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Do Bank Credits Cause the Financial Crisis in Indonesia?

Edwin Basmar
Ph.D Candidate, Graduate School of Economics Hasanuddin University,
Makassar South Sulawesi, Indonesia

Muhammad Yunus Zain
Professor of Economics, Graduate School of Economics Hasanuddin University,
Makassar South Sulawesi, Indonesia

Marsuki
Professor of Economics, Graduate School of Economics Hasanuddin University,
Makassar South Sulawesi, Indonesia

Abdul Hamid Paddu
Ph.D of Economics, Graduate School of Economics Hasanuddin University,
Makassar South Sulawesi, Indonesia

***Abstract-* This study aims to examine the effect of bank credit to the financial crisis in Indonesia. This research is also to know the influence of credit to growth (GDP) in period 1990 - 2014. The data used is secondary data from Central Bank of Indonesia which processed by using Simultaneous Equation Model. The results of this study found that bank credit is positive and significant in economic growth and financial crisis, while the economic growth does not affect to financial crisis in Indonesia.**

***Index Terms*— bank credit, growth domestic product, financial crisis**

I. Introduction

Indonesia as a developing country desperately needs banking credit. Especially in building facilities and infrastructure in facilitating the process of economic and development, but this is still controversial, credit like two sides of the coin, one side with high credit can maximize economic movement, on the other hand, excessive credit lead to financial crisis through the performance of banking systemic impact on other financial systems are interconnected with each other.

The phenomenon of credit in Indonesia has increased with economic growth, Indonesia's Growth Domestic Product (GDP) rate of 19.60% in 1990, then decreased significantly (-13.30%) in 1997 [1], this condition explains that GDP can not be a reference in preventing financial pressure from domestic or abroad.

Indonesia has a high economic growth but can not anticipate the global financial crisis, where Indonesia is the hardest problem country of the financial crisis, the pressure caused damage to the economic system in Indonesia through several financial sectors, so Indonesia needs sustainable improvement to all sector. The government regulation is important to create financial stability, by providing appropriate policies in financial movements within abroad and domestic country.

Overall, this study aims to determine the effect of credit on economic growth (GDP) and financial system in Indonesia. which is changing the Indonesian economy to anticipate the financial crisis, and this research will provide a new form of credit management policy, as well as governance of financial organization, especially in banking to anticipate the occurrence of economic pressures from abroad and domestic [2].

II. Literature Review

Banking credit reacts positively to the strength of the economy, this is seen through the close correlation relationship between credit to GDP, a positive relationship between the probability of banking crisis and credit gap on GDP [3].

Other conditions found that changes in bank credit to real GDP consistently did not correlate with economic growth, on the other hand, the decline in private sector banking credit has not been able to restore the economy [4].

The contradiction of the view, indicating that credit for a certain period provides benefits for economic development, in addition, banking credit gives a negative influence on the economy [5].

Banking credit stability is the key to growth, so the right policy in creating financial stability is necessary, banking credit contraction will indirectly affect the business process. [6].

The crisis is affected by the level of banking health [7], by increasing the financial health ratio can make credit contraction aggravate during the downturn phase of the financial cycle, while the credit effect is a damper of compensation during the boom, as the credit cycle declines, the higher the capital-asset ratio, the liquid-asset ratio resulting in greater credit depreciation [8].

Financial activity has a closer relationship to credit as well as loan to GDP ratio [9] [10], one of the indicators is the property prices could capture the individual phases of the financial cycle and predict the size of the banking sector's loan losses [11].

It is further explained that in identifying the phases of the financial cycle based on some variables it can capture the change in risk perception from optimism to pessimism. [12] [13].

There was a movement of credit co-movement in the financial cycle and business cycle is bigger in recession than expansion [14], the most recessionary factors are correlated with monetary and financial variables, where expansion is largely related to real activity variables [15].

Considering the development of credit that is able to give effect to economic growth and financial crisis, proper measurement technique is needed, such as empirical normalization (min-max) and statistical normalization applied to the economy in Macau, this formula is formed from 19 indicators are grouped into three major groups, namely the financial soundness index (FSI), the financial vulnerability index (FVI), and the regional economic climate index (RECI) [16], but the measurement is inadequate, if there are outliers, there will be distortion on the normalized indicator, otherwise not all data obtained have the same time frame, and each country has different financial characteristics that are not equal to other countries, so this formula is not suitable for other countries [17].

