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ROLE OF RISK GOVERNANCE IN PROMOTING OPERATIONAL RISK DISCLOSURE AND PERFORMANCE: AN ASEAN-5 BANKING PERSPECTIVE

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ABSTRACT

This paper aims to investigate the effect of risk governance on five-ASEAN banks operational risk disclosure and performance. The uniqueness of this paper lies in countries setting and risk governance index based on the most recent guideline of bank governance. This study uses 285 bank-year observations comprising hand-collected data for the period 2010-2014. The results suggest that, consistent with the agency and stakeholder theory, risk governance practices can encourage the banks tend to improve operational risk disclosure while to decrease their ROA and P/E. However, these practices can positively affect these performances if mediated by the operational risk disclosure quality. This means that risk governance practices will encourage managers to present operational risk disclosures quality to improve bank performance.

Keywords: Risk governance; Operational risk disclosure; Return on assets; Price earnings ratio.

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1. INTRODUCTION

The monetary crisis experienced by Asian nations amid 1997– 1998 is one of the failure of banking industry (Zhuang, David, David, & Capulong, 2000; Mehran, Morrison, & Saphiro, 2011). Shortcomings in governance were caused by a lack of understanding of the risks they take and boards who didn't focus on their risk management function (Financial Stability Board [FSB], 2013; Organisation for Economic Co-operation and Development [OECD], 2014). Risk governance is useful for optimal decision-making related to risks and maximizes public confidence in risk management processes, structures, and decisions (International Risk Governance Council [IRGC], 2008). Risk governance is also a part of corporate governance decisions and actions that ensure the

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effectiveness of risk management (International Finance Corporation [IFC], 2012). Meanwhile, risk transparency has increasingly demanded by shareholders and stakeholders after a number of bank failures (Linsley, Shrives, & Kajuter, 2008). In accordance with Basel Accord II (pillar 3) guidelines, banks are required to disclose certain types of risks, such as financial risks (market and credit risk) and non-financial risks (operational risk).

Due to the importance of risk disclosure to banks, this research focuses on disclosing operational risks. Operational risk disclosure (ORD) is one of the topics most discussed by academics and financial practitioners in recent years since the global crisis (Barakat & Hussainey, 2013). Their opinion is based on increasing these ORD, as one of the main causes of the collapse of a number of banks (Ford, Sundmacher, Finch, & Carlin, 2009). The high risk is due to increased investment in information and technology systems, the wave of mergers and acquisitions, and new financial instruments (Helbok & Wagner, 2006).

Based on the above important issues, this research is motivated by two things. First, it is due to the importance of banking risk governance in promoting effective risk management and enhancing stakeholder confidence. Second, the competitive climate related to information and technology systems has the potential to increase the operational risks (OR) are increasingly required to disclose these risks, especially after the global crisis. This study uses the analysis of banking data listed in the five countries of the Association of Southeast Asian Nations (ASEAN-5) because these countries that initiate the establishment of ASEAN. They also represent the best disclosure practices due to the complex capital markets and emerging product markets that drive on efficient information dissemination (Gray, Felman, Carvajal, & Jobst, 2011).

This research is expected to give some contributions. First, it provides a conceptual understanding of the role of risk governance in promoting banks' ORD and improving their performance. Previous research has only investigated the effect of standard governance on the bank risk disclosure quality (see for example Ratnovski, 2013; Barakat & Hussainey, 2013). They argue that testing on bank samples would be better and more relevant if using a measurement of risk governance practices rather than standard/general governance. This is caused by the risk governance is useful for optimal decision making related to risks and maximizing public confidence in risk management processes, structures, and decisions. Banking activities are also riskier than non-financial corporate activities (IRGC, 2008; Aebi, Sabato, & Schmid, 2012; Battaglia & Gallo, 2015).

Second, it extends the additional methodology by using risk governance scores based on "Guidelines: Corporate Governance Principles for Banks" published by the Basel Committee on Banking Supervision (BCBS) on July 9, 2015. This new guidelines differ from previous guidelines in terms of expanding the board of director (BOD) s' responsibilities, particularly in overseeing the implementation of an effective risk management system. Practically, ASEAN-5 banks have started implementing risk governance practices prior to the year in force. This can be explained, their regulator (Bank Indonesia-BI and Otoritas Jasa Keuangan-OJK; Monetary Authority Singapore-MAS; Bank Negara Malaysia-BNM; Bank of Thailand-BoT; and Banko Sentral ng Pilipinas-BSP) has already revised the guidelines related to governance. Based on this, this study develops a new score that is expected to have an advantage as it explains the overall banking risk governance in ASEAN-5. Finally, this study fills the previous research gap that largely examines the factors that determine financial risk disclosures, such as Bushman & Smith (2001) and Oliveira,

Rodrigues, & Craig (2011). However, studies that investigate the non-financial risk disclosure are remain mixed, especially in the banking industry due to limited to the OR measurement (Helbok & Wagner, 2006; Ford et al., 2009; Barakat & Hussainey, 2013).
The remainder of the paper is organized as follows. Section 2 reviews the relevant prior studies and develops these study hypotheses, Section 3 provides the methodology, Section 4 reports the empirical results and Section 5 concludes the paper.

