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The Benefit of Enterprise Risk Management (ERM) On Firm Performance

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ABSTRACT

There were inconsistencies on the results of previous ERM studies. There were some variabilities on the benefits and obstacles hampering the implementation of ERM. The purpose of this research is to study the benefits of ERM to increase firm performance. This research used a quantitative method. The sampled firms are companies listed on the Indonesian stock exchange. One hundred eight questionnaires were filled out by respondents. Regression procedures were used to analyze the data samples. Some secondary data were also used to enrich analyzing the research phenomena. The research findings showed a significant relationship between ERM with firm performance. The effect of ERM on firm performance was significant. The influence of corporate governance on firm performance was insignificant. Based on individual regression, CG influences on firm performance is significant. However, the influence became insignificant, hampered by the magnitude of ERM influence significantly. These findings add to positive heuristics of falsification model of research as proposed by Imre Lakatos.

INTRODUCTION

ERM is announced by the Committee of Sponsoring Organizations (COSO, 2004). COSO stated that ERM's goal is to provide reasonable assurance about the achievement of entity objectives. There has been much previous research showing the benefits of ERM to improve the achievement of corporate performance, especially profit. Callahan and Soileau (2017), in their study, concluded that there is a relationship between ERM process maturity and firm operating performance. Callahan and Soileau use extensive industrial samples and conclude that the maturity of the broader ERM process achieves higher operating performance than firms in the same industry that use only the metric approaching the profit-making process. Ahmad et al. (2014) say that ERM is an approach to combat the volume and complexities of the risks faced by today's organizations. However, there are still variabilities of research results on the benefits of ERM on company performance. Some researches results suggested that ERM is useful for improving performance, but some research results suggest that there is variability in the relationship between ERM and performance. McBride (2012) concludes based on the results of his research that there are various levels of ERM implementation with different types of effectiveness. McBride says there is an opportunity to carry out additional research to gain a more in-depth view into organizations that must implement the ERM framework, while an analysis should also be made regarding the effectiveness of other ERM fixtures. Kanhai and Ganesh (2014) concluded that the success of ERM implementation is determined by the adequacy of risk management structures, the quality of organizational culture, the intensity of the regulatory environment, and the size of the bank. So, there is no persistence and consistency of research results regarding the benefits of ERM on performance. Some research findings suggest that there are various obstacles to ERM implementation. Callahan and Soileau (2017), for example, researching the relationship between ERM implementation at various levels with company performance.

In some countries, there are little studies on ERM. Ahmad et al. (2014), for example, researched because very little empirical data were found at the time regarding the application of ERM in public companies in Australia. In Indonesia, there are still fewer researches on ERM implementation in public companies in Indonesia and the benefits gained.

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In addition to ERM, the achievement of corporate performance is also influenced by the level of corporate governance (CG) implementation and firm size. Corporate governance affects the company's management control system because the CG concept builds the rules of the game and the business practices of the company. There have been many studies conducted that show the benefits of CG to improve company performance.

The magnitude of the company also affects the achievement of the company's performance because many of the research results show the influence of firm size on company performance. Company size can be determined from various sizes such as asset value, sales achievement, number of employees, and number of shares.

This research was conducted at four banks listed on the Jakarta Stock Exchange, whose performance moved rapidly from time to time. The proxies of the company's performance in this research are revenue growth and profitability. This phenomenon makes the author interested to make banking companies as samples. The four banking companies are PT Bank Rakyat Indonesia Tbk, PT Bank Mandiri Tbk, PT Bank Negara Indonesia 1946 Tbk, and PT Bank Central Asia Tbk.

The scope of this research is about ERM benefits to improve company performance. Based on the discussion of the background of previous research, the research questions are: does ERM affect company performance? Does CG affect company performance? Also, does Company Size affect company performance? The purpose of this research is to prove the influence of ERM on company performance empirically.

This research is expected to be useful to scientists to add insight into the theory of the role of ERM, CG, and firm size to firm performance and for practitioners to know how ERM is applied to public finance companies in Indonesia. Moreover, the significance of this research is to know about the real application of ERM theory and its benefits to the public company's financial performance in Indonesia, especially the banking sector.

