Blanket Guarantee for Stabilization or Moral Hazard? Study Cases: Conventional Bank in Indonesia

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Abstract. Indonesian Deposit Insurance Corporation through Law No. 2 of 2020 enhance the Blanket Guarantee Mandate to a Risk Minimizer. A larger mandate implies greater authority for the Deposit Insurance Corporation in supporting the stability of the banking system. On the other hand, the Blanket Guarantee program has raised concerns about moral hazard in banks. Therefore, this research will analyse whether the Blanket Guarantee program through its risk minimizer function can improve financial system stability or create moral hazard. Research will be conducted on Conventional Banks from 2018 – 2021 with panel data analysis by two research models. The first and second model will show whether the blanket guarantee program encourages financial system stability or triggers the emergence of moral hazard. The research results show that the blanket guarantee program creates stabilization and does not cause moral hazard in conventional banks.

Keywords: Blanket Guarantee, Financial Stability, Moral Hazard

1. Introduction

The financial crisis that occurs in a country has a bad impact and experience for the community. The delay in economic activity, starting from the production process and the ability to consume, shows the systemic impact of the financial crisis on real economic growth. Financial crises in a country may occur infrequently but provide a warning signal for policy makers [1]. Dealing with the financial crisis requires at least three phases, namely direct damage containment, medium-term industrial restructuring and long-term consequences [2].

Historical records show that the severe financial crisis was caused by bank runs, a condition of bank failure which eventually disrupted the monetary system and decreased production [3]. Furthermore, problems in the banking sector can cause disruption to the flow of loans to households or business actors and reduce the level of investment which then encourages bankruptcy in the business sector. [4]. The resulting systemic impact makes bank runs considered like a viral infection that can be transmitted so that a system is needed to provide protection to banks in order to create a stable financial system. [5] [6]

Efforts to protect banks were carried out by establishing a deposit insurance institution which was first formed in the US in 1934 after the great depression. [7]. The purpose of establishing a deposit insurance agency is to prevent bank run through several schemes that can create security and reduce the risk of failure of the banking system in both developed and developing countries. [8] [9] [10].

In addition, deposit insurance institutions are also needed to restore customer confidence after a bank run. When bank runs start to occur, customers tend to panic and quickly withdraw

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their deposits. Then after the bank run, customers' concerns about the failure of the banking system that might happen again made them distrust banking institutions and reluctant to deposit their money in banks. Therefore, restoring customer confidence is an important matter that must be prioritized so that the banking system can function effectively again [5] [11]. So that deposit insurance institutions are needed to be able to restore customer confidence and minimize the risk of disrupting the stability of the banking system.

In 2004 Indonesia established a Deposit Insurance Corporation through Law No. 24 of 2004 concerning Deposit Insurance Corporation. Through the Blanket Guarantee program, DIC functions to maintain banking system stability and create a sense of security for depositors. Then Law No. 2 of 2020 was enacted to address economic and banking industry problems due to the emergence of Covid-19. In line with Law No. 2 of 2020, the Blanket Guarantee Mandate at the Indonesian Deposit Insurance Corporation has led to a Risk Minimizer. [12] (LPS, 2020)

A larger mandate implies greater authority for the Deposit Insurance Corporation in supporting the stability of the banking system. However, there is debate between policy makers and economic observers regarding the benefits and costs of the presence of deposit insurance institutions in providing protection to the banking system [9]. The blanket guarantee program that has become increasingly widespread from deposit insurance agencies has raised concerns about moral hazard in banks. There is a possibility of social counterproductivity from the blanket guarantee program because banks and the public are aware of the incentives provided by the deposit insurance agency when a failure occurs, which encourages them to carry out financing and work programs with high risks that cause moral hazard. [10]. In the end the program can trigger bank failure if banks take high risks and banking crises may occur more frequently [7].

Therefore, this research will prove whether the expansion of the Blanket Guarantee can improve financial system stability or create moral hazard in banking in Indonesia. A Study by [13] analysed the possibility of moral hazard after the establishment of a deposit insurance institution in Canada and found that the deposit insurance program did not cause moral hazard to banks in Canada. [14] tested the effect of the deposit insurance program on bank charter value in 251 banks from 36 countries and found that the program of the deposit insurance agency had a positive effect on bank charter value.