2. LITERATURE REVIEW

2.1. Risk Governance, ORD and Their Practices on ASEAN-5 Banks

The monetary crisis in Asian countries (1997/1998) was a moment of urgency for governance reform. Therefore, bank regulators and supervisors establish provisions on bank health by requiring banks to have effective risk management and risk governance. Risk governance is the subset of corporate governance decisions and actions that ensure effective risk management, including cohesive policies, guidance, processes and decision-rights within the risk area (IFC, 2012). This new rule contrasts from past rules in terms of expanding the BODs' responsibilities, defining the elements of risk framework, giving direction for banking supervisors in assessing the selection process of board members and senior management, and evaluating risk-based remuneration structures as well as reinforcing a sound risk culture. Some ASEAN-5 financial regulators, practically, have issued regulations on the obligations for banks to have risk governance. Singapore and Malaysia, for example, issued "Risk Governance" guidelines in 2013, BI issued Circular Letter no. 13/24/DPNP in 2012 which implicitly explains risk governance and BoT published The Handbook for Directors of Financial Institutions in Chapter 4 which explains the role of boards in promoting risk governance. While BSP adopted the guidance of risk governance in August 2017 with the publication of Circular 971.

According to Basel II, operational risk is "the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events failures. This definition includes legal risk, but excludes strategic and reputational risk" (BCBS, 2006, p.144). While ORD is regulated in the document of International Convergence on Capital Measurement and Capital Standard (A Revised Framework) of Pillar 3 concerning market discipline. Pillar 3 establishes risk disclosure requirements and risk measurement processes, and the capital adequacy of banks that allows market participants to assess the banks condition. Particularly for the ORD, banks are required to provide information (a) risk management strategies and processes, (b) structure of the risk management function, (c) scope and nature of the risk measurement/reporting system, (d) policy for risk hedging or mitigation, and/or (e) strategies and processes for monitoring the effectiveness of mitigation. The Financial Stability Institute (FSI) survey in 2014 shows that most of the ASEAN-5 banks began to implement Basel II regulations in 2007.

2.2. Previous Researches and Hypothesis Development

Risk Governance Practices and ORD Quality

The principle of risk governance emphasizes oversight on risk management by the BODs, and the placement of risk committees in BOD compositions to help analyze the risk exposures (FSB, 2013).

According to agency theory, the separation of ownership (principal) and management control (agent) can encourage the problem of asymmetric information, namely moral hazard and adverse selection (Jensen & Meckling, 1976). They can be derived through the disclosure of information, including risk disclosure, which is one of the responsibilities of the board and senior management (IFC, 2012; FSB, 2013; BCBS, 2015). Thus, risk governance can be one monitoring tool that will affect the ORD quality. The stakeholder theory states that firms should benefit stakeholders (Freeman, 1984). Therefore, risk governance can also be an effective tool for protecting the interests of stakeholders that may affect the ORD quality. Hence the hypothesis of this study is:
H1: Risk governance practices have a positive effect on the ORD quality.

Risk Governance Practices and Bank Performance

Several studies have shown that governance characteristics, particularly risks, increase bank's return on assets (ROA), return on equity (ROE) (Battaglia & Gallo, 2015; Ellul & Yerramilli, 2013), and stock returns (Aebi et al., 2012; Ellul & Yerramilli, 2013). Otherwise, the number of risk committees and independent boards negatively affect the share value (Tobin's Q and Price earnings ratio-P/E) (Aebi et al., 2012; Erkens, Hung, & Matos, 2012). While Adams & Mehran (2003) using bank samples for 34 years proves that board independence is not related to Tobin's Q. Risk governance is a concept based on agency theory that is expected to function as a tool that can give investors confidence that they will receive a return on the funds invested. Return received can be a profit (ROA) and a higher stock price. A bigger increase in stock price than the increase in profit will cause the bank P/E value to be higher. Hence the hypothesis of this study are:
H2a1: Risk governance practices have a direct positive effect on ROA.
H2b1: Risk governance practices have a direct positive effect on P/E.

Furthermore, this study believes that the ORD quality variable mediates the influence of risk governance practices on bank performance due to these practices indirectly improve bank performance through the ORD quality. An ORD quality demonstrates a bank's ability to manage risks that can reduce the uncertainty of future cash flows and encourage access to external financing at lower costs (Botosan, 1997). Therefore, it may increase the bank's capital base and profitability. In other words, the more qualified the ORD, the company's ability to improve performance will be higher. Conversely, if the lower the ORD quality, the lower the company's ability to drive performance. Based on the above explanation, the next hypothesis are:
H2a2: Risk governance practices have an indirect positive effect on ROA through ORD quality.
H2b2: Risk governance practices have an indirect positive effect on P/E through ORD quality.

3. METHODOLOGY

3.1. Data

The samples of this study consist of 57 banks listed on the stock exchanges of ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore, and Thailand) and it uses 258 annual report (2010-2014). Information on risk governance practices (RGOV) and ORD quality (ORD) variables for analytical purposes are collected from annual reports. While banking performance (ROA and P/E) and other control variables are obtained from the annual financial statements and stock market data contained in BankScope Bureau van Dijk database.