LITERATURE REVIEW

All sciences come from the science of philosophy. Philosophy is the mother of all sciences. According to philosophy, science will continue to develop throughout human civilization, including accounting science. The purpose of this study is to contribute to new thinking in the field of accounting science. The development of philosophy was caused among other things by the views of philosophers. The philosopher will be cited in this study is

Lakatos (1989). Lakatos combined and revised the Popper's falsification theory and the concept of anomaly from Thomas Samuel Kuhn. According to Lakatos (1989), in theory, there is a core theory that cannot be compared with each other. This core called the hardcore of science, and it cannot be falsified. Hardcore contains the basic assumptions that characterize the underlying scientific research program, which cannot be denied or modified. This core is protected from falsification. Positive heuristics consist of suggestions or suggestions about how to develop complex variants, how to modify and enhance flexible protective circles.

There are many factors influencing company performance, such as ERM, corporate governance, firm size, firm age, general economic condition, government regulation, fiscal policy, budgeting system, and inflation rate. In this research, ERM is chosen as the main topic of study to add to positive heuristics as proposed by Lakatos.

The grand theory of this research is agency theory. The agency theory regulates the relationship between the owner of a company and its manager. The relationship between owner and manager must be arranged so that the manager will decide and act in the interest of the owner or shareholder of the company. Scott (2015) defines agency theory as a branch of game theory that studies contract designs to motivate rational managers to act on behalf of principals. If the interests of agents are different, then it will lead to conflict with the principal.

Furthermore, according to Scott, contract agency theory has the characteristics of cooperatives and non-cooperative games. According to Lambert (2001), the central aspect of agency theory is attractive to accounting researchers because it allows researchers to incorporate into research models of conflict of interest, incentive issues, and mechanisms to control these incentive problems. The implementation of enterprise risk management is mainly for the benefit of firm owners. By the implementation of ERM, the set-up objectives of the firm will become more reasonable and more achievable.

Enterprise Risk Management (ERM)

There are risks within certain limits that hinder the achievement of corporate objectives such as price downtrend and competitor that have not been identified and established. The magnitude of these risks should be established early on before the annual planning is implemented. So, for each risk identified in each company's objectives, the risk must be

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calculated, and risk mitigation steps are established. The ERM definition according to COSO (2004) is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.

ERM is a process to achieve corporate goals. Regarding the company's objectives, Sprčić et al. (2015) state that ERM's objective is to increase the likelihood that an organization will achieve its objectives, which means that ERM should be created and implemented to protect and create shareholder value. Sprčić et al. argue that ERM protects and increases the value of the owner. However, there has been a view to approaching ERM in an integrated way. D'Arc (2001) for example concludes from the results of his research that It quickly became apparent that a common approach to risk management would be preferable to an individual approach and an integrated approach preferable to a separatist approach. COSO (2004) suggests that there are 7 (seven) risk management components that are targeting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring. The seven components are the steps that must be followed in implementing the ERM process in an integrated manner so that the company's goals will be achieved. Bac (2010) revealed from the results of his research that risk management supports more effective management of an organization because it helps to understand and assess the threatening risk. Reducing the likelihood of failure will increase the likelihood of achieving company goals.

Several previous pieces of research have shown that there is a beneficial relationship between enterprise risk management implementation on company performance. Tseng (2007) concludes from his research that the relationship between ERM and company performance depends on the compatibility between the ERM and the five factors that affect the company: environmental uncertainty, industry competition, firm complexity, firm size, and monitored by the company's Board of Directors (BOD). Hoyt and Liebenberg (2011) conducted a study to gauge how extensively the company implements ERM and the value implications of those programs. The results showed the relationship between the use of ERM with the value of the company. Shivashankarappa et al. (2011) concluded based on the results of his research that ERM becomes a means

of helping the investment shaping and maximizing stakeholder value. ERM can improve the quality of decision making and maximize stakeholder value. Dafikpaku (2011) concluded based on his research on ERM that he who fails to plan, plans to fail. Dafikpaku statement above contains the underlying philosophy of risk management. Anyone who does not plan a complete awareness of the possible and likely effects of events may mean planning for failure. Liu (2012) stated from his research that ERM implementation could improve internal audit performance when the development is aimed for it. McBride (2012) concludes based on his research that the use of ERM techniques is easy and effectively improves decision making in the context of risk. Nan (2015) show that all levels of ERM performance among Chinese companies is relatively low, and there is a big difference among the various companies. Florio and Leoni (2017) show that there is a relationship between ERM implementation and company performance in Italy. Callahan and Soileau (2017) examine the relationship between enterprise risk management applications at various levels of company performance. The sample is an official in the company's internal audit in the US and other countries. The result of the research is that there is significant influence between ERM implementation level and company performance.

