it can be seen that internal factors have a significant influence on the profitability of regional development banks in Indonesia.

(2) External factors have a positive and significant effect on the profitability of Regional Development Banks in Indonesia with a coefficient value of 0.344 and the significance can be determined by comparison (0.05 > 0.002), so it can be seen that external factors have a significant influence on the profitability of regional development banks in Indonesia.

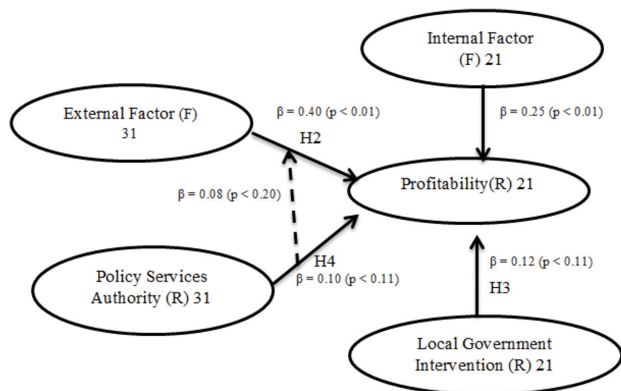

Figure 2: Result of Direct Effect

(3) Local government intervention factors have a negative and insignificant effect on the profitability of Regional Development Banks in Indonesia with a coefficient value of −0.155 and the significance can be determined by comparison (0.05 < 0.117), so it can be seen that local government intervention has an insignificant effect on the profitability of regional development banks in Indonesia.

(4) The policies of Bank Indonesia and the Financial Services Authority have a positive and insignificant effect on the profitability of regional development banks in Indonesia with a coefficient value of 0.073 and the significance can be determined by comparison (0.05 < 0.327), so it can be seen that the Bank Indonesia and Financial Services Authority and Policies are not significant to profitability regional development banks

4.2. Effect of Moderation

The impact of the Policies of Financial Services Authority and Bank Indonesia on the profitability of Regional Development Bank in Indonesia with balance factors (outside factors) and their impact without balance factors are shown in Table 2.

The policies of Bank Indonesia and the Financial Services Authority has a positive and insignificant effect on profitability by external factors as moderation for Regional Development Banks in Indonesia with a coefficient value of 0.080 and the significance can be determined by comparison (0.05 < 0.303), meaning that the policies of Bank Indonesia and Financial Services Authority have an effect but no significant effect on the profitability of regional development

Table 1: Path Coefficients and *p*-values

Variable	Path Coefficients	Divisions	Description
Internal Factor (X_1) → Profitability (Y)	0.218	0.003	Negative and Strong Significance
External Factor (X_2) → Profitability (Y)	0.344	0.002	Positive and Strong Significance
Local Government Factor (X_3) → Profitability (Y)	0.155	0.117	Negative and Weak Significance
Policy and Financial Service Authority (X_4) → Profitability (Y)	0.073	0.327	Positive and Insignificant

Table 2: Results of Moderation Effect

Variable	Path Coefficients	*P* Divisions	Description
Policies of Bank Indonesia and the Financial Services Authority (X_4) on Profitability (Y) with External Factors (X_2)	0.080	0.303	Positive and insignificant

banks in Indonesia. External factor variables measured with economic growth, inflation, and Bank Indonesia certificates are capable of being moderating variables because they have a positive coefficient value and play a role in increasing the influence/impact of financial services policies on regional banks in Indonesia.

5. Discussion

5.1. Internal Factors on Profitability

Internal factors have a negative and significant effect on the profitability of regional development banks in Indonesia. This means if there is a 1% increase in non-interest income then the profitability of Regional Development Banks in Indonesia will decrease by 0.218%. This implies that large-sized Regional Development Banks do not have great quality assets during the research/study period. Bank size is measured as the natural logarithm of the value of total assets. It represents the ownership of assets by banks. High asset ownership enables banks to offer more financial services at a low cost. However, it is revealed that RDBs' assets are not of high quality. The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and other assets, as well as off-balance sheet transactions. The ability of management to identify and manage credit risk is also reflected here. Asset quality is one of the most critical areas in determining the overall condition of a bank. The primary factor affecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans typically comprise a majority of a bank's assets and carry the greatest amount of risk to their capital. As per our study, RDBs' asset quality is low which means levels of risk and problem assets are significant, inadequately controlled, and subject the financial institution to potential losses that, if left unchecked, may threaten its viability.

5.2. External Factors on Profitability

External factors have a positive and significant impact on the profitability of regional development banks in Indonesia. This means through monetary development and expansion of the Bank Indonesia Certificate by 1% then the profitability of Regional Development Banks in Indonesia will increase by 0.344%. Working capital management is essential for the efficient operation of the organization because it ensures the effective use of financial resources. Inefficient use of working capital management negatively affects profitability. This makes it imperative that there should be efficient working capital management, to helps in reducing constant incidents/cases of bank distress. The specific business problem is that some bank managers lack working capital management strategies to improve profitability. Working capital management is vital in the management of the bank's current account which includes current assets and current assets and current liabilities. This explains the various forms of current assets and current liabilities adjustments that a bank can make to meet its required working capital. Strong economic growth usually results in at least a moderate inflation rate. A stimulus to demand will see higher inflation and higher economic growth. In this case, rising inflation can lead to an increase in profitability for firms if the financing cost of the Bank Indonesia Certificate rises, then banks' profitability also increases.