3.2. Research Design and Empirical Model

The content analysis is used to measure RGOV and ORD, which are then tested for validity and reliability with a Cronbach alpha value of 0.60-0.70 as "good" or "adequate" (Clark & Watson, 1995). The following multivariate regression models are developed to test the association between RGOV and both the bank's ORD and performance:

Model 1: Effect of risk governance practices on ORD quality (ORD)

$$ORD_{it} = \beta 0 + \beta 1RGOV_{it} + \beta 2SIZE_{it} + \beta 3TSA_{it} + \beta 4CAR_{it} + \beta 5LAW_{i} + \upsilon_{it} \quad (1)$$

Model 2: Effect of risk governance practices on bank performance

$$ROA_{it};\ P/E_{it} = \gamma 0 + \gamma 1RGOV_{it} + \gamma 2ORD_{it} + \gamma 3SIZE_{it} + \gamma 4TSA_{it} + \gamma 5CAR_{it} + \gamma 6LAW_{i} + \gamma 7GDP_{it} + \eta_{it} \quad (2)$$

Regression analysis with intervening variables is used to find out the total effect of independent variables on dependent variable consisting of direct and indirect effects, namely through the intervening variable with the formula:

Direct effect: $\gamma 2$, $\delta 2$, and indirect effects: $\beta 1 * \gamma 1$, $\beta 1 * \delta 1$

The above equation models are then tested using Two Stage Least Square (TSLS) method by regressing endogenous variables on all exogenous variables in the model and estimating structural equations. Table 1 presents the definitions and sources of all variables in the empirical analysis.

Table 1: Definitions and Operationalisation of Variables

Variable	Measurements	Prediction	Sources
Dependent Variables / endogen			
PERFORM	ROA = Net Income / Total Assets P/E = Market Value per Share/Earnings per Share		Annual Report BankScope
ORD	Operational risk disclosure index, based on Basel II regulations (BCBS, 2006) and the ORD index developed by Helbok & Wagner (2006); Barakat & Hussainey (2013)	+	Annual Report
Independent Variable			
RGOV	Risk governance index, based on the risk governance regulation issued by BCBS (2015), developed by Karyani, Dewo, Frensidy, & Santoso (2018).	+	Annual Report
Control Variables			
lnSIZE	Bank size measured using the natural logarithm of total assets	+	BankScope
TSA (*dummy*)	Dummy variable "1" for the standardized approach (TSA), and "0" otherwise (basic indicator approach/BIA)	+	Annual Report
CAR	$CAR = \frac{\text{Tier One Capital + Tier Two Capital}}{\text{Risk Weighted Assets}}$	+ / -	BankScope

Variable	Measurements	Prediction	Sources
LAW (dummy)	Dummy variable "1" for the type of country system of common law, and "0" otherwise (code law or mixed law)	+	www.cia.gov (Central Intelligence Agency)
lnGDP	natural logarithm (ln) of real GDP per capita (in USD)	+ / -	World Bank

Risk Governance Index (RGOV)

This study uses a risk governance index constructed by Karyani et al. (2018) to measure score of risk governance practices for each bank-year ($RGOV_{it}$). This index is based on governance guidelines issued by BCBS (2015). This guidance consists of 13 principles that must be implemented by banks adapted to the size, complexity, structure, economic significance, and risk profile. The thirteen principles explain: (1) board responsibility, (2) board qualification and composition, (3) board's own structure and practice, (4) role of senior management (CEO), (5) governance of group structure, (6) an effective and independent risk management function, (7) risk identification, monitoring and control, (8) risk communication, (9) compliance function, (10) effective internal audit function, (11) compensation, (12) disclosure and transparency, and (13) the role of supervisor. The first twelve principles with 17 criteria, focused on internal risk governance processes (see Karyani et al., 2018), are evaluated by weighting based on 3 (three) benchmarks. Those are low level (score 0), medium level (score 1), and high level (score 2) by considering the different roles and responsibilities of board between countries, namely one-tier and two-tier systems. The following table describes the evaluation criteria of 17 items.

Table 2: Governance Index for Assessing Risk Governance Practices

	Evaluation criteria
A. Risk Governance Structure: Board (principles 1, 2, 3)	
1.	Are board's responsibilities (board of commissioners) disclosed taking into account the risk aspect?
2.	Are the board members (board of commissioners) (1) independent, as measured by the number of independent boards (commissioners) ≥ 50%; (2) do they have risk management competencies, as measured by at the least one member of the board of commissioners having a risk management certificate or risk management experience?
3.	Does the selection process of board candidates (board of commissioners) asses (1) financial independence and competence; (2) record of integrity and good reputation; (3) enough time to carry out the responsibility?
4.	Is the audit committee (1) independent, as measured by the number of independent audit committee members ≥ 50%; (2) does it consist of at the least one person having expertise in finance or accounting?
5.	Is the risk committee: (1) independent, as measured by the number of independent risk committee members ≥ 50%; (2) does it have expertise in banking risk management, as measured by at least one risk committee member with a risk management certificate?
6.	Is the compensation committee (1) independent, as measured by the number of independent remuneration committee members ≥ 50%; (2) does it evaluate the remuneration taking into account the risks?