However, several studies show that there are many obstacles in ERM implementation and/or doubts about the benefits of improving company performance, so many companies have not been able to implement it fully. Rodriguez and Edwards (2014) concluded from his research that to enhance the value of ERM implementation, and people need to be able to communicate in their teams and with other teams. They need to be able to develop activities where they can interchange points of view and can reach conclusions during meetings. People's positive work environment facilitating good communication helps ERM practice considerably by providing motivation and openness to the reception of different views. It takes good communication between human resources as a prerequisite for the success of ERM. McBride (2012) concludes based on the results of his research that there are various levels of ERM implementation with different types of effectiveness. McBride says there is an opportunity to carry out additional research to gain a deeper view into organizations that must implement the ERM framework, while an analysis should also be made regarding the effectiveness of other ERM fixtures. Kanhai and Ganesh (2014) concluded based on the results of his research

on ERM bank practices in Zimbabwe that the success of ERM implementation is determined by the adequacy of risk management structures, the quality of organizational culture, the intensity of the regulatory environment, and the size of the bank. The OECD (2014, page 74) informs that the Swiss Code of Obligations (CO) mandates that risk management as one of the areas that the Board of Directors can delegate to the executive board, but must maintain the oversight. This policy indicates that ERM should be implemented, but the Board of Directors is sufficiently monitored and monitored. The OECD (2014) further states that Risk management in Switzerland is primarily seen as a responsibility of line management. Companies increasingly adopt risk policies that assign members of senior management as risk owners for particular risks. So, the foundation of risk management at the companies in Switzerland is placed on the management. BOD should direct and supervise only. In Indonesia, the Board of Directors only should direct the risk management to online management, but the responsibility for the implementation of risk management still exists on the Board of Directors (Ministry of SOEs, 2012). Lundquist (2015) researched the administrative process of acceptance, implementation, and integration of ERM at universities and colleges in America because of the lack of such research, moreover in university. The results show that proactive initiatives cause higher education institutions to adopt ERM by the University Council or President or in responding to unexpected events (or both). ERM stages, according to Lundquist research, result in the forming, developing, establishing, and integrating steps. Most university administrators consider ERM essential for achieving institutional goals, but practitioners do not think so. Fraser and Simkins (2016) concluded their study based on their research on challenges faced by ERM practitioners, and basic techniques for ERM implementation, including additional techniques that may be feasible. Fraser and Simkins put forward 26 basic techniques to consider and deserve to be used to build the ERM methodology. But not all techniques must be applied by the organization. Based on the above discussion, this research proposes the hypothesis as follows:

> H1: Implementation of ERM has a positive effect on company performance.

Corporate Governance

Corporate governance governs the relationship between the company owner and the company manager. The importance of corporate governance is to address agency problems. Owners of companies with company management have different interests. The company owner wants his company to get the highest profit possible. While the manager wants the compensations, he receives as high as possible. Corporate governance governs the relationship between the two to achieve goal congruence. Each author or institution provides a different definition of CG. Canada's Office of the Superintendent of Financial Institutions on its Guideline of Corporate Governance (2013) provides that CG definition is a set of relationships between a company's management, its board, its shareholders, and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. The above definition emphasizes that CG is a set of parameters that govern the relationship between corporate management, councils, shareholders, and other stakeholders. Company objectives are defined, ways of achieving them, and monitoring are established. Lukviarman (2016) concludes that CG issues will always arise if there is a conflict of interest within a company. The National Committee on Governance Policy (2006) mentions 5 GCG principles, namely transparency, accountability, responsibility, independence, fairness, and equality.