5.3. Local Government Intervention Factor on Profitability

Local government intervention factors have a negative and insignificant effect on the profitability of Regional Development Banks in Indonesia. This means an increase in intervention by the local government through regulations or policies by 1% then the profitability of Regional Development Banks in Indonesia decreases by 0.155%. Government regulation affects the banking industry in many ways, but the specific impact depends on the nature of the regulation. Increased regulation typically means a higher workload for people in financial services, because it takes time and effort to adapt business practices that follow the new regulations correctly. The Financial Services Authority was formed so that the whole activities in the financial services sector are working in order, fair, transparent, and accountable manners; able to create a financial system that grows continuously and in a stable manner, and able to protect the interests of consumers and the society. However, local government intervention can cause more problems than it solves. For example, the local government may support encourage the survival of inefficient regional development banks. If governments bail out banks, it may create a moral hazard where in the future banks have less incentive to

avoid bankruptcy because they expect a government bailout. As such regional development banks may not work optimally so that profitability and performance increases.

5.4. Policy Factors of Bank and the Financial Services Authority on Profitability

The policies of Bank Indonesia and the Financial Services Authority have a significant positive effect on profitability. If the policies of Bank Indonesia and the Financial Services Authority are measured through statutory reserves and non-performing loans, and the capital adequacy ratio increases by 1%, the profitability of Regional Development Banks in Indonesia will increase by 0.073% with an insignificant effect. The policies of Bank Indonesia and the Financial Services Authority regarding the profitability of Regional Development Banks are assessed through their minimum demand deposits and bad debts as well as the capital adequacy ratio. The determination of the statutory reserve requirement is one of the monetary instruments of Bank Indonesia as the Monetary Authority which aims to influence the amount of money circulating in the public.

A non-performing loan (NPL) is a bank loan that is subject to late repayment or is unlikely to be repaid by the borrower in full. Non-performing loans represent a major challenge for the banking sector, as it reduces the profitability of banks, and is often presented as preventing banks from lending more to businesses and consumers, which in turn slows down economic growth. When granting loans to their clients, banks always expose themselves to credit risk – the risk that the borrower may not pay back the loan. When this happens, the loan is said to become non-performing. NPLs reduce banks' earnings and cause losses, which weighs on their soundness. Banks with high levels of non-performing loans are unable to lend to households and companies. This is harmful to the economy as a whole. A capital requirement (also known as regulatory capital or capital adequacy) is the amount of capital a bank or another financial institution has to have as required by its financial regulator.

The advantage of the regional development bank has likewise changed because of the capital adequacy ratio as set by Bank Indonesia. Capital requirements are set to ensure that banks and depository institutions' holdings are not dominated by investments that increase the risk of default. They also ensure that banks and depository institutions have enough capital to sustain operating losses while still honoring withdrawals. Because banking is such an important part of the economy, regulators have established minimum required levels of bank capital, generally requiring more capital if the bank is larger or is riskier, though exactly what counts as capital these days, and how size and risk are measured, becomes quite complex. The capital adequacy ratio is a measure of how much capital a bank has available, reported as a percentage of a bank's risk-weighted credit exposures. Therefore, the higher a bank's capital adequacy ratio, the more likely it is to be able to withstand a financial downturn or other unforeseen losses.

5.5. External Factors as Moderation

The policies of Bank Indonesia and the Financial Services Authority have a positive and insignificant effect on the profitability of regional development banks in Indonesia. The policies of Bank Indonesia and Financial Services Authority have an effect but no significant effect on the profitability of regional development banks in Indonesia. External factor variables measured with economic growth, inflation, and Bank Indonesia certificates are capable of being moderating variables because they have a positive coefficient value and play a role in increasing the influence/impact of financial services policies on regional banks in Indonesia. Bank Indonesia remains committed to maintaining price stability and strengthening policy coordination with the central and local government to control inflation. When Bank Indonesia issues certificates and sells them to the public it will cause the amount of money circulating in the community to decrease. Reducing the amount of money in circulation is one of the targets to be achieved in establishing contractive policies. This policy is carried out when the economy runs too strong and causes inflation. So that the expectation when money circulating in the community is reduced will suppress public demand for goods which is a factor causing demand pull-inflation so that the inflation rate can be suppressed.

6. Conclusion

Large banks do not always provide a large profit value and even tend to decline because the assets owned by regional development banks are not of good quality. Assets owned by regional development banks do not meet loan requirements so collectability resulting in decreased credit returns, a low-interest income, and delayed repayments of loans. However, banks must incur costs to get non-interest income such as operational costs. Banks receive a major part of their net income from interest income but they can also earn income from non-interest income that makes a big contribution to bank profitability. The study results however show that banks' non-interest income does not have an optimal effect on the banks' profitability although interest income optimally impacts banks' profitability. Bank Indonesia certificates are a part of external factors in this study. If the loan cost for Bank Indonesia Certificates increases, an increasing number of banks will be keen on purchasing Bank Indonesia Certificates. Bank Indonesia certificates are the most secure instruments for banks. Banks can purchase these certificates and earn income in the form of interest.

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