

## The Comparative Moderating Effect of Risk Management Committee and Audit Committee on the Association Between Voluntary Risk Management Disclosure and Firm Performance

*(Kesan Penyederhana Jawatankuasa Pengurusan Risiko dan Jawatankuasa Audit Secara Komparatif ke Atas Hubungan Antara Pendedahan Maklumat Sukarela Pengurusan Risiko dan Prestasi Syarikat)*

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### ABSTRACT

*The purpose of this study is to examine the comparative moderating effects of two separate risk governance mechanisms on the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP). This study utilizes content analysis method to collect VRMD data, while FP is measured based on investors' perspective, represented by Tobin's Q. Multivariate statistical tests show that the existence of Risk Management Committee (RMC) augmented the association between VRMD and FP. However, the appointment of audit committee (AC) and the quality of AC which are represented by size, independence, education and number of AC meetings, do not have any moderating effect on the relationship between VRMD and FP. The findings suggest that risk governance mechanisms do matter to investors in evaluating risk management information. The findings also provide empirical evidence that should be of interest to the management of company and regulatory bodies in terms of deciding upon whether or not to establish RMC as a separate committee from AC.*

*Keywords: Risk management committee; audit committee; risk governance; voluntary risk management disclosure; non-financial industry*

### ABSTRAK

*Tujuan kajian ini adalah untuk mengkaji kesan penyederhana secara komparatif dua mekanisme tadbir urus risiko terhadap hubungan antara pendedahan maklumat sukarela pengurusan risiko (PMSPR) dan prestasi syarikat (PS). Kajian ini menggunakan kaedah analisis kandungan untuk mengumpul data PMSPR, manakala PS diukur berdasarkan perspektif pelabur, yang diwakili oleh Tobin's Q. Ujian statistik multivariat menunjukkan bahawa kewujudan Jawatankuasa Pengurusan Risiko (JPR) meningkatkan hubungan antara PMSPR dan PS. Walau bagaimanapun, perlantikan Jawatankuasa Audit (JA) dan kualiti JA yang diwakili oleh saiz, kebebasan, pendidikan dan bilangan mesyuarat JA tidak mempunyai kesan penyederhana terhadap hubungan PMSPR dan PS. Dapatan kajian ini menunjukkan bahawa mekanisme tadbir urus risiko adalah penting kepada pelabur dalam menilai maklumat pengurusan risiko. Dapatan ini juga memberikan bukti empirikal kepada pihak pengurusan syarikat dan badan pengawalseliaan dari segi penentuan sama ada untuk menubuhkan JPR atau tidak secara berasingan daripada JA.*

*Kata kunci: Jawatankuasa pengurusan risiko; jawatankuasa audit; tadbir urus risiko; pendedahan maklumat sukarela pengurusan risiko; industri bukan kewangan*

### INTRODUCTION

Risk management has increasingly become a highlight in business activities as it is considered a proactive approach towards sustainable business. Financial Reporting Council (FRC) being one of the accounting bodies in the United Kingdom (apart from ICAEW and others) proactively promotes sound risk management practices among companies. In 2011, FRC held a series of meetings which involved representatives from over 40 major listed companies, investors and financial advisers to discuss the main issues in risk management. One of the issues discussed was risk governance, that is, to propose the best risk governance structure that firms should adopt. Recent research issues in risk governance also revolved around the

best risk governance structure that would be appropriate to be adopted by non-financial companies (Abdullah et al. 2017; Buckby et al. 2015; Hines & Peters 2015) which is still voluntary for them.

Meanwhile, the current issue of risk management disclosure is about the reliability of the information as recent studies demonstrated that companies tend to influence investors by strategizing their risk management disclosure in annual report (Abdullah et al. 2015; Abraham & Shrives 2014; Moumen et al. 2015). For example, Abraham and Shrives (2014) revealed that companies prefer providing symbolic information rather than substantive, and tend to act opportunistically by reporting inaccurate risk management information such as disclosing about their risk management measures that is not actually

being implemented in the company. These reporting behaviours impair the reliability of risk management information (FRC 2011) especially in a competitive market (Moumen et al. 2015) because company tends to be manipulative by disclosing risk management information that can strengthen their competitive advantages and hide information that can destroy their competitive advantages (Abdullah et al. 2015; Linsley & Shrives 2006; Moumen et al. 2015).

Thereby, Moumen et al. (2015) predicted that risk governance structure may play a significant role in improving the reliability of risk management information. According to Hines and Peters (2015), certain risk governance structures play a symbolic role on the perception of responsible risk management actions. For that reason, we argue that the reliability of risk management information should improve if investors know that the reporting company has a good risk governance structure in the sense that the information reflects the actual risk management actions in the company. This argument is in line with FRC (2011) which discovered that investors are quite critical in evaluating risk management information and one of their considerations is the quality of corporate governance. Thus, it is important to take another step further to provide empirical evidence on whether risk governance structure can really improve the reliability of risk management information. To some extent, the empirical evidence may shed some light on the usefulness of a certain risk governance structure that is currently being practiced by non-financial companies.

FRC in their 2011 meeting with business stakeholders found that participants of the meeting had different views on the risk governance structure that would be appropriate to be adopted by companies. Some participants agreed on companies to establish a stand-alone Risk Management Committee (RMC) as they claimed that the RMC may promote better risk management practices. However, the main critique by opponents against RMC was that an additional committee can create overlapping responsibility in the risk management's job scope since the Audit Committee (AC) is already there to fulfil all the risk management duties.