Previous studies have demonstrated the benefits of CG to improve company performance. Al Haddad et al. (2011) has researched the relationship between corporate governance and performance indicators of industrial companies in Jordan listed on the Amman Stock Exchange (ASE). The samples are 44 (forty-four) companies chosen at random. The results showed a positive relationship between profitability measured by using EPS and ROA and Corporate Governance; a positive relationship between liquidity, dividend per share, and firm size with CG; and a positive relationship between CG and company performance. Todorovic (2013) examines the relationship between the level of CG implementation and the performance level of 19 companies in Bosnia, listed on the Banja Luka Stock Exchange. Level of CG implementation is done by doing assessment using scorecard analysis. The result is that there are an apparent relationship and the influence of CG implementation principles on

company performance. Based on the above discussion, this research proposes the hypothesis as follows:

H2: Corporate Governance positively affects the company's performance

Firm Size

Firm size is the level or size of the company. Company size indicators can be expressed in various kinds of size, such as asset value, number of employees, sales value, and amount of capital. Various studies have proven a positive relationship between firm size and corporate profits. Alexander et al. (2005) concluded from the results of his research that there is a positive relationship between company size and capital structure. Amato et al. (2007) conducted a study on the effect of firm size on the profit level of companies engaged in financial services by using various definitions of company size. The result is that there is a positive relationship between firm size and firm profits. Gaur (2007) states that his research resulted in the benefits of firm size. Mesut Dogan (2013) conducted a study on 200 companies listed on the Istambul Stock Exchange, with data between 2008 and 2011. The result is a positive relationship between the size indicators and the profitability of the company. If the size of the company increases, then the performance will also increase. Chang et al. (2013) show from the results of empirical studies that there is a relationship between company size and financial performance. Abiodun (2013) conducted a study on the relationship between firm size and firm performance listed on the Nigerian Stock Exchange, using panel data from 2000-2009. The result is that there is a positive relationship between company size, in the size of total assets and sales, on the profitability of manufacturing companies in Nigeria. Kumas et al. (2014) researched the Turkish labor market. The result of the empirical study is that there is a relationship between firm size and job qualification. There is a size role. Pomar study (2016) shows that entrepreneurial orientation is a sufficient condition for performance in small Spanish sports services firms, not large firms. Based on the above discussion, this research proposes the hypothesis as follows:

H3: Company size has a positive effect on company performance.

METHODS

The population of this study is practitioners in the banking industry. This industry was chosen because of its highest inherent risk among other kinds of industry. The units of analysis are individuals from the companies listed on the Indonesia Stock Exchange classified as LQ 45. The data of this study are primary data obtained from practitioners of those companies.

The variables from this study are company performance, ERM implementation, corporate governance, and firm size. Proxies from company performance are revenue and profit. Questionnaires are used to measure income and profit levels. The measurement of the company performance variable used Likert Scale 1 to 5 where Strongly Agree (SS) means achievement 5; Agree (S) means achievement 4; Quite Agree (CS) means achievement 3; Less Agree (KS) means achievement 2; and Disagree (TS) means achievement 1. The measurement of the ERM variable used a Likert scale from 1 to 5. The CG implementation level indicator is the level of performance that typically uses a certain rating system such as Bank Indonesia CG Scorecard, OJK CG Scorecard, or CG Scorecard SOE. In this study, the measurement of CG implementation level using Likert scale 1 to 5. Proxies of firm size can be asset value, the number of employees, or sales. This study used asset value as the proxy of firm size. In this study, company size is measured by using a Likert scale 1 to 5.

Questionnaires used to measure the achievement of indicator variables using questionnaires from previous research. For measurement of ERM implementation level achievement, using questionnaires on Callahan and Soileau research (2017). In his article, Callahan and Soileau (2017) explain that ERM is an extensive process; which organizations for various reasons may or may not choose to implement with no two implementations being identical. They said that while Internal Audit Functions (IAFs) may or may not be directly involved in the implementation of ERM, it is likely that IAF management would be knowledgeable of ERM implementation, the structure of ERM reporting function, and ERM risk considerations. Based on their views on the definition of ERM, Callahan and Soileau (2017) designed the questionnaire and divided it into 5 (five) sections. 5 (five) elements of the questionnaire from Callahan and Soileau and the ten questions mentioned above have been adopted into the questionnaire used in this study.

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This research used a quantitative research method. Data processing is done by ordinary least squares (OLS), using Eviews program. The quantitative research model is formulated as follows:

$$FP = a + b1ERM + b2CG + b3FS + \mu;$$

where FP = firm performance; ERM = enterprise risk management; CG = corporate governance; and FS = firm size.

The data analysis performed includes a normality test, multicollinearity test, heteroskedasticity test, and regression test. Data samples were collected from 4 (four) banks listed on the Indonesia Stock Exchange, namely BRI, Bank Mandiri, Bank BCA, and Bank BNI.