	Evaluation criteria
B. Risk governance structure: Management (principles 4, 6, 9, 10)	
7.	Are the tasks of the senior management in managing bank activities taking into account the risk aspect (risk appetite)?
8.	Is there an independent CRO (risk management committee) of other executive functions?
9.	Is the compliance function (1) independent of the operational work unit; (2) does it provide reports on compliance risks?
10.	Is the internal audit function (1) independent of the operational work unit; (2) a professional member of the audit or having an internal auditor certification; (3) does it have risk-related activity skills, as measured by a risk management certificate?
C. Risk Management Practices (principles 5, 6, 7, 8, 11)	
11.	Does the risk management framework cover the entire banking entity (integrated)?
12.	Does the CRO (Risk Management Committee / Risk Director) report a risk profile directly to the board (Board Risk Committee or Board of Commissioners)?
13.	Does the board risk committee or senior management evaluate the risks faced by the bank and all risk profiles on a regular basis?
14.	Is the risk-related information communicated to the board risk committee and senior management?
15.	Does the reporting system of the risk profile contain important and routine information?
16.	Does the remuneration structure consider risk-based compensation in evaluating the manager's (senior executive) performance?
17.	Is the governance disclosure delivered to stakeholders through websites and annual reports?

Source: BCBS (2015), Karyani et al. (2018)

ORD Index

The ORD index for each bank-year (ORDit) is designed using disclosure indexes developed by Helbok & Wagner (2006) and Barakat & Hussainey (2013). ORD index was developed based on the Basel II Capital Accord (Pilar3) "Risk Disclosure-Operational-risk disclosure requirements" which was issued by BCBS and effective in 2008. These disclosures are classified into two with six items: 1) quantitative disclosure (capital adequacy) items and 5 (five) general qualitative disclosure items. The ORD index in this study yields 26 items or scores that are not given a weighting to avoid the subjectivity of the researcher. Sub-indices are summed for each year and each bank sample becomes an index of disclosure by counting all items. All items are treated as binary variables, namely assigned a value of '0' if not disclosed in the annual report and '1' if mentioned in the annual report.

Table 3: Disclosure Index for Assessing ORD Quality

No	Item/subitem	Reference
Operational Risk Disclosure (general)		
	1. Does the bank define operational risk in accordance with the definition put forward by Basel Accord II?	Helbok & Wagner (2006)
1	1.1 *Direct/indirect loss*.	
2	1.2 *Internal processes*.	
3	1.3 *Human error*.	
4	1.4 *System error*.	
5	1.5 *External events*.	
6	1.6 *Legal risk*.	
Risk Management Process		
	2. Does the bank disclose the amount / value of regulatory capital (capital) for operational risk?	Barakat & Hussainey (2013)
7	2.1 Quantitative explanation.	
8	2.2 Explanations are grouped by division, line of business, subsidiary, and country.	
9	2.3 Explanation of reasons for change.	
10	2.4 Illustrated graphically or presented in the table.	
	3. Does the bank disclose the measurement approach regulatory capital for	Barakat &
11	operational risk?	Hussainey
12	3.1 Qualitative explanation.	(2013)
13	3.2 Quantitative explanation.	
14	3.3 Explanation of previous or subsequent changes.	
	3.4 Illustrated graphically or presented in the table.	
	4. Does the bank disclose techniques for mitigating operational risks?	Barakat &
15	4.1 Qualitative explanation	Hussainey
16	4.2 Quantitative explanation	(2013)
17	4.3 Forward looking explanation	
18	4.4 Illustrated graphically or presented in the table.	
	5. Does the bank disclose database of operational risk events (external / internal)?	Barakat &
19	5.1 Qualitative explanation.	Hussainey
20	5.2 Quantitative explanation.	(2013)
21	5.3 Forward looking explanation.	
22	5.4 Illustrated graphically or presented in the table.	
Additional information		
	6. Does the bank disclose additional information outside the regulatory provisions, such as the cumulative amount of operational losses based on the type of events and business lines, corrective actions, subsequent operational risk events?	Barakat & Hussainey (2013)
23	6.1 Qualitative explanation.	
24	6.2 Quantitative explanation.	
25	6.3 Forward looking explanation.	
26	6.4 Illustrated graphically or presented in the table.	

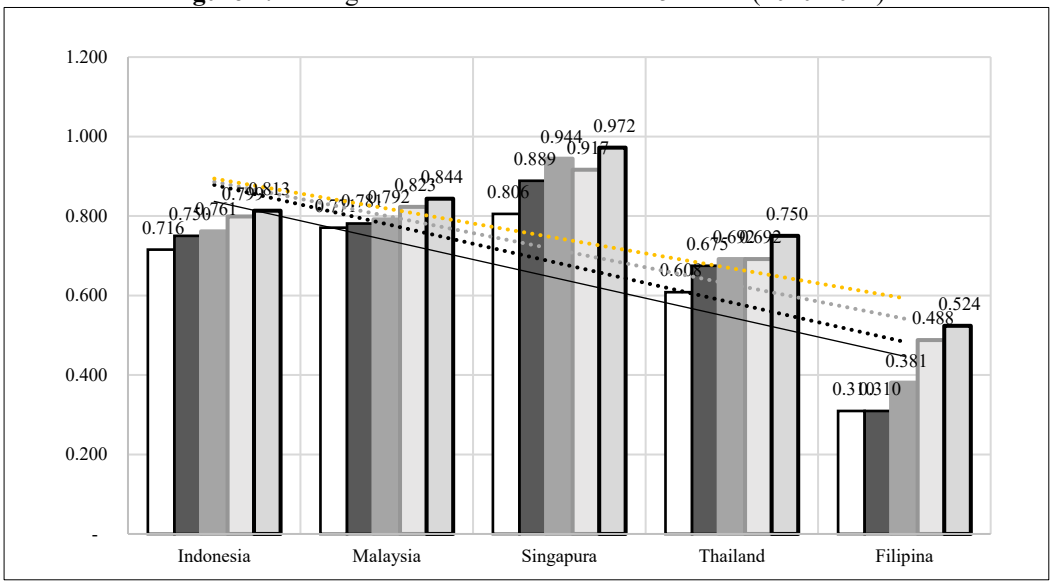
Sources: BCBS (2006), Helbok & Wagner (2006), and Barakat & Hussainey (2013)