Fraser and Henry (2007) in their qualitative study, found that there are doubts as to whether the AC has the expertise to undertake high level risk management duties. Brown et al. (2009) also argued about the effectiveness of AC because the AC is already overload with internal control duties and might not have enough time to manage risk properly. At the same time, the requirement for membership on an AC is also claimed to be incompatible with the needs of risk management duties (Brown et al. 2009). Considering the potential weakness of AC for risk management duties, Fraser and Henry (2007) and Brown et al. (2009) recommended companies to establish RMC to promote better risk management practices. However, Bates and Leclerc (2009) claimed that the establishment of RMC is not an optimal approach for all companies since large companies that went bankrupt (such as

Lehman Brothers and Wachovia) already had separate risk committees charged with oversight of their respective risk management functions, and yet they still failed. This shows that the effectiveness of RMC across the corporate spectrum is still unclear and empirical evidence to support this recommendation remains scant.

Even though there are several empirical research that attempt to examine the role of RMC in promoting better risk management practices, the majority of them focus mainly on financial institutions (e.g.: Aebi et al. 2011; Hines & Peters 2015; Hock-Ng et al. 2012; Tao & Hutchinson 2013). Other studies argued that those empirical findings should not be simply generalize towards non-financial companies since financial institutions are already legally risk management entities (Linsley & Shrives 2006; Miihkinen 2013). The regulators believe that the role of RMC is expected to be more crucial in the financial companies compared to non-financial companies (FRC 2011; Linsley & Shrives 2006). Hence, the establishment of RMC is mandatory for financial companies but still voluntary for non-financial companies (FRC 2011) in Malaysia as of year 2017.

As such, it is still not clear whether there is any different in the role of RMC compared to AC with regards to their effect on the reliability of voluntary risk management disclosure (VRMD) towards stakeholders, especially among non-financial companies. This comparative issue is critical knowing the fact that the establishment of RMC among non-financial companies is still voluntary in many countries throughout the world until today (Abdullah et al. 2017; Buckby et al. 2015; Hines & Peters 2015). Furthermore, there is still limited empirical findings from prior research that could highlight this issue. Therefore, our main research question is "Does the establishment of RMC compared to the appointment of AC (to manage risk) influence investors in evaluating voluntary risk management disclosure?" Our study extends prior literature by investigating the risk governance issues among non-financial companies, in a voluntary setting. We hope our study will offer a significant contribution to the body of knowledge since our study links the recent issues in risk governance with the current issues in risk management disclosure.

Our empirical findings show that the establishment of RMC influence investors' evaluation on VRMD and accordingly increases investors' perception of firm performance. In contrast, the appointment of AC is found to have no significant influence on investors' evaluation of the VRMD and subsequently does not affect investors' perception of firm performance. In the view of investors, the existence of RMC may provide better resources to undertake risk management duties and hence increase the reliability of VRMD. This result also supports signalling theory and conforms to Hines and Peters' (2015) theoretical assertion that the existence of RMC signals a good risk management practice in a company. This result can also be explained through agency theory where in the view of investors, the existence of RMC may promote a better risk governance function because there

is a separate risk management function, apart from the AC, within a company. RMC is established to focus on managing risk while the AC is for giving assurance on the risk management system. The findings of this study may also provide significant contribution in assisting the company and regulatory bodies in the process towards strengthening risk management practices among non-financial companies.

Malaysia provides a good setting to investigate this issue given the establishment of RMC among Malaysian listed companies is still at an early stage on a voluntarily basis. The regulatory bodies in Malaysia have also been inconsistent in suggesting risk governance best practices. For example, MSWG (2010, 2012) and the Central Bank of Malaysia (2010) argue that RMC is the best risk governance mechanism while the Securities Commission, under the Malaysian Code on Corporate Governance – MCCG (2007, 2012) and the Malaysian Institute of Accountants – MIA (2013) emphasize on the role of AC as the best risk governance mechanism. In addition, Malaysia offers a good setting to explore this issue since the capital market in Malaysia is known among the most competitive markets in the world (World Economic Forum 2016). The expected high competition among listed companies in Malaysia may increase proprietary cost and consequently reduce the reliability of risk management information (Moumen et al. 2015).

The discussion is extended in the second section which focuses on the Malaysian risk governance and risk management disclosure environment. The third section discusses the theoretical background and hypothesis development. The fourth section discusses the research method. The fifth section discusses on the findings and finally the sixth section summarises this study.

#### MALAYSIAN RISK GOVERNANCE AND RISK MANAGEMENT DISCLOSURE ENVIRONMENT

Risk governance refers to the corporate governance mechanism which is a given responsibility to manage company's risk. Based on regulations perspective, it is the responsibility of the board of directors (BOD) to provide oversight of the company's risk management (MCCG 2007, 2012). However, prior literature documented that the board normally do not play an active role in risk management because they usually appoint a board committee to manage risks on their behalf (Bursa Malaysia 2011; MSWG 2010, 2012). In Malaysia, with effect from 2010, it became obligatory for financial companies to appoint a stand alone RMC to help the board in managing risk (Central Bank of Malaysia 2010). Non-financial companies, however, are not bound by the said regulation. Even though RMC is considered as the best risk governance mechanism or structure for financial companies, the current Malaysian regulatory bodies such as the Securities Commission and the Malaysian Institute of Accountants (MIA) put more emphasis on the AC to discharge all risk management

duties among non-financial companies. The Securities Commission Malaysia highlights in MCCG (2007, 2012) that the AC can provide better function (including in risk management) if the AC has the qualified characteristics as suggested in the Code such as a large size committee, independent, financially literate and active. The same recommendation has also been made by FRC (2012).

In terms of risk management disclosure, listed companies in Malaysia need to comply with the requirements stated in the Malaysian Financial Reporting Standards (MFRS), Bursa Malaysia listing requirements and Securities Commission's rules and regulations. All the rules and regulations require the listed companies to disclose financial risk management information as outlined in MFRS 7 Financial Instruments: Disclosure. Until today, it is still the company's discretion whether to report non-financial risk management information in the annual report, for instance information about strategic and operations risks (Abdullah et al. 2015). In the lack of specific rules and regulation, companies will have the power to decide the contents of non-financial risk management information and might finally lead to manipulative behaviour.

#### THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Prior studies (such as Abdullah et al. 2015; Miihkinen 2013; Moumen et al. 2015) proved that investors react positively towards the risk management information. Abdullah et al. (2015) provide evidence that the voluntary risk management disclosure increases investors' confidence in the performance and prospects of the Malaysian firms. However, Abdullah et al. (2015) did not investigate the possibility that moderating factors could change investors' reaction towards the information. According to Moumen et al. (2015) and FRC (2011), investors usually tend to be very critical in evaluating risk management information and they take into account the quality of risk governance in evaluating the information. A number of literature agrees that the appointment of AC may provide ineffective risk management oversight that could reduce the reliability of risk management information. Fraser and Henry (2007) found that AC has lack of expertise in risk management while Brown et al. (2009) pointed out that the AC is overburdened with responsibilities if required to monitor the whole internal control system as well as risk management duties. Due to the availability of limited time, it is not possible for the AC to manage risks with focus and utmost efficiency (Brown et al. 2009). Our study argues that, based on resource dependence theory and prior literature, investors might doubt the reliability of risk management information since they might think that the AC has limited resources in providing a thorough risk management oversight (Cabedo & Tirado 2014).

Resource dependence theory generally argue on the advantages of having BOD variety of membership and

committees in enhancing the reliability and usefulness of firms' performance and reported information (Hillman & Dalziel 2003). It is argued that the vast knowledge and experiences of BOD members and committees would interact positively with other external resources and eventually increase firms overall performance (Pfeffer & Salancik 1978). As such we also argue that the appointment of AC and/or specifically through the existence of RMC in firms would also enhance the monitoring of firms' risks and subsequently affect investors' perception of firm performance. However, many prior studies that have investigated on the issue of AC as the monitoring entity on firms' risks tend to argue on the weakness of only having AC as the monitoring entity of firms' risks. This is due to the fact that AC has multiple responsibilities with regards to monitoring firms' internal control as required by the authority such as the Securities Commission Malaysia (within the guidelines of the MCGG). Furthermore, MCGG (2007, 2012) only proposed that AC members must comprise a certain percentage of accounting and finance education and not necessarily any risks management education. And yet, despite the findings on the possible ineffectiveness of having only AC in monitoring firms' risk management, it is still not compulsory for non-financial firms in Malaysia to form a stand-alone RMC apart from AC to manage firms' risks.

Recent literature argue that it is important to have the RMC in firms because RMC members would have more in-depth skills and knowledge in risk management (Brown et al. 2009; Choi 2013; Fraser & Henry 2007). The skills and knowledge is useful in streamlining the risk management communication, both within the company (Brown et al. 2009; Choi 2013) and to the external parties (Subramaniam et al. 2009). The RMC may also provide better risk management work since their tasks are focused on risk management and they have ample time stipulated for risk management activities (Bates & Leclerc 2009; Brown et al. 2009). The existence of RMC is also expected to increase the reliability of risk management information since the establishment of the RMC may signal the commitment and the company's efforts to provide better risk management to safeguard shareholders' interest (Gordon et al. 2009; Hines & Peters 2015; Liebenberg & Hoyt 2003).

In addition, the existence of RMC may increase risk governance independence because the RMC can manage risk while the AC can focus on internal control duties which include giving assurance on the effectiveness of risk management system. However, in the absence of RMC, the AC is responsible for both duties (i.e. to manage risk and give assurance) which can compromise their independence (De Zwaan et al. 2009; Fraser & Henry 2007). Based on agency theory, the separation of roles between committee that manage risk and giving assurance on the risk management, may increase the reliability of risk management information (De Zwaan et al. 2009). Hence, we expect that investors will have more confidence

in risk management information when the RMC manages risk and this eventually and positively influence investors' perception of company's performance. We separate our first hypothesis into 1a for the existence of RMC and 1b for the appointment of AC to manage risks in firms with regards to their moderating effect in the relationship between VRMD and firm performance. We separate the hypothesis mainly to highlight the possible individual significant moderating effect of each risk governance committee. Hence based on our arguments and findings from prior studies, our hypothesis for 1a (for the existence of RMC) is stated as follows:

H<sub>1a</sub> The existence of RMC will significantly moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

With regards to hypothesis 1b (for the appointment of AC to manage risks), we have argued that prior literature provides evidence on the potential ineffectiveness of AC as the only entity to manage firms' risks (for example among others, Brown et al. 2009; De Zwaan et al. 2009; Fraser & Henry 2007). Nonetheless, it is undeniable that AC has been appointed as the universal required entity to manage risks, for example by the Securities Commission of Malaysia, among others. As such, we argue that there have been potential for AC to manage risks appropriately since it is costly for firms to have too many BOD committees. Furthermore, firms should be utilizing their internal audit as well as internal control departments to provide the required information to the AC to cover for potential risks issues in firms (Beasley 2010). The head of internal audit and internal control departments would also eventually be reporting to the future RMC should the firm form such an entity later. In the absence of RMC to specifically manage firms' risks, prior literature has also provide evidence that AC was able to handle and manage firms' risks for the length of many successful firm years (Kallamu & Nor Ashikin 2015) even though with lower effectiveness as argued by other literature. Therefore with that justification, we proposed our hypothesis 1b to be stated as follows:

H<sub>1b</sub> The appointment of AC will moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

Apart from hypothesis 1b, we also proposed hypothesis 2 to argue separately on the potential effectiveness of each AC characteristics investigated in terms of their moderating role in the association between VRMD and FP. Even though the appointment of AC to manage risks is being criticised for not providing effective risk management oversight (Fraser & Henry 2007; Brown et al. 2009), we assume that investors' evaluation of risk management information might be different if the investors know that the reporting company appoint a good quality AC to manage risks. Based on legislative perspective, a good quality AC in Malaysia is the AC that fulfils MCGG's requirements in terms of

size, independence, education and activeness (MCCG 2007, 2012). Hence, this study divides hypothesis 2 into four parts, as follow.