A Study by [7] analysed whether the program of the deposit insurance agency could increase the stability of the banking system in 61 countries in 1980 – 1997 and found that the program of the deposit insurance institution contributed to a banking crisis. The program of the deposit insurance agency has a negative effect on financial development and growth in the long term, except in countries that already have good banking regulations [10]. The negative influence of the deposit insurance agency program is evidenced by the emergence of moral hazard through increased risk taking by banks [15].

The debate about the blanket guarantee program in several previous studies has made this topic interesting to analyse. In this study, testing will be carried out on Conventional Banks that have a systemic impact in Indonesia from 2018 – 2021 using quarterly data with panel data analysis. Referring to [15] to test whether the deposit insurance program creates banking stability or moral hazard, in this study two research models will be used. The first research model will show whether the blanket guarantee program encourages financial system stability by using the dependent variable, namely the ratio of total savings to assets. The second research model will show whether the blanket guarantee program triggers the emergence of moral hazard in banks by using the dependent variable, namely the ratio of total loans to assets. The independent variables used are the blanket guarantee program by deposit insurance agencies in Indonesia, bank size, ROA, and inflation in conventional banks.

So, the purpose of this research is to prove whether the blanket guarantee expansion program, namely the risk minimizer of the Indonesian deposit insurance institution, can create stabilization or cause moral hazard. The renewal and contribution of this research is the use of the latest research period with banking objects in Indonesia. Currently, studies on this topic are still very few and over a long period of time, especially in Indonesia. In addition, the use of independent variables is based on several empirical reviews that have been carried out. The hypothesis in this study is that the blanket guarantee program through the risk minimizer function can stabilize and not cause moral hazard in conventional banks in Indonesia. In addition, it is suspected that bank size, ROA and inflation have an effect on banking stability or moral hazard.

This part of the study consists of (1) introduction. Part (2) describes a literature study on the blanket guarantee program for banking stabilization. Section (3) describes the research method and data, sections (4) brings the results and discussion, section (5) and section (6) are the conclusions and recommendations.

2. Literature Review

The condition of a country's banking system which is in a systemic crisis encourages the implementation of a blanket guarantee system in that country. Based on this, the purpose of implementing a blanket guarantee is to reduce public distrust of banks, which can lead to panic and runaway deposits. (Nys, Tarazi, and Trinugroho 2014). With the existence of a blanket guarantee, it is hoped that public confidence in banks can recover so as to encourage the re-creation of post-crisis banking system stability.

Explicit blanket guarantees can play a useful role as a tool for the authority's commitment to limiting the security that is included in the deposit guarantee. Theoretically, a blanket guarantee can create moral hazard and encourage banks to take excessive risks (Gropp and Vesala 2004). Mitigation of the occurrence of moral hazard is how the government issues banking regulations which include regulations limiting banking activities, prudential principles, supervision, and sanctions. Furthermore, a banking resolution mechanism that includes early detection and intervention in problem banks, and a ban on shareholder bailouts is very important to prevent moral hazard. (Laeven and Valencia 2012). Furthermore, coverage limits and risk-adjusted premium differentials can also help reduce moral hazard (Dwi 2011).

After the banking crisis in Indonesia in 1997 which resulted in the revocation of the operating licenses of 16 banks, sparked public distrust which led to bank runs. At that time, Indonesia did not yet have a clear deposit insurance system. This further fuelled public doubts about the banking system which has the potential to become a systemic crisis which can be seen from the rising bank NPLs and the high cost of saving the banks at that time. (S. S. 2003).

In 2004 the Indonesian government issued Law Number 24 of 2004 concerning the Deposit Insurance Corporation, which became the legal basis for the formation of a new State Institution, namely the Deposit
Insurance Corporation. The guaranteed loan balance was originally 100 million Rupiah per customer per bank. In 2008, as a result of the global crisis, countries such as Thailand, Hong Kong, Taiwan and Australia increased their deposit insurance limits. In line with the increase in deposit insurance in these neighbouring countries, DIC increased deposit insurance to 2 billion Rupiah.

The next development of the duties and functions of DIC was the issuance of Law no. 9 of 2016 concerning Prevention and Handling of Financial System Crisis (UUPPKSK). The authority and responsibility of the IDIC is to organize a banking restructuring program if a financial system crisis occurs and problems occur in the banking sector that risk disrupting the Indonesian economy. In accordance with the UUPPKSK, DIC has the authority to deal with banks with systemic impacts that have been declared a failure by the KSSK with four options for resolution methods, namely Purchase and Assumption, intermediary banks, equity participation or bank liquidation. Furthermore, due to the increased responsibility, IDIC transformed gradually.