4. RESULTS AND DISCUSSION

4.1. Descriptive Analysis

The result of the validity test on 17 items of RGOV scale shows 15 good items (valid) and two invalid items (the 11th and 17th items) which are omitted. The reliability test result indicates the value of the cronbach's alpha coefficient of 0.648 which means either "good" or "adequate". Table of these test result are not shown. The observation results also show that the highest average value of RGOV structure disclosure is the independence and competence categories of audit committee members, which is 1.86. This is caused by the fact that the majority (87%) of the number of independent audit committee members exceeding 50% and at least one of the members has experience in accounting or financial practices. Indonesian banking largely discloses these criteria as compliance with the disclosure requirements required by regulator (OJK). While the lowest average score of 0.98 is the compensation committee in evaluating the remuneration of the board of commissioners and their committees by considering the risk aspect. This is mainly due to the majority of banks about 70,88%, particularly Indonesia banks, do not consider the risk in evaluating remuneration. The following graph describes the average index of bank risk governance (RGOV) in ASEAN-5 which shows the level of RGOV in these countries is quite good (40% to 90%). The RGOV per year shows the awareness of ASEAN-5 banks to improve the risk governance disclosure.

Figure 1: Average Index of RGOV in Asean-5 Banks (2010-2014)



Source: Annual Report and Notes to the Financial Statements of each bank in Asean-5, processed

Graph 1 above describes that the highest level of RGOV disclosure for five years has been Singapore banking followed by banks in Malaysia, Thailand, Indonesia, and Philippine banking. The high level of transparency in Singapore and Malaysia is likely to be due to a specific guideline

regarding risk governance that has been issued by regulators of financial institutions in the country. The Corporate Governance Council in Singapore issued "Risk Governance Guidance for Listed Boards" in May 2012 while Malaysia through BNM issued "Risk Governance" guidelines in March 2013. In addition, in accordance with the Asian Development Bank (ADB) ranking results during 2011-2014 that Singaporean companies have the highest score in terms of "Disclosure & Transparency" and "Responsibilities of the Board" aspect.

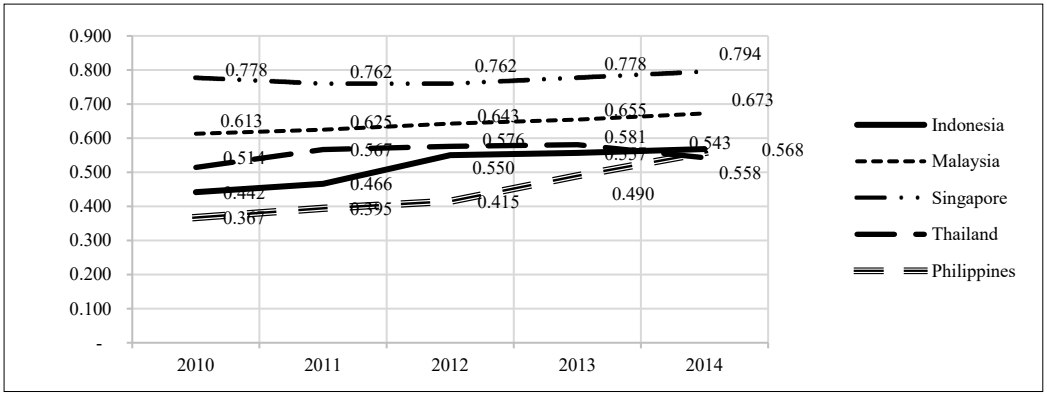
The level of ORD grouped into six categories and 26 items of disclosure, validity and reliability test results. Validity test using 5% significance level with r-table 0,113 (285 observation). Result of the validity test on 26 items shows 23 good items (valid) and 3 items that are not good (invalid) that is 4-2, 5-2, and 6-4. While item 2-1 and item 3-3 cannot be assessed because all bank samples are declared to reveal this item. This research will exclude items that have no valid value for the purpose of ORD index assessment. While the result of reliability test shows the value of the cronbach's alpha coefficient of 0.715. If an invalid item is not included in the reliability test, the cronbach's alpha coefficient becomes 0.718. From both of these values, it can be concluded that all items are still reliable as a data collection instrument. Table of these test result are not shown.
Average disclosure for category defines operational risk about 77% with the highest average value of disclosure. That is to admit human error and system error factors that is equal to 90%. While the lowest average value is to disclose the definition of legal risk factor about 32% due to Indonesian banks (most samples) do not include legal risks as part of operational risks in accordance with the rules issued by BI (PBI No.11/25/PBI/2009).