*Audit Committee Size (AC size)* Past studies noted that AC faces difficulties to manage risk with proper perspective and focus due to time constraints as they have already been given heavy responsibilities in the broad job scope of internal control (Bates & Leclerc 2009; Brown et al. 2009; and Fraser & Henry 2007). To make sure the AC has sufficient resources to accomplish all duties, MCCG (2007, 2012) recommended the AC to have a minimum member of 3 persons. The presence of more AC members is expected to increase the AC internal resources that can increase the efficiency of the AC function (Dionne & Triki 2005). Also, Li et al. (2012) noted that the presence of more AC members help AC to obtain diverse opinions and expertise in internal control and risk management. A large number of AC members is also claimed to reduce the problem of earnings managements in financial statements (Lin et al. 2006).

Nonetheless, AC membership that is too large can also create problems similar to the BOD size issue. For example, a too large AC size, just like the BOD situation, could reduce decision making cohesiveness and reduce timely decision making (Jensen 1993; Lipton & Lorsch 1992). As such, similar to the situation of BOD, AC should also have an appropriate number of membership that is most suitable to ensure an optimal output from their decision making activities (Li et al. 2012). Based on the resource dependence theory, we predict investors might be more convinced about the reliability of risk management information when the reporting companies have an AC with a suitable membership size that in the end positively influences investors' perception of firm's performance. It is expected that an AC size having less than 3 membership is considered not suitable for an AC (MCCG 2007). The optimal size is expected to be larger than 3 memberships. Hence, hypothesis 2a is stated as follows:

H<sub>2a</sub> The AC size will moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

*Audit Committee Independence (ACInd)* AC independence is regarded as an important element to increase corporate governance quality. MCCG (2007, 2012) requires company to have at least two-thirds of independent non-executive directors (INED) to be in the AC. Abraham and Cox (2007) found that the presence of INED increases the level of risk management information disclosures in United Kingdom. In contrast, Ismail and Abdul Rahman (2011) found the presence of the INED does not increase the level of risk management information in Malaysia because the INED might have limited knowledge about risks that a particular company faces because of not being involved in the company's operations. Khalil and Maghraby (2017) also found an insignificant negative association between risk management disclosure and INED. However, based on agency theory we predict that the presence of INED is very

important to monitor the management and to protect the interest of the shareholders (Fama & Jensen 1983). It is also argued that the INED is stricter in discharging their duties because they are usually not allied with the management and hence, they are more independent in channelling all risk management information to shareholders (Abdullah 2004).

Nevertheless, it might not be very clear in the case of Malaysian scenario with regards to the issue of INED not being allied with the firms' management. Especially in the case where AC members chosen are normally based on networking relationship between the BOD members or among the controlling institutional shareholders, be it in choosing internal or external directors. Furthermore, institutional shareholders such as the government might put their representatives having poor risks management experience to be on BOD committee which might not increase value to the firms in terms of their presence (Jaffar & Abdul-Shukor 2016). Nevertheless, prior literature generally argue and many times found that in the case of BOD, the existence of INED would usually strengthen the association of accounting disclosures and firm performance (Agyei-Mensah 2016; Tao & Hutchinson 2013). Therefore we also expect that investors would most likely think that the risk management information should be more reliable if the AC has more independent members (Kallamu & Nor Ashikin 2015). Hence, we state our hypothesis 2b as follows:

H<sub>2b</sub> The AC independence will moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

*The Audit Committee Education (ACEdu)* MCCG (2007, 2012) states that all AC members should be financially literate and at least one should be a member of an accounting body. However, Fraser and Henry (2007) found that having knowledge in finance and accounting is not sufficient to enable AC members to manage risk better, especially when it comes to managing non-financial risks. In an interview session, Fraser and Henry (2007) demonstrated that a finance director stated that "... much of our risk is technical rather than financial" (2007: 403). This observation shows that risk management does not only revolve around financial matters, but also a much broader concept that incorporates all areas of a company's operations and the risks related with such operations (such as operations risks, integrity risk and others). In other studies, Ernst and Young (2010, 2011) confirmed that the non-financial risks are the most critical risks that a company faces, compared to the financial risks.

Therefore, prior studies generally suggest that AC members need to have a diverse skill set especially skills in risk management to enable them to manage all non-financial risks properly. Thus, we predict that investors might think that the non-financial risk management information that is disclosed in annual report is less reliable if the risk management issues are handled by the AC whose main knowledge and skills are more related

to finance and accounting and less on risk management. Hence based upon the resource dependence theory which would argue that firms should put in place appropriate people to be responsible for the right job, without which firms' performance will be affected, we state hypothesis 2c as follows:

H<sub>2c</sub> The AC education will moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

*The number of Audit Committee Meetings (ACMeet)* FRC (2012) and MCG (2007, 2012) both agreed for the AC to conduct frequent meetings to facilitate risk management process. Tao and Hutchinson (2013) stated that a more frequent committee meeting may help in streamlining the communication of risk management issues and hence increase the effectiveness of risk management oversight in the company. Bryce et al. (2014) and Lipton and Lorsch (1992) also documented that the more frequent the AC meets, the more active the AC is in discharging their duties. Thus, we predict that investors will view the risk management information as being more reliable when they are aware about the activeness of the AC in managing risks. Undeniably, meetings alone might not be look upon as the only venue to show the reliability of AC undertaking their responsibilities. It is expected that the outcomes of meetings among experience members would be more fruitful compared to meetings among inexperience members. As such, in the case of Malaysian firms, stakeholders might need to have in the first place more trust on the abilities of the AC members in discharging their duties before the stakeholders would believe on the usefulness of the AC members attending more meetings. In the absence of any evidence, we still argue that more meetings among AC members should signal a good effort on the part of the firms to show the seriousness of AC members in undertaking their responsibilities. Therefore, our hypothesis 2d is stated as follows:

H<sub>2d</sub> The number of AC meeting will moderate the relationship between voluntary risk management disclosure (VRMD) and firm performance (FP)

## METHODOLOGY

### SAMPLE SELECTION

This study uses the same sample as Abdullah et al. (2015) which comprises 395 non-financial companies that were listed on the Main Market of Bursa Malaysia in 2011. We exclude financial companies because as aforementioned, the requirement to establish RMC is already obligatory to them (FRC 2011; Central Bank of Malaysia 2010). We use one year data instead of longitudinal basis because prior literatures (e.g. Abraham & Shrivs 2014; Ismail & Abdul Rahman 2011; Miihkinen 2013) found that VRMD is not significantly different between years. For sample selection, this study uses the stratified random sampling

method where population is divided into industry and a random sample from each industry is taken in a number proportional to the industry's size when compared to the population. List of sample is shown in Table 1.

TABLE 1. Sample

Industry Type	No. of population	Population percentage (%)	Sample
Construction	45	6	23
Consumer Products	132	17	67
Hotels	4	1	4
Industrial Products	246	32	126
IPC	7	1	4
Mining	1	0	0
Plantations	42	5	20
Properties	89	11	44
Technology	30	4	16
Trade/ Services	183	23	91
Total	779	100	395

## HYPOTHESIS TESTING MODEL

*Hypothesis 1a and 1b* To test hypothesis 1a and 1b, we adopted an interaction model that has been proposed by Brambor et al. (2006), which is different from the usual method utilized in many prior studies that analyze moderating effects. According to Brambor et al. (2006), the model in equation (1) can be used to test interaction effects between dummy and continuous variable in which the dummy in the moderating variable is discrete and mutually exclusive. Brambor et al. (2006) explains that in equation (1) indicates the effect of a unit change in (continuous variable, where in this study it will be VRMD) when (dummy variable) exist (for instance, = north, where in this study it will be RMC), while indicates the effect of when does not exist (for instance, = south, where in this study it will be AC). It is only necessary to include (where in this study it will be RMC) as a separate variable when the interaction terms included in the model are and because to include both (where in this study it will be VRMD) and in this model may lead to perfect multicollinearity.

$$Y = \beta_0 + \beta_1 Z + \beta_0 X * Z + \beta_0 (X* - Z) + \epsilon \quad (1)$$

In the case of our study, as highlighted above, the VRMD is a continuous variable while both the existence of RMC and the appointment of AC to manage risks, are dummy variables. In this study, for the purpose of our analysis, the assumption is that, the existence of RMC and the appointment of AC to manage risks, are discrete and mutually exclusive in which both conditions would not exist in a company at the same time. Based upon legislative perspective, when a company has an RMC, the responsibility to manage risk is under the RMC portfolio, but in the absence of RMC, regulations states that the AC will automatically be appointed to manage risks (Turnbull Report 1999; MCG 2007, 2012; MSWG

2010,2012; The Institute of Internal Auditors 2005). As such, to test hypothesis 1a and 1b, we adapted equation (1) to incorporate our own testing variables and our testing model is eventually illustrated as follows:

$$FP_{it} = \beta_0 + \beta_1 RMC_{it} + \beta_2 VRMD * RMC_{it} + \beta_3 VRMD * AC_{it} + \beta_4 LnSize_{it} + \beta_5 Lev_{it} + \beta_6 ROA_{it} + \beta_7 Growth_{it} + \beta_8 Industry_{it} + \beta_9 BODSize_{it} + \beta_{10} BODInd_{it} + \beta_{11} CEODual_{it} + \beta_{12} BODMeet_{it} + \beta_{13} AuditQual_{it} + \varepsilon_{it} \quad (2)$$

Where: FP = firm performance, which is proxy by Tobin's Q [(market value of equity + book value of liabilities)/book value of total assets]; VRMD = the level of voluntary risk management disclosure; RMC = 1 if Risk Management Committee is established to manage risks, 0 otherwise; AC = 1 if the AC is appointed to manage risks, 0 otherwise; VRMD\*RMC = the interaction between VRMD and RMC existence; VRMD\*AC = the interaction between VRMD and AC appointment; LnSize = the firm size (natural logarithm of total assets); Lev = leverage (total liability/total assets); ROA = return on assets (Profit after tax /total assets); Growth = Growth (current sales/previous year's sales); BODSize = the size of Board of Directors (number of BOD); BODInd = the independence of BOD (number of Independent Non-executive Director/ number of BOD); CEODual = 1 if the Chief Executive Officer is the chair of the board, 0 if otherwise; BODMeet = the frequency of BOD meetings (number of BOD meetings held throughout the accounting year); AuditQual = 1 if external auditor is from Big 4 audit firm, 0 if otherwise.

The coefficients  $\beta_2$  and  $\beta_3$  will provide evidence on the moderating effect of RMC and AC respectively, in the association between VRMD and firm performance.

*Hypothesis 2* Our regression model to test hypothesis 2 is based on the format of regression model commonly utilized in prior studies that investigate moderating effects situations (e.g. Tao & Hutchinson 2013).

$$FP_{it} = \beta_0 + \beta_1 VRMD_{it} + \beta_2 AC\ size_{it} + \beta_3 ACInd_{it} + \beta_4 ACEdu_{it} + \beta_5 ACMeet_{it} + \beta_6 VRMD * AC\ size_{it} + \beta_7 VRMD * ACInd_{it} + \beta_8 VRMD * ACEdu_{it} + \beta_9 VRMD * ACMeet_{it} + \beta_{10} LnSize_{it} + \beta_{11} Lev_{it} + \beta_{12} ROA_{it} + \beta_{13} Growth_{it} + \beta_{14} Industry_{it} + \beta_{15} BODSize_{it} + \beta_{16} BODInd_{it} + \beta_{17} CEODual_{it} + \beta_{18} BODMeet_{it} + \beta_{19} AuditQual_{it} + \varepsilon_{it} \quad (3)$$

Where, AC size = total number of AC members; ACInd = number of independent AC members/number of AC members; ACEdu = number of AC members with education in accounting and/or finance /number of AC members; ACMeet = number of AC meetings held throughout the accounting year. Measurements for all other variables in the equation are the same as in equation (2).