Phase I is the foundation construction stage throughout 2017-2018. Phase II, which is the development stage for 2019-2020, is the development stage and the final stage is the end state stage in 2021. At this time, with Law Number 9 of 2016 concerning PPKSK, DIC is in a loss minimizer function. Furthermore, based on Law number 2 of 2020, the additional authority for DIC in terms of placing funds during the Covid-19 pandemic recovery to banks with liquidity problems through a function of a risk minimizer in deposit insurance. IDIC has prepared itself towards expanding the function of the institution towards a risk minimizer function in accordance with the strategic plan until 2026 by increasing the effectiveness of bank guarantees and resolutions, increasing surveillance and strengthening the organization, human resources and IT infrastructure.

3. Methodology and Data

3.1 Data

To prove whether the blanket guarantee program, which is a risk minimizer from deposit insurance institutions in Indonesia, creates stabilization or creates moral hazard, quarterly data from conventional bank financial reports for 2018-2021 are used. Sampling of Indonesian banking is determined using the purposive sampling method with the criteria of the five largest conventional banks in Indonesia as well as being a participant in a deposit insurance institution. This criterion was chosen on the grounds that the larger a bank, the more systemic the impact it will have in the event of a failure. The conventional bank samples are as follows:

Table 1. Research Sample

Bank	
Bank	**Asset (Year of 2021) (million rupiah)**
PT BRI	1,572,761,035
PT Bank Mandiri	1,355,555,571
PT BCA	1,205,491,799
PT BNI	941,211,128
PT BTN	371,868,311

Source. Bank Financial Report, 2021

3.2 Research Method

The method used in this research is panel data regression analysis. Before carrying out panel data regression, a test was first carried out to determine the appropriate model to use between the common effect model, the fixed effect model and the random effect model through the Chow test and Hausman test. There are two research estimation models for conventional banks. The first estimation model uses the dependent variable, namely the ratio of total deposits to assets to show whether the blanket guarantee program promotes financial system stability. The second estimation model uses the dependent variable, namely the ratio of total loans to assets, to show whether the blanket guarantee program triggers moral hazard in banks. While the independent variables used are the blanket guarantee program by deposit insurance agencies in Indonesia, bank size, ROA, and inflation. The research estimation model is as follows:

Estimation Model:

$$Stabilization\_BK_{it} = \beta_o + \beta_1 DBG_{it} + \beta_2 BS_{it} + \beta_3 ROA_{it} + \beta_4 Inf_{it} \quad (1)$$

$$MH\_BK_{it} = \beta_o + \beta_1 DBG_{it} + \beta_2 BS_{it} + \beta_3 ROA_{it} + \beta_4 Inf_{it} \quad (2)$$

Stabilization_BK_{it} is the ratio of total deposits to assets, MH_BK_{it} and MH_BK_{it} are the ratio of loans to total assets. The DBG_{it} variable is a dummy blanket guarantee, namely 1 after the risk minimizer is applied and 0 before the risk minimizer is applied. BS_{it} is the bank size. ROA_{it} is return on assets and Infit is inflation. **4. Results and Discussion**

4.1 Results

4.1.1 Panel Data Regression Technique Selection

Based on the Chow Test and Hausman Test for the equation model of the blanket guarantee program as stabilization in Conventional Banks, it was found that the appropriate method used was the Random Effect Method. The results are the same in the Chow Test and the Hausman Test that the appropriate method used in the blanket guarantee program equation model as a moral hazard is the Random Effect Model. This is indicated by the probability of the Hausman test which is more than 0.05, meaning that it accepts Ho, so the appropriate method is the Random Effect Model. The results of selecting the panel data regression technique consisting of the Chow test and the Hausman test are shown in Table 2.

Table 2. Panel Data Regression Technique Selection

Dependent Variable : Stabilization			
Chow Test		**Hausman Test**	
Effects Test	**Prob.**	**Test Summary**	**Prob.**
Cross-section F	0.0002	Cross-section random	1.0000
Cross-section Chi-square	0.0001		

Dependent Variable: *Moral Hazard*			
Chow Test		**Hausman Test**	
Effects Test	**Prob.**	**Test Summary**	**Prob.**
Cross-section F	0.0000	Cross-section random	1.0000
Cross-section Chi-square	0.0000		

Source. Data is processed using Eviews10 software

4.1.2 Panel Data Regression Results

The results of panel data regression using the Random Effect Method in Table 2 for the blanket guarantee equation model and conventional bank stabilization obtained the probability value of the dummy blanket guarantee variable, return on assets and inflation of less than 0.05. This means that statistically these variables affect the stabilization of conventional banks. While the probability value of the bank size variable is more than 0.05, which means that the bank size variable has no significant effect on the stabilization of conventional banks.