The implementation of risk management of public companies is managed by the Government, primarily by Bank Indonesia and the Financial Services Authority (OJK). ERM implementation in the banking industry has generally been more advanced than any other business. Risks in the banking business consist of credit and non-credit risks. BRI, for example, establishes a liquidity risk management policy that includes liquidity management, optimum liquidity reserve maintenance, funding strategy set up, early warning system, cash flow projection, maturity profile, liquidity limit setting, and contingency funding plan. The implementation of risk management in Bank Mandiri (Annual Report Bank Mandiri, 2014) within the framework of Enterprise Risk Management (ERM) is conducted using a two-pronged approach, through capital risk management and risk management operations, enabling the Bank's business risk to be minimal. The implementation of Risk Management at BNI (Annual Report Bank BNI 2016) is based on national and international regulations, including the Financial Services Authority Regulations (POJK), Circular of Financial Services Authority (SE OJK), Bank Indonesia Regulation (PBI), Bank Indonesia Circular Letter (SEBI), and the Basel Committee on Banking Supervision (BCBS) document. BCA has implemented a Risk Management Framework that is aligned with the Bank's business strategy, organizational structure, policies, and guidelines as well as the development of banking infrastructure.

RESULTS

The achievements of the dependent variable and the independent variables measured through the questionnaires were tabulated. Tabulation of the achievement of these variables was obtained from 108 respondents. Normality test with Eviews software showed the following results:
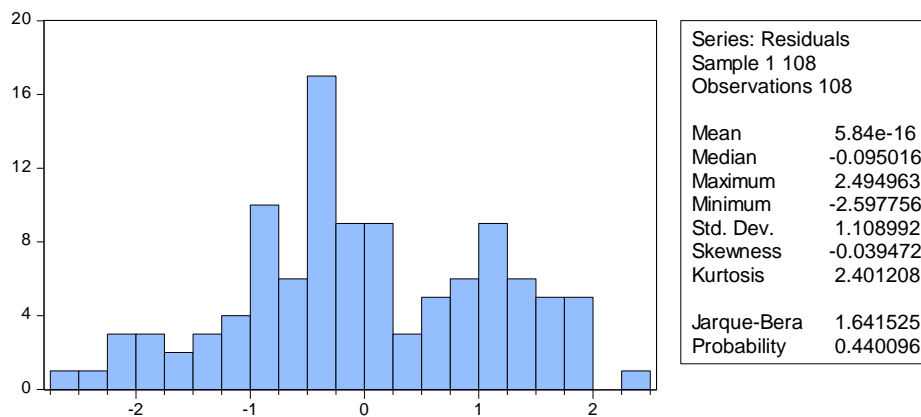
The regression results from the above data are as follows:

Dependent Variable: Y
Method: Least Squares

Sample: 1 108
Included observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.643337	0.948863	1.731901	0.0863
X1	0.125689	0.024731	5.082314	0.0000
X2	0.114699	0.058796	1.950798	0.0538
X3	0.298376	0.087516	3.409398	0.0009

R-squared	0.557690	Mean dependent var	12.20370
Adjusted R-squared	0.544931	S.D. dependent var	1.667497
S.E. of regression	1.124873	Akaike info criterion	3.109551
Sum squared resid	131.5953	Schwarz criterion	3.208890
Log-likelihood	-163.9158	Hannan-Quinn criter.	3.149829
F-statistic	43.70979	Durbin-Watson stat	1.842883
Prob(F-statistic)	0.000000		

DISCUSSION

To test the normality of the data, based on the normality test results with the Eviews program mentioned above and some additional tests deemed necessary, the following results are obtained.

Skewness value is - 0,039. The skewness value is a measure of the asymmetry level of the probability distribution of the random variable from the mean. Skewness value - 0.039 is smaller than 3. This skew means a normal slope. The value of kurtosis is 2,401. The value of the distribution kurtosis below 3 means the normal and feasible distribution in regress — Jarque-Bera of 1,641 525. The Jarque-Bera test is one type of goodness of fit test that measures whether the skewness and the sample kurtosis

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correspond to the normal distribution. The value of Jarque-Bera 1.641 (<2), means the normal sample distribution. Breusch-Pagan-Godfrey (BPG) test results show that Obs * R-squared has Prob. Chi-Square (2) is 0.6250 (<0.05). Its meaning is not significant. This score indicates the absence of serial correlation in the research model. White Test Results for heteroscedasticity showed that Obs * R-squared has Prob. Chi-Square (9) 0.8559 (> 0.05). Its meaning is not significant. This score shows the absence of heteroscedasticity in the model. The Variance Inflation Factor (VIF) test shows that the values of centered VIF are 2.02; 1.91; and 1.23. Everything <10 means the indications of the absence of multicollinearity. From the above-explained results of the statistical test, it is concluded that the model passed the test of classical assumption.