The coefficients  $\beta_6$  until  $\beta_9$  will provide evidences on the moderating effect of AC size, ACInd, ACEdu and ACMeet respectively, in the association between VRMD and firm performance.

## FINDINGS AND DISCUSSION

### DESCRIPTIVE STATISTICS

Descriptive statistics for all dichotomous and continuous variables are provided in Table 2. Table 2 shows that there are 34.6% out of 395 companies (137 companies) that have established RMC while 65.4% (258 companies) maintain AC as the committee to manage risks. This finding is in line with MSWG (2010, 2012) that found the majority of non-financial companies are more inclined to appoint the AC to manage risk compared to establishing a new RMC. Regarding the CEODual, Table 2 shows that majority of companies separate the functions of chairman and CEO and only 18 companies (4.6%) that have a chairman who also holds the position of CEO. Half of sample companies (50.4%) were audited by the big 4 audit firms and the rest by non-big 4 audit firms. On average, the value of Tobin's Q at accounting year end was 1.010 and this value rose to 1.040 on the date six months after the year end. The ratio greater than 1 indicates that the company's shares are more expensive than the replacement cost of assets, implying a good level of FP. The same table also shows that, on average, companies have three AC members and majority are independent and financially literate. The AC also on average meets 5 times per year. Companies are also found to disclose on average about 28 sentences of non-financial risk management information and a maximum of 210 sentences. Descriptive statistics for other control variables such as firms size, leverage, return on assets, growth, the BOD size, the BOD independence and number of BOD meetings are also shown in Table 2.

### CORRELATION TEST

Table 3 shows the result for Pearson correlation test. All independent variables correlate at level less than 0.800 ( $r < 0.800$ ); hence, indicating that there is no multicollinearity problem (Tabachnick & Fidell 2001). The multicollinearity problem can also be tested through the Variance Inflation Factors (VIF) and Tolerance value. According to Gujarati and Porter (2009), VIF value of less than 10 and Tolerance above 0.1 shows there is no multicollinearity problem. The results of the VIF and Tolerance test during multiple regression analysis are shown in Tables 4 and 5.

### MULTIPLE REGRESSION RESULTS

*Results on Hypothesis 1a and 1b* Abdullah et al. (2015) provided evidence that the VRMD positively affects investors' perception towards FP. As earlier discussed, we expect that investor's perception towards FP will most likely change if the investors take into account the quality of risk governance in evaluating the VRMD (FRC 2011; Moumen et al. 2015). Table 4 shows that

TABLE 2. Descriptive statistics for all variables (N = 395)

Variables	Mean	Median	Standard Deviation	Min	Max
Dichotomous Variables:					
1. RMC	0.346	0.000	0.477	0.000	1.000
2. AC	0.654	1.000	0.477	0.000	1.000
3. CEODual	0.046	0.000	0.209	0.000	1.000
4. AuditQual	0.504	1.000	0.500	0.000	1.000
Continuos Variables:					
1. TobinsQ-ye	1.010	0.819	0.851	0.251	9.818
TobinsQ-6m	1.040	0.816	0.922	0.231	10.926
2. ASize	3.174	3.000	0.390	3.000	5.000
3. ACInd	0.868	1.000	0.161	0.333	1.000
4. ACEdu	0.542	0.667	0.223	0.250	1.000
5. ACMeet	4.868	5.000	0.993	2.000	10.000
6. VRMD	28.000	19.000	27.000	2.0000	210.000
7. LnSize	19.780	19.610	1.4330	15.160	24.450
8. Lev	0.400	0.399	0.196	0.010	1.467
9. ROA	0.040	0.039	0.374	-4.714	4.331
10. Growth	1.146	1.069	0.485	0.000	4.844
11. BODSize	7.365	7.000	1.866	4.000	17.000
12. BODInd	0.457	0.429	0.122	0.167	0.833
13. BODMeet	5.458	5.000	1.941	2.000	19.000

\*Note: ye = year end; 6m = 6 months after year end

TABLE 3. Correlation test (N = 395)

	TobinsQ-ye	TobinsQ-6m	VRMD	LnSize	Lev	ROA	Growth	BODSize	BODInd	BODMeet	ASize	ACInd	ACEdu
VRMD	0.298***	0.298***											
LnSize	0.251**	0.253**	0.533***										
Lev	0.188**	0.161**	0.101*	0.245**									
ROA	0.131*	0.131*	0.070	0.092	-0.119*								
Growth	0.098	0.127*	0.048	0.073	0.014	0.216**							
BODSize	0.128*	0.130*	0.176**	0.327***	0.046	0.094	0.033						
BODInd	-0.053	-0.076	0.075	-0.013	0.075	-0.007	-0.032	-0.363***					
BODMeet	0.132*	0.105*	0.168**	0.142*	0.225**	-0.089	-0.026	0.041	0.157**				
ASize	0.143*	0.137*	0.181**	0.280**	0.113*	0.067	-0.034	0.351***	0.081	0.130*			
ACInd	-0.078	-0.081	-0.048	-0.061	-0.002	0.028	0.081	0.006	0.402***	-0.097	-0.143*		
ACEdu	0.031	0.047	0.053	-0.001	0.014	0.029	0.012	-0.070	0.059	0.073	-0.057		-0.027
ACMeet	-0.051	-0.076	0.103*	0.017	0.225**	-0.098	-0.071	-0.013	0.180**	0.514***	-0.015	0.048	0.077