The panel data regression results for the blanket guarantee and moral hazard equation models show that the bank size and inflation probability values are less than 0.05. This means that statistically these variables affect the moral hazard of conventional banks. Meanwhile, the probability value of the dummy blanket guarantee variable and return on assets is more than 0.05, which means that the blanket guarantee program and return on assets have no effect on moral hazard.

The R-squared value for the blanket guarantee equation model as a stabilization of conventional banks is 0.145892. This shows that the stabilization variable can be explained by 14% of the independent variables and the other 86% is explained by other variables that are not included in the equation model. Meanwhile, the R-squared value for the blanket guarantee equation model as a moral hazard is 0.351111. This means that the moral hazard variable can be explained by 35% of the independent variables and the remaining 65% is explained by other variables that are not included in the equation model.

Table 3. Panel Data Regression Results

Dependent Variable	**Stabilization**			***Moral Hazard***		
Independent Variable	***Coefficient***	***t-statistic***	**Prob**	***Coefficient***	***t-statistic***	**Prob**
C	139.7249	2.755214	0.0074	200.3177	5.115828	0.0000
DBG	2.476569	1.895651	0.0619**	-1.486244	-1.020104	0.3110
BS	-3.174216	-1.264952	0.2098	-6.669141	-3.428612	0.0010*
ROA	2.634482	2.688383	0.0088*	-1.166483	-1.430321	0.1568
INF	-3.105414	-3.668907	0.0005*	2.150362	2.261564	0.0266*
R-squared		0.145892			0.351111	
Adjusted R-squared		0.100340			0.316503	
F-statistic		3.202735			10.14553	

Source. Data is processed using Eviews10 software **Significant at alpha 0.10., *Significant at alpha 0.05.

4.2 Discussion

The blanket guarantee program encourages stabilization in conventional banking. This is shown by the dummy blanket guarantee variable which is significant and has a positive sign. Based on Law number 2 of 2020, the function of DIC has changed from a loss minimizer to a risk minimizer. Through the risk minimizer function, DIC has additional authority in terms of placing funds, especially during recovery due to the Covid-19 pandemic, to banks with liquidity problems. However, this additional authority does not make conventional banking have a tendency to carry out financing or run programs with high risks which then lead to bank moral hazard. Furthermore, the stabilization variable which is proxied from the ratio of deposits to assets shows that conventional banks have maintained their level of liquidity, especially during the Covid-19 pandemic.

The function of the risk minimizer to increase stabilization is also strengthened by the results of research that the dummy blanket guarantee variable is not significant for moral hazard. This shows that the additional authority of DIC through the risk minimizer function does not cause moral hazard in conventional banks. In addition, the moral hazard variable proxied from the loan to asset ratio shows that conventional banks apply the precautionary principle in extending loans and conducting financing. So, it was concluded that conventional banks responded positively to DIC policies through risk minimizers by not taking excessive risks. The results of this study are in line with [13] who did not find any moral hazard from the blanket guarantee program at banks in Canada.

Furthermore, the return on assets variable has a positive and significant effect on stabilization, while the bank size variable has a negative and significant effect on moral hazard in conventional banks. This shows that the greater the profit ratio and the larger the size of the bank, the more stability is maintained and the less likely moral hazard to arise in the banking sector. So that the largest conventional banks with a systemic impact do not take advantage of the momentum of guarantees provided by deposit insurance agencies by conducting high-risk financing and continuing to apply the precautionary principle. In addition, DIC has also implemented mitigation of the occurrence of moral hazard by issuing banking regulations which include regulations limiting banking activities, prudential principles, supervision, and sanctions. (Laeven and Valencia 2012).

In addition to banking conditions, macro conditions are also considered to affect banking stability, one of which is inflation. Based on the research results, it is known that inflation has a significant negative effect on stabilization and a positive effect on moral hazard. This shows that inflation conditions can disrupt banking stability because inflation can continue to weaken economic conditions which then reduces people's purchasing power and creates panic among customers so that they tend to withdraw their deposits. In line with [10] that high inflation will cause the condition of financial institutions to become problematic.