For the category of value disclosure and measurement approach of the regulatory capital of operational risk, almost all banks in ASEAN-5 express quantitatively followed by table/graph and qualitative explanations. However, disclosure based on divisions, business lines, subsidiaries, or countries is the lowest about 18% due to the difficulty in calculating it based on these criteria. The level of ORD related to qualitative, quantitative, and graphic/table measurement approach is about 63%-80% or 69% on average. While disclosure in the category explains why the change does not exist from the sample.

The lowest score of disclosure to describe the mitigation techniques and databases related to the operational risk events is expressed qualitatively (94% and 83%) and forward looking (78% and 48%). The disclosure of additional information outside the regulatory provisions is generally very little (<10%). This is likely related to the level of bank secrecy that may have an impact on the reputation level of the bank. However, some banks disclose losses as a result of qualitative operational risk events and in table form.

Graph 2 below explains the average ORD indexes in ASEAN-5 banks during 2010-2014 which indicates the level of ORD in these countries is quite good (40% to 70%). These banks are also seen as an effort to be more transparent to the public as evidenced by the average ORD index continues to increase throughout the year, although this change is not very significant, namely 54% (2010), 56% (2011), 59% (2011), 61 % (2013), and 63% (2014).

Figure 2: Average Index of ORD in Asean-5 Banks (2010-2014)



Source: Annual Report and Notes to the Financial Statements of each bank in Asean-5, processed

From the above figure, it can be concluded that banks in Singapore have the highest transparency (78%), followed by banks in Malaysia (64%), Thailand (56%), Indonesia (52%) and Philippines (44 %). Singaporean banks have been likely triggered by an already developed capital market rate so that protection of stakeholders are also higher through law enforcement with tighter transparency.

Table 4 below describes the descriptive statistics related to the research variables.

Table 4: Descriptive Statistics of Research Variables

	Mean	Deviation Standard	Maximum	Minimum	25th Percentile	75th Percentile
ORD	0.547	0.140	0.809	0.095	0.476	0.667
ROA	0.013	0.011	0.034	-0.078	0.010	0.017
P/E	15.049	11.981	116.04	2.900	9.325	16.400
RGOV	0.788	0.088	0.978	0.444	0.733	0.8444
lnSIZE	23.028	1.750	26.511	18.980	21.737	24.405
TSA	0.158	0.365	1	0	0	0
CAR	0.158	0.037	0.460	0.090	0.140	0.170
LAW	0.193	0.395	1	0	0	0
lnGDP	8.451	0.699	10.856	7.664	8.090	8.624

Source: Results of Data Processing with EViews

The table above describes the average level of ORD, the highest index level is owned by Overseas Chinese Banking Corporation Ltd. (OCBC) (0.809 or 80.95%) while TISCO Bank Co. Ltd. has the lowest index of 9.52%. Banking performance showed the average ROA value of 1.27% and average P/E was 13.87 times. The average RGOV is 78.8% with a maximum value of 97.8% (Bank CIMB Group Holdings Berhad) and a minimum value of 44.4% (Bank of The Philippine Islands).

4.2. Multivariate Analysis

This study uses Feasible Generalized Least Squares (FGLS) estimators that do not require a residual or classical assumption testing (heteroskedastic, autocorrelation, and normality) as for Ordinary Least Square (OLS) estimators. However, this study tests correlation strength due to high correlation has the potential to generate multicollinearity, and perfect multicollinearity (0.99-1.0) causes the regression coefficients of the variables to decrease the estimate accuracy (Gujarati & Porter, 2017, p.350). According to Pallant (2005, p.142), multicollinearity occurs when variables independent correlated high (r>0.9). The test results show that all correlation coefficients between independent variables less than 0.9.

Table 5: Correlation Testing among Research Variables (N=285)

Correlation	ORD	RGOV	Ln(SIZE)	TSA	CAR	LAW
RGOV	0.537***					
ln(SIZE)	0.441***	0.445***				
TSA	0.239***	0.182***	0.495***			
CAR	-0.045	-0.145**	-0.138**	0.016		
LAW	0.456***	0.441***	0.517***	0.154***	-0.120**	
ln(GDP)	0.551***	0.543***	0.595***	0.542***	-0.067	0.821***

Source: Results of Data Processing

*** 1% statistically significant; ** 5% statistically significant; * 1% statistically significant.

Description of Table 5 and 6.

RGOV is an effective risk governance practices. ORD is an operational risk disclosure quality. lnSIZE is the size of the bank. TSA is a type of capital requirement measurement, namely the basic indicator approach (BIA), and the standardized approach (TSA). CAR is the capital adequacy ratio that functions to accommodate the risk of losses that may be faced by the bank. LAW is the legal system of the country. GDP is a Gross Domestic Product. ROA is return on assets. P/E is price earnings ratio.

This research uses three research models that cannot be tested with fixed effect method because of the near-singular matrix. Near-singular matrix occurs because there are dummy variables (Verbeek, 2017, p.83), namely TSA and LAW variables. In addition, there are COMPET and lnGDP variables which values are repeated for each bank. This study uses Pooled Effect Model estimation method because the result of LM test with Breusch-Pagan method shows probability value 0,00<0,05. The following table describes the result of panel data model analysis. This study also identifies the model by using the order testing procedure to determine whether it is appropriate to use the TSLS method. The test results show that all equations are overidentified, so the model is estimated using the TSLS method.