Based on the regression test results as presented above, the following results are obtained. The coefficients (C, X1, X2, and X3) are all positive. The direction corresponds to the hypothesis. Durbin Watson, Statistic 1.843. It means that there is no heteroskedasticity.

R-squared value of 0.56. Meaning 56% of the changes in the dependent variable can be explained by the independent variables — value 56% material for a model. Thus, the research model is fit and feasible to be used for forecasting and decision making. Next is the test of causality between the independent variable X with the dependent variable Y.

The overall causality test between variable X (independent variable) with variable Y is indicated by F statistic value (43,71) and Prob (F-Statistic) equal to 0,00. Value F Statistic 0.00 <0.5. The overall effect of X variables is significant. The level of ERM and CG implementation and the firm's overall size have a significant effect on the performance improvement of banking companies.

The result of partial causality test between the independent variable X and the dependent variable Y is also presented in the table of regression results above. The t statistic of the ERM is 0.00 (<0.05). This score means that the effect of ERM independent variables on the performance of banking companies is significant. Thus, the hypothesis supported by the data of research that ERM implementation has a significant effect on the performance improvement of banking companies.

Prob t-statistic Corporate Governance of 0.05 (= 0.05). This score means that the influence of corporate governance implementation on improving the performance of banking companies is not significant. Actually, based on regression CG influence on firm performance is

significant (Prob t-statistic = 0.00 <0.05). However, if multiple regression, the overall influence with ERM and firm magnitude, then the influence of CG becomes insignificant, hampered by the effect of ERM is very significant. Indeed, in the banking industry, to maintain public confidence, especially the trust of customers, is very important so that the implementation of ERM becomes very important and mandatory.

Based on the regression result, Prob t-statistic Firm size is 0.00 (<0.05). This score means that the influence of firm size on company performance is significant. In the overall regression with ERM and CG, its influence on firm performance remains significant.

From the discussion of statistical test results presented above, it is evident that the influence of ERM on banking performance is significant. It is because before COSO issued ERM in 2004, actually banking companies have implemented risk management. However, its application has not been as wide and integrated as it is now. This finding adds to positive heuristics as opposed by Lakatos.

BRI, for example, built enterprise risk management in 2007 as mandated by COSO in 2004, to strengthen companies at strategic, managerial and operational levels. BRI applies the so-called Basel II, Pillar 3 (market discipline) in disclosing the types of risks and potential losses and risk management practices (Annual Report PT Bank BRI).

ERM implementation since 2007 and always updated and upgraded has succeeded in pushing the company profit significantly. Improved implementation of risk management is further enhanced by 2014.

CONCLUSION

The purpose of this research is to study the benefits of Enterprise Risk Management (ERM) to increase firm performance. Research on ERM in the past has not provided consistent and persistent results regarding the benefits of ERM to improve firm performance.

This research used a quantitative method, using the statistical software of Eviews to process the sampled data. The data sampled are 4 (four) banking companies listed on the Indonesian stock exchange. Regression procedures were used to analyze the data samples. Some secondary data were also used to analyze the research phenomena.

The research findings showed a significant relationship between ERM and firm performance. The influence of ERM as an independent variable on firm performance was significant so that the influence of CG

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became insignificant. Based on individual regression, CG influence on firm performance is significant. However, the influence became insignificant, hampered by the magnitude of ERM influence significance. These findings add to positive heuristics of falsification model of research as proposed by Lakatos.

Limitations and Recommendations for Future Research

This study is only conducted in public companies in the financial sector, especially the banking sector, in Indonesia. The influence of culture, industry type, institution, and the level of inherent risk may influence the research result. The banking industry has the highest inherent risks and its business mostly based on the belief of its stakeholders, especially the fund owner. Further research may extend research samples to other financial firms and non-financial firms in Indonesia. If this study were conducted on different industries and countries, it might lead to different conclusions.