5. Conclusion

Based on the research results, it can be concluded that the blanket guarantee program by DIC, which has increased its authority through the risk minimizer function, has created stabilization and has not created moral hazard in conventional banks. In addition, the greater the profit ratio and the larger the size of the bank, the more stable it will be maintained and the less likely moral hazard will appear in conventional banking. Macroeconomic conditions reflected in inflation can disrupt conventional banking.

Therefore, the blanket guarantee program by DIC through the risk minimizer function which aims to assist in terms of placing funds in banks experiencing liquidity problems during recovery due to the Covid-19 pandemic has been responded positively by conventional banks which have relatively larger bank sizes to create stabilization banking system.

6. Recommendation

The policy recommendation given in this study is to always ensure that the limits of coverage and premiums from the Deposit Insurance Corporation in the blanket guarantee program are adjusted to the risk of a possible moral hazard. So that the blanket guarantee program is not counterproductive and can always assist banking stability as it is today.

References

[1] Edward J. Kane, Daniela Klingebiel, "Alternatives to blanket guarantees for containing a systemic crisis," *Journal of Financial Stability 1,* pp. 31-63, 2004.

[2] Claessens., SKlingebiel, D., Laeven, L., "Financial Restructuring in Banking and Corporate Sector Crises: Which Policies to Pursue? In: Klingebiel, D., Laeven, L. (Eds.), Managing the Real and Fiscal Effects of Banking Crises. Discussion," *Discussion Paper, World Bank,* 1999.

[3] Douglas W. Diamond, Philip H. Dybvig, "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy,* vol. 91, pp. 401 - 409, 1983.

[4] Demirguc Kunt, Enrica Detragiache, "The Determinants of Banking Crises in Developing and Developed Countries," *IMF Staff Papers,* no. 45, 1998.

[5] Halim Alamsyah, Mochammad Doddy Ariefianto, Herman Saheruddin, Seto Wardono, Irwan Trinugroho, "Depositors' Trust: Some Empirical Evidence from Indonesia Prepared," *Indonesia Deposit Insurance Corporation Research Working Paper,* 2020.

[6] Stella Suljic Nikolaj, Bojana Olgic Drazenovic, Vesna Buterin, "Deposit insurance, banking stability and banking indicators," *ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA,* 2022.

[7] Demirguc Kunta, Enrica Detragiache, "Does deposit insurance increase banking system stability? An empirical investigation," *Journal of Monetary Economics* , vol. 49, pp. 1373 - 1406, 2002.

[8] R. Carissano, "Deposit insurance: Theory, policy and evidence.," 1992.

[9] Calomiris, C., White, E, "The origins of federal deposit insurance. In: Goldin, C., Libecap, G. (Eds.)," *The Regulated Economy: A Historical Approach to Political Economy. University of Chicago Press*, pp. 145 - 188, 1994.

[10] Robert Cull, Lemma W. Senbet, Marco Sorge, "Deposit Insurance and Financial Development," *Journal of Money, Credit, and Banking*, vol. 37, pp. 43 - 82, 2005.

[11] Knell, M., Stix, H, "Trust in Banks during Normal and Crisis Times—Evidence from Survey Data.," *Economica*, vol. 82, no. 1, pp. 995-1020, 2015.

[12] LPS, "https://www.lps.go.id/web/guest/uu_perpu/-/asset_publisher/Z2kn/content/undangundang-no-24-tahun-2004-tentang-lembaga-penjamin-simpanan," 2004. [Online].

[13] Jean-Pierre Gueyiea., Van Son Laib, "Bank moral hazard and the introduction of official deposit insurance in Canada Jean-Pierre," *International Review of Economics and Finance*, pp. 247-273, 2003.

[14] F. Gonzalez, "Bank regulation and risk-taking incentives: An international comparison of bank risk," *Journal of Banking & Finance*, pp. 1153-1184, 2005.

[15] Lucy Chernykh., Rebel A. Cole, "Does deposit insurance improve financial intermediation? Evidence from," *Journal of Banking & Finance*, pp. 388-402, 2011.

[16] LPS, 2020. [Online]. Available: https://lps.go.id/web/guest/uu_perpu/-/asset_publisher/Z2kn/content/undang-undang-republik-indonesia-nomor-2-tahun-2020.

[17] LPS, "https://lps.go.id/documents/10157/182852/UU+2+tahun+2020/aa39c086-e37c-490abafa-0fbd41947c14," 2020. [Online].