Table 6 explains that all models have adjR-square which is high enough for model 1 (68%) which shows a strong determination of this model, while for model 2 and 3 are not high enough about 4%-50%. Estimation results also indicate a significant and negative direct effect of risk governance practices on ROA and P/E. On the other hand, a significant and positive indirect effect of risk governance practices on ROA and P/E through ORD quality.

Table 6: Regression Estimation Results for Testing Hypotheses

	Prediction	Model 1 (ORD)	Prediction	Model 2 (ROA)	Model 3 (P/E)	Model 2 (ROA) (TSLS)	Model 3 (P/E) (TSLS)
RGOV	+	0.473***	+	-0.006***	-10,93**	0.012***	4.768***
ORD			+	-0,001	-0.634	0.026**	10.08*
lnSIZE	+	0.011***	+	1.002***	0.949	1.002***	0.851
TSA	+	-0.046***	+	-0.001	-3.121***	0.001	-1.692
CAR	+/-	-0.027	+/-	0.043***	12.65	0.039***	18.74
LAW	+	-0.011	+	-0,001	-1.353	0.001	-0.808
lnGDP	+	0.079***	+/-	0.997***	6.869*	0.994***	2.264
N		285		285	274	285	274
Adjusted R^2		0.689		0.375	0.080	0.446	0.036
F-stat		106.10***		25.31***	4.395***	28.89***	3.35***

Source: Results of Data Processing

*** 1% statistically significant; **5% statistically significant; *10% statistically significant.

4.3. Discussions

Effect of Risk Governance Practices on ORD Quality.

The coefficient value of risk governance variable is equal to 0.473 (p-value 0,000) that means the level of ORD is in line with rising risk governance practices. In accordance with previous research results, asymmetric information could be reduce through governance mechanisms (such as board independence and audit committees) to monitor and discipline management (Linsley & Shrives, 2005), and support reporting risks to external interests (Blunden & Thrilwell, 2010; Girling, 2013). Consistent with agency theory and stakeholder theory, risk governance mechanisms (such as board member and senior management independence, committee members expertise, risk management practices) are ways to reduce asymmetric information over ORD quality. Risk governance can also be an effective tool for protecting the interests of stakeholders that may affect the ORD quality.

Effect of Risk Governance Practices on ROA and P/E

The coefficient value of RGOV is equal to -0.006 (p-value<0,05) that shows the risk governance practices have a direct negative effect on ROA. This study suggests that the regulation of the obligation to have risk governance practices of banks has pushed the burden of the company tends to increase cost and potentially decrease profit. For the banking industry in general that in order to comply with risk governance standards in accordance with regulatory requirements, banks must provide complete information and procedures related to risk management and supervision that prompt a slightly larger operating expense. The risk governance framework is also quite complex and requires additional costs that may result from compensation expenses or remuneration of committees, management or staff who have capabilities in accordance with regulatory requirements. Moreover, the implementation of risk governance will increasingly complicate the approval of loan applications for both working capital and investment. The bank only approves customers who have good reputation and credibility so that it has the potential to reduce the number of customers and the frequency of transactions that can sacrifice profit.

Meanwhile, TSLS model test results show that RGOV coefficient value (0.012) is significantly positive. This means that risk governance practices has an indirectly positive impact on ROA through ORD quality. In other words, the practice of effective risk governance can reduce the moral hazard and adverse selection by providing the large responsibilities to boards (board of commissioners) and senior management to conduct quality risk control and risk transparency oversight. This risk disclosure is useful for determining the company's risk profile, reducing information asymmetry and portfolio investment decisions, as well as reducing business and investment risks (Abraham & Cox, 2007). Thus, risk governance practices can positively affect bank ROA through ORD quality due to the existence of an independent boards and their responsibility of the effectiveness of risk management and disclosure. Strict supervision by the board on management to avoid manager behavior conveys risk information that misleads outsiders. High quality risk disclosure can reduce uncertainty in future cash flows, increase capital base, and further affect bank profitability. In accordance with agency theory that risk governance can be used as a monitoring tool to reduce agency problems. Healy & Palepu (2001) also state that for the interests of external parties (owners), the board monitors and disciplines management by encouraging them to provide risk information. The bank's ability to manage risk will also effective if it can improve cost efficiency related to risk management so that bank profitability can be achieved (Hamalainen, Hall, & Howcroft, 2003).

The coefficient value of RGOV variable is equal to -10.93 (p-value <0.05) showing that RGOV practices have a direct negative effect on the P/E value. In other words, banks that follow strict or rigid supervisory boards in following the RGOV guidelines tend to have lower levels of cost and technical efficiency that may inhibit earnings. Costs incurred include improving the quality of human resources (especially related to risk management) through employee training, preparing documents, and generating information (internal and external objectives). These costs have the potential to lower the margin, which is then followed by a decline in stock prices that could be greater, due to a bad signal to the bank, thus reducing the P/E value. These results support previous research that the adoption of risk governance is expensive so as to reduce the firm value (Aebi et al., 2012; Andries, Capraru, & Nistor, 2018). These are also consistent with overreaction hypothesis that poor signals (decrease in earnings and Eearnings per share-EPS) lead to lower stock prices (Bondt & Thaler, 1985).