From several views and studies on credit and financial crisis measurement methods, it is seen that credit contraction can affect economic development, especially in connection with financial crisis, the impact of this financial crisis can affect financial stability [16], so that when the crisis of monetary policy instruments and fiscal policy must be well prepared, because the rapid and difficult to predict financial movements the government must be consistent in taking the right policies at a difficult time [10].

III. Methodology

This study uses data presented by Central Bank of Indonesia in the financial statements report. The Data collection uses secondary data in time series, this study uses bank credit from all banks in Indonesia (*exogenous variable*), and *Growth Domestic Product* (GDP) as an *intervening endogenous variable*, last, an *endogenous variable* which also the target of study is the financial crisis.

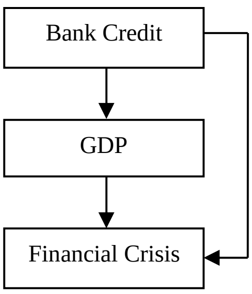

Figure 1. *Conceptual Framework*

Based on the Figure 1, the data is processed using a *Simultaneous Equation Model* (SEM) as shown through the function below :

$$y_1 = \alpha_0 + \alpha_1 X + \mu_1 \quad (1)$$

$$y_2 = \beta_0 + \beta_1 Y_1 + \beta_2 X + \mu_2 \quad (2)$$

Where, X is the amount of credit in Indonesia, measured in rupiah, Y_1 is *Growth Domestic Product* (GDP), measures in rupiah, and Y_2 adalah Financial Crisis, measured in percent. α_0 and β_0 are constants, α_1, β_1 dan β_2 are each as paremerters tobe estimated: μ_1 and μ_2 are random error terms.

The reduced form based on Equation 1 and 2 can be presented in the following equation :

$$y_1 = \alpha_0 + \alpha_1 X + \mu_1 \quad (3)$$

$$y_2 = \gamma_0 + \gamma_1 X + \mu_{12} \quad (4)$$

Where, α_0 and γ_0 $(\beta_0 + \alpha_0\,\beta_1)$ are constants ; α_1 dan $\gamma_1(\beta_2 + \alpha_1\,\beta_1)$ are the total effects of variabel X to variabel y_1 and y_2 ; μ_{12} $(\mu_2 + \mu_1\,\beta_1)$ are composites random error.

IV. Result and Discussion

In this study it was found that the effect of significant direct relationship was found on the credit relationship to GDP (probability 0.000), and the relationship between GDP and crisis has no significant effect (probability 0.351) while the relationship between credit to financial crisis has a significant relationship (probability 0.01) can be seen in Table 1 below:

Tabel 1. Result of Research Analysis

Variabel	Regression Coefficients			Estimate Results		
	Direct	Indirect	Total	Reg Coefficients	T - Statistic	Prob
Credit - GDP	0.355	0.000	0.355	0.355	8.438	0.000
GDP - Crisis	-10.021	0.000	-10.021	-10.021	-0.932	0.351
Credit - Crisis	14.947	-4.032	10.915	14.947	2.549	0.011

The results of this study found that credit has a significant effect on economic growth (GDP) [3], but the economic growth has not affected the financial crisis in Indonesia, the findings reveal that the financial crisis is due to the big influence of bank credit, these findings are in accordance with the theory that the increasing demand for money (credit) will create economic stability [18].

Economic development is characterized by increasing facilities and infrastructure in the real sector so give influence to the development of the business sector, this indicates that bank credit provides great benefits for business development in Indonesia.

Business development implications (GDP) through credit effectiveness do not cause financial crises, this is because credit is channeled only to sectors that provide high benefits (large industrial sectors) so that this can increase the movement of the real sector.

High credit distribution has an impact on the financial crisis, this is caused by credit distribution banking on the basis of profit orientation (moral hazard) gradually affects the level of banking health that trigger the occurrence of damage to the financial system in Indonesia.

In the development of credit in Indonesia is increasing from year to year, this is indicated by the amount of working capital loans, investment loan and consumption loan [19]. The development of credit from 1990 to before the crisis was stabile, and disrupted in 1997, where the condition of the banking system experienced a disruption of health performance, but it was not long, with appropriate policies stimulate banks to channel credit to several sectors that are considered potential to develop economic growth in Indonesia [20].

V. Conclusion

The crisis in Indonesia (1997 and 2008) was caused by the banking credit distribution, due to the fact that the banking credit in Indonesia mostly distributed large amounts of credit to large industrial sectors which had an impact on the growth of the economy, but the credit distribution did not use prudential principles, this became the trigger of banking's health destruction. Therefore the financial crisis in Indonesia is caused by bank credit.

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