REFERENCES

Ahmad, S., Ng, C., & Mcmanus, L. A. (2014). Enterprise Risk Management (ERM) Implementation: Some Empirical Evidence from Large Australian Companies. *Procedia - Social and Behavioral Sciences*, *164*, 541–547. DOI: 10.1016/j.sbspro.2014.11.144

Al-Haddad, W.M.Y., Alzurqan, S.T., & Al-Sufy, F.J. (2011). The Effect of Corporate Governance on the Performance of Jordanian Industrial Companies: An Empirical Study on Amman Stock Exchange. International Journal of Humanities and Social Science. Vol. 1 No. 4, April 2011.

Amato, L.H., Burson, T.E. (2007). The Effects of Firm Size on Profit Rates in The Financial Services. Journal of Economics and Economic Education Research, Volume 8, Number 1, 2007.

Bac, M. (2010). Models of risk management in organizations. The Malopolska School of Economics in Tarnów Research Papers Collection, Issue 2 (16)/2010.

Ball, R., Gerakos, J., Linnainmaa, J. T., & Nikolaev, V. (2016). Accruals, cash flows, and operating profitability in the cross-section of stock returns. *Journal of Financial Economics*, *121*(1), 28–45. DOI: 10.1016/j.jfineco.2016.03.002

Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, *14*(3), 257–273. DOI: 10.1016/j.jcorpfin.2008.03.006

Brown, L. D., & Caylor, M. L. (2006). Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, *25*(4), 409–434. DOI: 10.1016/j.jaccpubpol.2006.05.005

Bushman, R., Chen, Q., Engel, E., & Smith, A. (2004). Financial accounting information, organizational complexity, and corporate governance systems. *Journal of Accounting and Economics*, *37*(2), 167–201. DOI: 10.1016/j.jacceco.2003.09.005.

Callahan, C., & Soileau, J. (2017). Does Enterprise risk management enhance operating performance? *Advances in Accounting*, *37*, 122–139. DOI: 10.1016/j.adiac.2017.01.001

Chang, C.-L., Hsu, H.-K., & Mcaleer, M. (2013). Is small beautiful? Size effects of volatility spillovers for firm performance and exchange rates in tourism. *The North American Journal of Economics and Finance*, *26*, 519–534. DOI: 10.1016/j.najef.2013.02.019

Committee of Sponsoring Organizations of Treadway Commission (2004), Enterprise Risk Management – Integrated Framework. Executive Summary, Committee of Sponsoring Organizations of Treadway Commission, Jersey City, NJ.

D'Arc, S.P. (2001) Enterprise Risk Management. Journal of Risk Management of Korea Volume 12, Number 1.

Dafikpaku, E. (2011). The Strategic Implications of Enterprise Risk Management: A Framework. 2011 Enterprise Risk Management Symposium Society of Actuaries March 14-16, 2011.

Desoky, Abdelmohsen M. Mousa, Gehan A. Corporate Governance Practices: Transparency and Disclosure – Evidence From The Egyptian Exchange. Journal of Accounting, Finance, and Economics, Vol. 2 No. 1 July 2012 Pp. 49-72.

Dogan, Mesut. Does Firm Size Affect Firm Profitability? Evidence From Turkey. Research Journal of Finance and Accounting, Vol. 4, No. 4, 2013.

Fraser, J. R., & Simkins, B. J. (2016). The challenges of and solutions for implementing enterprise risk management. *Business Horizons*, *59*(6), 689–698. DOI: 10.1016/j.bushor.2016.06.007.

Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. *The British Accounting Review*, *49*(1), 56–74. DOI: 10.1016/j.bar.2016.08.003

Gaur, Vishal. , Saravanan Kesavan. The Effects of Firm Size and Sales Growth Rate on Inventory Turnover Performance in the U.S. Retail Sector. Johnson Graduate School of Management, Cornell University, 2007.

Ghozali, Imam, Ratmono, Dwi. Analisis Multivariat dan Ekonometrika: Teori, Konsep, dan Aplikasi Dengan Eviews 8. Universitas Diponegoro Semarang, 2013.

Hoyt, R. E., & Liebenberg, A. P. (2011). The Value of Enterprise Risk Management. *Journal of Risk and Insurance*, *78*(4), 795–822. doi: 10.1111/j.1539-6975.2011.01413.x.

Kanhai, C. & Ganesh, L. (2014). Factors Influencing The Adoption Of Enterprise Risk Management (ERM) Practices By Banks In Zimbabwe. International Journal of Business and Commerce (ISSN: 2225), Vol. 3, No.6: Feb 2014.