Note: \*\*\*significant at 0.01 \*\*significant at 0.05 \*significant at 0.10; ye = year end; 6m = 6 months after year end

the interaction between VRMD and RMC existence has a positive and significant effect towards FP ( $\beta = 0.006$ ,  $p = 0.01$ ). These results support hypothesis 1a which states that, the existence of RMC significantly moderates the relationship between VRMD and FP. Hypothesis 1b however is not supported because the result shows the interaction between VRMD and AC has insignificant effect towards FP. Therefore, our findings provide evidence of a different effect of RMC compared to AC in terms of their moderating role towards the reliability of VRMD for our sample firms. Table 4 also shows that the firm size has negative relationship with FP and this result is consistent with Orens et al. (2009). In contrast, leverage is found to have positive relationship with FP. Miihkinen (2013) argued that, higher leverage increases the usefulness of information disclosed by a company and subsequently

reduces agency cost and increase investors' confidence in the FP.

*Further Analysis on Hypothesis 1a and 1b* We run additional analysis to check the robustness of our results. According to Hayes (2005), moderating effects of a variable can also be seen visually through residual plots. Figure 1 demonstrates the observations of RMC existence and AC appointment in which 1.000 (symbol in green color) refers to the RMC existence and 0.000 (symbol in blue color) refers to the AC appointment.  $R^2$  for the RMC existence (0.492) is higher than  $R^2$  for the AC appointment (0.136). This provide further evidence that the relationship between VRMD and FP is stronger in the existence of RMC, compared to the relationship between VRMD and FP at the appointment of AC to manage risks.



TABLE 4. Result for Hypothesis 1a and 1b (N = 395)

Variables	TobinsQ			Tolerance	VIF
	Year end	6 months after year end			
Constant	0.973 (1.930)	1.216 (2.367)**			
RMC	-0.132 (-1.651)	-0.141 (-1.733)		0.327	3.061
VRMD*RMC	0.006 (3.376)***	0.006 (3.205)***		0.281	3.557
VRMD*AC	0.003 (1.399)	0.002 (1.119)		0.286	3.496
LnSize	-0.072 (-2.950)***	-0.080 (-3.197)***		0.332	3.012
Lev	0.625 (5.254)***	0.627 (5.168)***		0.752	1.331
ROA	0.128 (2.029)**	0.120 (1.760)		0.301	3.324
Growth	0.081 (1.019)	0.123 (1.509)		0.836	1.196
BODSize	0.003 (0.229)	0.000 (-0.025)		0.736	1.359
BODInd	-0.206 (-1.093)	-0.302 (-1.573)		0.790	1.265
CEODual	0.038 (0.377)	0.022 (0.212)		0.931	1.074
BODMeet	0.106 (1.468)	0.070 (0.952)		0.829	1.206
AuditQual	0.006 (0.134)	0.034 (0.726)		0.798	1.253
Constructions	-0.404 (-2.381)**	-0.412 (-2.386)**		-	-
Trading/Services	-0.324 (-2.142)**	-0.303 (-1.965)*		-	-
Property	-0.497 (-3.158)***	-0.499 (-3.114)***		-	-
Plantation	-0.339 (-1.986)*	-0.313 (-1.803)		-	-
Consumer Product	-0.239 (-1.539)	-0.232 (-1.470)		-	-
Industrial Product	-0.349 (-2.300)**	-0.403 (-2.604)**		-	-
Other Industries	-0.188 (-1.051)	-0.167 (-0.915)		-	-
Adjusted R <sup>2</sup>	0.261	0.282			
F-Statistics	7.965***	8.742***			

Notes: \*\*\*significant at 0.01 \*\*significant at 0.05 \*significant at 0.10

#No multicollinearity problem exist because VIF < 10; Tolerance > 0.1

TABLE 5. Result for Hypothesis 2a, 2b, 2c and 2d (N = 258)

Variables Variables	TobinsQ			Tolerance	VIF
	Year end	6 months after year end			
Constant	1.174 (1.856)*	0.995 (1.494)			
VRMD	0.005 (2.052)*	0.016 (1.433)		0.540	1.851
ACSize	0.042 (0.499)	0.138 (1.496)		0.290	3.444
ACInd	-0.030 (-0.135)	0.129 (0.548)		0.352	2.845
ACEdu	0.093 (0.719)	0.218 (1.395)		0.508	1.970
ACMeet	-0.208 (-1.436)	-0.316 (-1.684)		0.446	2.241
VRMD*ACSize	0.001 (0.360)	-0.002 (-0.833)		0.264	3.793
VRMD*ACInd	0.001 (0.294)	-0.003 (-0.491)		0.286	3.490
VRMD*ACEdu	-0.002 (-0.919)	-0.008 (-1.596)		0.349	2.866
VRMD*ACMeet	-0.001 (-0.453)	0.000 (0.291)		0.311	3.213
LnSize	-0.079 (-3.184)***	-0.084 (-3.360)***		0.366	2.735
Lev	0.641 (5.349)***	0.648 (5.323)***		0.804	1.243
ROA	0.100 (1.262)	0.086 (1.057)		0.308	3.243
Growth	0.087 (1.069)	0.126 (1.530)		0.877	1.141
BODSize	-0.003 (-0.246)	-0.008 (-0.558)		0.665	1.504
BODInd	-0.233 (-1.037)	-0.324 (-1.410)		0.780	1.282
CEODual	0.052 (0.510)	-0.024 (-0.232)		0.953	1.050
BODMeet	0.191 (2.349)*	0.159 (1.921)		0.877	1.140
AuditQual	-0.004 (-0.095)	0.023 (0.495)		0.809	1.236
Industries	Included	Included			
Adjusted R <sup>2</sup>	0.262	0.287			
F-Statistics	6.382***	7.107***			

