The Effects of Enterprise Risk Management on Bank Performance: Evidence from Indonesian Public Listed Companies

by Hamdi Agustin

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The Effects of Enterprise Risk Management on Bank Performance : Evidence from Indonesian Public Listed Companies

Hamdi Agustin¹ Azwirman² Siska³

Abstract

The purpose of this paper is investigate the effect of the Enterprise Risk Management implementation (ERM) on firm performance, mainly focusing on the bank industry. The population and the sample consist of 24 public listed banks, only 15 banks were selected to be the sample. The time period of the study was from 2011 to 2015, the data are taken from banks' annual reports of fiscal year ends on December 31 of each year and the data set consists of 11 private banks and 4 government banks. In this study using panel data and using pooled ordinary least square (OLS) and random effect analysis. The results are surprised and controversial. We find a negative statistically significant effect between the ERM adaption and Tobin's Q, while positive effect on Return On Equity of bank performance. This study also shows that DGOVERNMENT and DERM play a significant factor in explaining the performance in Indonesia banks.

Keywords: Enterprise Risk Management, bank performance and Tobin's Q

^{1 2,3} Corresponding author; Faculty of Economics, University Islam of Riau, Jl. Kaharuddin Nasution 113 Pekanbaru Riau, 28284, Indonesia, Email: hamdiagustin@yahoo.com

A. INTRODUCTION

Demidenko and McNutt (2010) stated that risk management is a means to realize the company's goals and monitor the performance of management. Risk management is implemented because it will generate more information about organizational risks and result in better management, and better decision making (Kleffner et al., 2003).

Interest in Enterprise Risk Management (ERM) continues to grow in recent years. Increasing the number of bank that have implemented or are preparing for the ERM program, many consulting firms are established with specialization in Enterprise Risk Management and various academics have developed programs or training related to ERM (Hoyt & Liebenberg, 2011).

The efforts to improve the quality of risk management can be done through integrated risk management that is ERM implementation. ERM enables management to effectively address the uncertainties associated with risks and opportunities, as well as enhance the capacity to build corporate value.

ERM program has more benefits by providing more information about the company's risk profile. This is because outside factors are more likely to experience difficulties in assessing the financial and complex financial strengths and risks of a

company. The existence of ERM allows companies to provide this information accurately and accurately to outsiders about the risk profile and also serves as a signal of their commitment to risk management (Hoyt & Liebenberg, 2011).

The main objective of risk management is to eliminate the possibility of low income earned by the organization, and can help organizations move on capital optimization and ownership structures (Stulz, 2003). By applying risk management to the company, especially in the field of banking industry will surely get more value in business activities.

Beasley et al. (2008) in his research found that the impact of new ERM implementation is felt in the long run, where the company has implemented ERM thoroughly in the internal environment of the company and communicated to all management lines. The application of risk management needs to be guarded by certain principles, so that it works well and effectively. Most of the risks faced by the company must be managed by the company concerned. This makes risk management a must for company.

Despite this increasing interest in risk management, academic research in this area is still scant. A reason is the difficulty in developing a reliable measure for the ERM construct. Some authors (Beasley et al. 2008; Hoyt & Liebenberg, 2011) use the appointment of a chief risk officer (CRO) as a proxy for ERM implementation.

Others (like Gordon et al. 2009) develop their own index. Moreover, the majority of the empirical studies concerns the financial industry, in particular the insurance one (Bertinetti *et al.* 2013). Results found so far are as follows: the implementation of ERM benefits firms by decreasing earnings and stock price volatility, increasing capital efficiency, and creating synergies between different risk management activities (Miccolis and Shah, 2000; Cumming & Hirtle, 2001; Lam, 2001; Meulbroek, 2002; Beasley et al. 2008). Furthermore, ERM adoption seems to promote increased risk awareness, which facilitates better operational and strategic decision-making.

This purpose of this paper is to examine the effect of ERM implementation, and to establish whether firms adopting ERM actually achieve observable results consistent with the claimed benefits of ERM. We believe that our work is important and timely because although many surveys have stated the benefits of adopting ERM (Marsh and McLennan, 2005), there has been little empirical evidence on how ERM affects bank performance. We argue that the primary goal of ERM is to reduce the probability of financial distress and allow firms to continue their investment strategies by reducing the effect lower tail outcomes, whether earnings or cash flow, caused by unexpected events (Pagach and Warr, 2007). Having smoother, steadier earnings and cash flow performance allows the firm to increase leverage, pursue more growth options and perhaps be more profitable.