Komite Nasional Kebijakan Governance. (2006) Pedoman Umum Good Corporate Governance Indonesia. KNKG.

Kumaş, H., Çağlar, A., & Karaalp, H. S. (2014). Firm Size and Labour Market Segmentation Theory: Evidence from Turkish Micro Data. *Procedia - Social and Behavioral Sciences*, *150*, 360–373. DOI: 10.1016/j.sbspro.2014.09.028

Strebulaev, I.A. & Kurshev, A. (2006). Firm Size and Capital Structure (March 1, 2006). EFA 2005 Moscow Meetings Paper. Available at SSRN: https://ssrn.com/abstract=676106 or http://dx.doi.org/10.2139/ssrn.676106

Lakatos, I. (1989). The Methodology of Scientific Research Programs. Volume 1. ISBN 0-52 I -2803 I – I, paperback. Cambridge University Press.

Lambert, R. A. (2001). Contracting Theory and Accounting. The Wharton School University of Pennsylvania.

Liu, J. (2012). The Enterprise Risk Management and the Risk Oriented Internal Audit. iBusiness, 2012, 4, 287-292 http://dx.doi.org/10.4236/ib.2012.43036, September 2012.

Lukviarman, N. (2016). Corporate Governance: Menuju Penguatan Konseptual dan Implementasi di Indonesia. The Governance Research Program Fakultas Ekonomi Univeritas Andalas. PT Era Adicitra Intermedia, Solo.

Lundquist, A. L. (2015) Enterprise Risk Management (ERM) at U.S. Colleges and Universities: Administration Processes Regarding the Adoption, Implementation, and Integration of ERM. Western Michigan University.

McBride, E.P. (2012) Enterprise Risk Management: Framework Presence and Effectiveness. Fisher College, Fisher Digital Publications.

Nan, L. (2015). Study on Assess of Enterprise Risk Management in China Based on Entropy Weight/TOPSIS Method. International Journal of u- and e-Service, Science and Technology Vol.8, No. 9 (2015), pp.21-30.

OECD. (2014). Risk Management and Corporate Governance. OECD Publication.

Office of the Superintendent of Financial Institutions Canada. Corporate Governance Guideline. 2013.

Núñez-Pomar, J., Prado-Gascó, V., Sanz, V. A., Hervás, J. C., & Moreno, F. C. (2016). Does size matter? Entrepreneurial orientation and performance in Spanish sports firms. *Journal of Business Research*, *69*(11), 5336–5341. DOI: 10.1016/j.jbusres.2016.04.134

Renault, B. Y., Agumba, J. N., & Balogun, O. (2016). Drivers for and Obstacles to Enterprise Risk Management in Construction Firms: A Literature Review. *Procedia Engineering*, *164*, 402–408. DOI: 10.1016/j.proeng.2016.11.637

Rodriguez, E., & Edwards, J. S. (2014). Knowledge Management in Support of Enterprise Risk Management. *International Journal of Knowledge Management*, *10*(2), 43–61. DOI: 10.4018/ijkm.2014040104.

Scott, W.R. (2015). Financial Accounting Theory. Pearson Canada, Inc. Toronto.

Sprčić, D. M., Kožul, A., & Pecina, E. (2015). State and Perspectives of Enterprise Risk Management System Development - The Case of Croatian Companies. *Procedia Economics and Finance*, *30*, 768–779. DOI: 10.1016/s2212-5671(15)01326-x

Shivashankarappa, A.N., Ramalingam, D., Smalov, L., & Anbazhagan, N. (2011). An exploratory study of ERM perception in Oman and proposing a maturity model for risk optimization. 9th Australian Information Security Management Conference, Edith Cowan University, Perth Western Australia, 5th -7th December 2011.

Tseng, C. Y. (2007). Internal Control, Enterprise Risk Management, And Firm Performance. Department of Accounting and Information Assurance Robert H. Smith School of Business.

Abiodun, B.Y. (2013). The Effect of Firm Size on Firms Profitability in Nigeria. Journal of Economics and Sustainable Development Vol.4, No.5.

Enterprise Risk Management — Integrated Framework www.coso.org https://www.coso.org/Documents/COSO-ERM-Executive-Summary.pdf

www.bri.co.id

www.bni.co.id

www.bankmandiri.co.id

www.bca.co.id