The test result of TSLS model testing, the coefficient value generated by RGOV variable is 4,768 and significant statistically. This means there is an indirect positive effect of risk governance practices on P/E through ORD quality. This study shows that the board is an important component responsible for overseeing risk management and establishing the best risk governance practices. Effective risk governance practices can encourage ORD quality so as to reduce agency problems (asymmetric information) and gets the benefits of increasing P/E. This indicates that both components (risk governance and ORD) are the basis of public confidence in management that can influence investor decisions (Nier & Baumann, 2004; Diamond & Verrecchia, 1991) as compensation because the bank has complied with the regulations. At the end, the credibility of bank management increases that improves access to capital, lowers capital costs, increases profit and EPS. When the EPS increase is followed by a larger share price increase, the P/E value becomes greater. According to a behavioral perspective that investors tend to overreact against good information so that the asset price becomes higher.

Effect of Control Variables on ORD Quality, ROA, and P/E

The bank size has a significantly positive effect on the ORD and ROA. However, the bank size has an insignificantly negative effect on P/E. While large companies have the ability to hire skilled employees, and have more prepared information (Barakat & Hussainey, 2013), larger banks can lower the preparation burden that encourages greater risk disclosure. The study also suggests that larger banks make them possible to provide wider financial and non-financial services that will increase revenue and profitability. The type of capital measurement (TSA) is significantly and negatively related to ORD, ROA, and P/E. This means there is a difference in ORD and performance for banks using the type of TSA and BIA. Banks using TSA (more complicated) prefer not to disclose qualified ORD as well as lower ROA and P/E than banks using the BIA method. This can be attributed to banks that have implemented TSA does not want to show the public related to better and more complex or comprehensive risk management techniques. Meanwhile, banks that implement TSA tend to have additional burdens associated with experts and preparation of larger documents because this method is more complex.

The CAR value has an insignificant effect on ORD and P/E. This result supports the findings of Klepczarek (2016) that the CAR does not affect the risk transparency because the bank maintains its capital ratio in accordance with the provisions. The CAR level of ASEAN-5 banks is quite high at 15.84% which exceeds that of Basel (8%-9%). The LAW variable has also an insignificant effect on ORD, ROA, and P/E. It suggests that the difference of the common law or non-common law system does not affect the three dependent factors. Meanwhile, the coefficients of GDP have a significant and positive effect on ORD and ROA, while having an insignificant and positive effect on P/E. This study reveals that GDP has the potential to increase demand and credit quality so that it positively impacts on bank risk and profitability disclosure. While GDP does not affect the value of stocks because of any other factors that can influence it stronger, such as investor behavior, the willingness of companies to pay dividends, and earnings of multinational corporations that are not reflected in the GDP of local countries (Herrmann, 2016).

4.4. Sensitivity Analysis of Major Research Models

This study performed two additional tests to see the robustness of the main models. Firstly, the RGOV score is replaced by counting all items without weight for each year and bank sample. All items are treated as binary variables, namely assigned a value of '0' if it is not disclosed in the annual report and '1' if it is mentioned in the annual report. The second test by regressing the entire model by removing all samples of Singapore banks during 2010-2014. This is done with the consideration that the Singapore stock market has advanced characteristics and above-average GDP scores from all sample studies. The test result with standardized method also shows that all Singapore bank samples as outlier samples. The test results for both additional tests supports the main test.

5. CONCLUSION

The above discussions highlighted that the board which fully responsible for the effectiveness of risk governance will ensure ORD, however, the bank's risk governance (RGOV) practices have the potential of increasing the operational expenses and decreasing the earnings as a result of strict regulations. This study also suggests that tight RGOV has the potential to diminish the customers

number as a result of complicated credit application approval. Furthermore, ORD has a mediation role that affects the RGOV towards ROA and P/E of ASEAN-5 banks. RGOV has a positive effect on bank ROA through ORD due to strict supervision by the board on risk management to avoid manager behavior conveying risk information that misleads outsiders. High quality risk disclosure can reduce uncertainty in future cash flows, increase capital base, and further affect bank ROA and P/E.

There are implications for regulators, banks, investors, and academics. First, banking regulators need to consider the burden that must be borne when requiring the stringent RGOV practices, but still encouraging this industry to further enhance and pay attention to the importance of ORD, which it will valuable for management and investors. Second, banks, however, need to revise their risk management policies and procedures that are adjusted to RGOV standards in order to achieve effective risk management. Third, investors need to pay more attention to banks' RGOV practices because they have a directly positive effect on ORD and indirectly positive effect on bank performance.

Finally, this research has five weaknesses. First, an assessment of RGOV and ORD practices may be less precise or accurate when the assessment is based only on what is disclosed in the annual report. Subsequent research is expected by adding more in-depth interview methods to better understand the true practices of risk governance. Second, there is the difference of data amount between countries that are less comparable. Future research can add longer time to the number of countries or more samples so that the analysis be more comprehensive. Third, this study excludes endogenous issues so that further research can investigate the effects of ORD and bank performance on RGOV practices. Fourth, the sample selection process does not divide into groups of large and small size that might improve the accuracy of research results or avoid selection bias. Fifth, the study uses ROA and P/E that may not be able to describe the overall measures of bank performance. Therefore other proxies such as net income, ROE, Tobin's Q, and stock returns can be used in subsequent research.

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