B. LITERATURE REVIEW

ERM's main goal is to maintain and enhance the value of the company. The traditional approach to risk management suggests both to implement hedging activities (mainly financial derivatives), and to buy corporate insurance. Many studies investigate the link between TRM and firm value, with controversial results. Allayannis and Weston (2001), Graham and Rogers (2002), Nelson et al. (2005), Carters et al. (2006), Pagach and Warr (2010), Bertinetti et al. (2013) show a positive relation between risk management and firm value. However, Guay and Kothari (2003) and Jin and Jorion (2006) discover that derivative positions of most non-financial companies are too small to significantly affect firm value. However Cyntia and Nanik (2015) and Izah and Ahmad (2011)) which found that the ownership structure of bank has no influence on Tobin's Q. ERM have higher corporate value than companies that do not implement ERM.

Another stream of research shows that risk management through hedging mitigates incentive conflicts, reduces expected taxes, and improves the firm's ability to take advantage of attractive investment opportunities (Smith & Stulz, 1985; MacMinn, 1987; Campell & Kracaw, 1990; Nance et al. 1993), thus increasing their value. As far as the demand for corporate insurance is concerned, the literature shows that if considered as part of the company's financing policy, corporate insurance may create new value through its effect on investment policy, contracting costs, and the

company's tax liabilities (Mayers and Smith, 1982). The empirical evidence around these theoretical predictions is mixed: Mayers and Smith (1990), Ashby and Diacon (1998), Hoyt and Khang (2000), and Cole and McCullough (2006) support this view; instead, Regan and Hur (2007).

As suggested by Pagach and Warr (2007), ERM creates firm value if it will reduce negative net cash flows and firms will not suffer losses while selecting a single project. Studies from Hoyt and Liebenberg (2006, 2008) found that ERM was positive and significant at 1 percent level. The empirical results support that Enterprise Risk Management would increase firm's value by 3.6% (Hoyt and Liebenberg, 2006) and 17% (Hoyt and Liebenberg, 2008). The study suggests that, if the company practices Enterprise Risk Management, the value of the company is 3.6 percent (to 17 percent) higher than company which do not practice Enterprise Risk Management. Therefore, it is argued that Enterprise Risk Management is one of the factors that can add value to a firm.

Pagach and Warr (2010) we find little impact from ERM adoption on a wide range of firm variables. While our results could be due to lower power tests, they also raise the question of whether ERM is achieving its stated goals. Overall, our results fail to find support for the proposition that ERM is value creating, although further study is called for, in particular the study of how ERM success can be measured. Izah and Ahmad (2011) Empirical results report that ERM is positively related to firm value but it is not significant. The results do not support the hypothesis that firms which practice ERM would have a higher Tobin's Q ratio than firms which are not.

Several studies have documented that the government bank has a lower asset, higher cost and lower asset quality rather than private banks (Berger et al., 2004; Berger et al., 2005; and Micco et al., 2004). Additionally, Cornett et al. (2010) stated that the government bank has a lower income, small capital and high-risk loans. La Porta et al. (2002) showed that the bank are controlled by local or domestic ownership typically have a large share in non financial companies and tend to lend money to the companies associated whit them even if the loan is not competent (high risk).

Fu and Heffernan (2009) examined the bank in China for the years 19852002. The results showed that the private bank is more profitable than the
government bank because the private bank has an income growth and higher
efficiency rather than government bank, despite the private bank have smaller market
share than government bank. Iannotta et al. (2007) examined three forms of bank
ownership are private banks, joint venture banks and government banks within a
sample of 181 banks in 15 European countries over the years 1999-2004. Bank
performance is measured by gross profit. The results showed that government banks
have smaller income rather than private banks because the government banks have
lack of capital, less of deposits and less of lending, so that, the government bank
cannot work optimally.

C. DATA AND METHODS

This research employs the data from financial statements which consist of 24 go public commercial banks operated in the Indonesia. The time period of the study was from 2011 to 2015, the data are taken from banks' annual reports of fiscal year ends on December 31 of each year and the data set consists of 11 private banks and 4 government banks. In this study using panel data and using pooled ordinary least square (OLS) and random effect analysis. While fixed effect did not used in the analysis because the number of banks has not changed during the period study and there were three dummy variables. The following model is estimated:

Performance_{it} = $\alpha + \beta_1$ DERM_{it} + β_2 DGOVERNMENT_{it} + β_3 DER_{it} + e_{it}

Where i refers to the bank, t refers to the years

Performance is measured by Tobin's Q and Return

n Equity of bank (ROE)

DERM_{it} : Dummy variable taking the value 1 for community

development bank and 0 for otherwise bank.

DGOVERNMENT_{it}: Dummy variable taking the value 1 for government bank

and 0 for otherwise bank.

DER_{it:} : Book value of total liabilities to market value of equity

D. RESULT AND DISCUSSION

Table 1. The Result Regression analysis

Dependent Variable: Tobin's Q

Variable	OLS without		OLSwith robust		Random Effect	
	standard	ard errors standard		errors		
	Coef.	p-value	Coef.	p-value	Coef.	p-value
Constan	28.8396	0.000***	28.8396	0.000***	28.8639	0.000***
DERM	-7.7738	0.075*	-7.7738	0.152	-7.7729	0.399
DGOVERMENT	3.4819	0.345	3.4819	0.252	3.4863	0.656
DER	-1.1995	0.370	-1.1995	0.033**	-1.2210	0.132
R-squared	0.0557			0.0557		0.0630
AdjustedR-squared	0.0158			-		-
Prob > F	0.2513			0.0801		-
Numberobservation	75			75		75

^{*, **} and *** denote significance at the 10%, 5% and 1% level, respectively, p-value in parentheses

DERM negative influence on Tobin's Q but positive influence on ROE.

DERM has a negative effect on Tobin's Q due to the cost of the bank for ERM implementation is large enough to cause a negative response to shareholders. While ERM has a positive effect on ROE indicates that ERM is performing better because customers trust to save in bank. although Impact of ERM implementation can only be felt for long period of time, where the bank has implemented ERM as a whole in

internal environment of company and communicated to all line of management. This result different with Allayannis and Weston (2001), Graham and Rogers (2002), Nelson et al. (2005), Carters et al., Rogers, and Simkins (2006), Pagach and Warr (2010), Bertinetti et al. (2013) which found that the enterprise risk management has positive influence on Tobin's Q..

Table 2. The Result Regression analysis

Dependent Variable: ROE

Variable	OLS without standard errors		OLSwith robust standard errors		Random Effect	
	Coef.	p-value	Coef.	p-value	Coef.	p-value
Constan	6.5812	0.006***	6.5812	0.084*	6.8846	0.124
DERM	7.2237	0.006***	7.2237	0.058*	7.2343	0.173
DGOVERNMENT	4.7119	0.032**	4.7119	0.004***	4.7670	0.290
DER	-1.0489	0.185	-1.0489	0.049**	-1.3171	0.008***
R-squared	0.2259			0.2259		0.2659
AdjustedR-squared	0.1932					
Prob > F	0.0004			0.0004		
Numberobservation	75			75		75

^{*, **} and *** denote significance at the 10%, 5% and 1% level, respectively, p-value in parentheses

DGOVERNMENT positive influence on ROE. The profitability of a government-owned bank is due to two factors. First, the government assures you will help its bank if there is a problem like bad debts. Secondly, the government bank serves as a government fundraiser (state revenue and expenditure estimates or State Budget), where the funds can be used by government banks to reduce the risk and increase the loan amount. Results of the study consistent of Reaz (2005), Beck *et al.* (2005), Berger *et al.* (2005), Omran (2007), Micco *et al.* (2007), Iannotta *et al.* (2007), Fu and Heffernan (2008), Yu and Neus (2009) and Flamini *et al.* (2009). This result different with Hadad *et al.* (2003), Fernandez *et al.* (2005) and Chantapong (2005) which found that the ownership structure of bank has no influence on bank performance.

DER negative influence on Tobin's Q and ROE. This is indicated by decreasing leverage level will increase the value of the company and will attract investors to invest in the company. However, if the greater leverage leads to the greater likelihood that the company is experiencing financial distress and also the increased financial risks faced in fulfilling its obligation to pay interest and loan principal, it will have an impact on the declining value of the company. This results in less investor confidence in the company, so investors are less interested in investing in high levels of leverage and vice versa.

These results are consistent with those of Bertinetti *et al.* (2013), and Hoyt and Liebenberg (2008, 2011) found a negative relationship between leverage and firm value. Where illustrates that based on DER signal theory is expected to give a

negative signal to the investors, so the higher the value of the company. This is also due to the information asymmetry between the company and the investor and the decrease in DER affects the value of the company, this is because the debt made by the company's management is used to improve the bank's operations.

E. CONCLUSION

This purpose of this paper is to examine the effect of ERM implementation, and to establish whether firms adopting ERM actually achieve observable results consistent with the claimed benefits of ERM.. The results are surprised and controversial. We find a negative statistically significant effect between the ERM adaption and Tobin's Q, while positive effect on Return On Equity of bank performance. DERM has a negative effect on Tobin's Q due to the cost of the bank for ERM implementation is large enough to cause a negative response to shareholders. While ERM has a positive effect on ROE indicates that ERM is performing better because customers trust to save in bank. This study also shows that DGOVERNMENT and DERM play a significant factor in explaining the performance in Indonesia banks.

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