Notes: \*\*\*significant at 0.01 \*\*significant at 0.05 \*significant at 0.10

#No multicollinearity problem exist because VI F < 10; Tolerance > 0.1

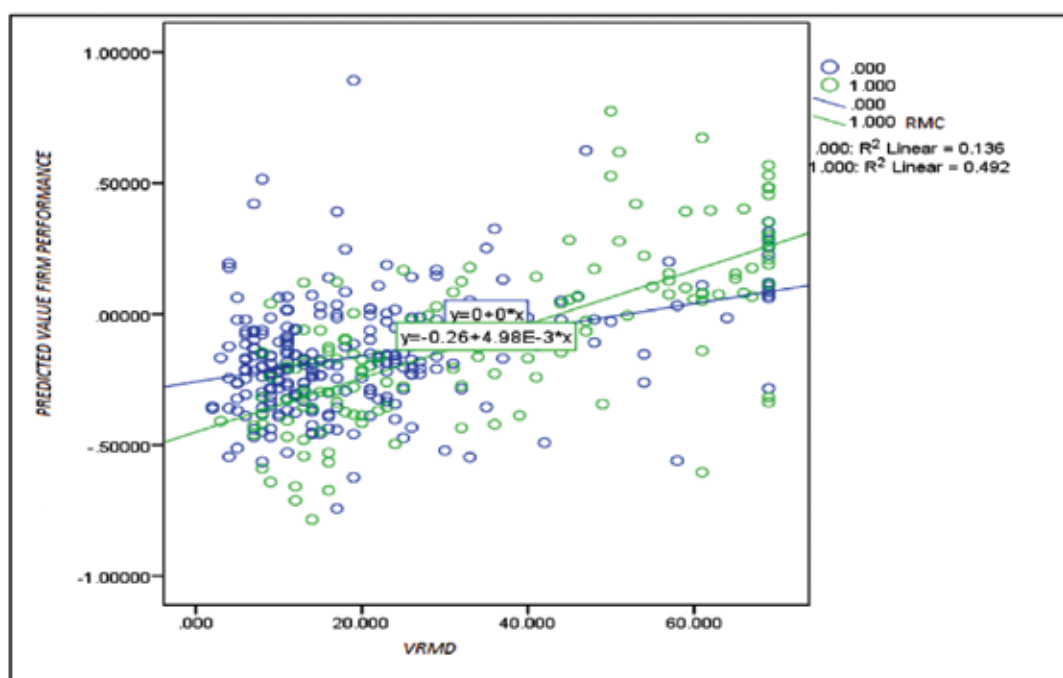


FIGURE 1. Residual plots for RMC existence and AC appointment

Overall, our results show that the establishment of RMC strengthens the relationship between VRMD and FP. These findings conform to Hines and Peters' (2015) theoretical assertion that the existence of RMC may signal good risk management practices and hence increase the reliability of risk management information. The existence of RMC also signals company's commitments and efforts to manage risks so as to protect investors' interest (Gordon et al. 2009). These findings can also be explained through agency theory, where separation of roles between RMC and AC in risk management duties may increase the reliability of the VRMD and hence increase the perception of investors towards FP. The appointment of AC to manage risks does not seem to influence investors in evaluating VRMD for the sample of our study. This result is consistent with those of Henry (2008), which also found the existence of AC does not affect investors' perception of the FP in Australia. We further explored the moderating effects of AC quality on the relationship between VRMD and FP. The results are shown in Table 5.

*Results on Hypothesis 2* Table 5 shows the AC size has no moderating effect on the relationship between VRMD and FP. This finding leads to the rejection of Hypothesis 2a. This result implies that investors do not see the AC size as a good risk governance mechanism that can influence their evaluation of the VRMD. This finding is consistent with prior studies that found AC size has no effect on the internal control quality (Krishnan 2005), the accounting information quality (Bryce et al. 2014) and earnings management (Mohd-Saleh et al. 2007). Ferreira (2008) and Mohd-Saleh et al. (2007) asserted that the quality of individual audit committee member is more important than

AC size because having more members does not mean the AC is more capable to perform their duties optimally. The investors perhaps might also think similarly and hence they do not take into account the AC size in evaluating VRMD.

Table 5 also shows that the ACInd does not affect the relationship between VRMD and FP. The finding is consistent with Klein (1998) that documented the AC independence does not influence investors' perception towards FP. Hence Hypothesis 2b is not supported. Agency theory suggests that the involvement of independent non executive directors (INED) in the AC will increase the effectiveness of firms' monitoring function (Fama & Jensen 1983; Mohd-Saleh 2007). On the contrary, our result shows that investors do not perceive the presence of INED as increasing the reliability of VRMD. These findings are in line with prior studies (such as Daly & Bocchino, 2006; Fraser & Henry 2007) which documented that AC lack risk management knowledge because they are not involved in company's daily operations (Klein 1998). The independent AC members might also lack detail knowledge on the risks that a company faces and how the risks are being managed (Fraser & Henry 2007). Since the investors are aware that the independent AC members are not directly involved in managing risks, it is assumed that the investors hence do not take into account the AC independence in evaluating VRMD.

Even though Hypothesis 2c stated that the ACEdu will moderate the relationship between VRMD and FP, the finding shows that investors actually do not take into account the finance and accounting education in evaluating VRMD. This finding is consistent with Dionne

et al. (2015) that also demonstrated the AC education does not influence investors' perception towards company performance. Regarding ACMeet, Table 5 shows that investors disregard the AC activeness in assessing VRMD. The result is consistent with Bédard et al. (2004) and Davidson et al. (2005) that documented the number of AC meetings do not increase AC function in monitoring earnings management activities. The investors might also doubt the activeness of the AC in risk management because they do not know how far the risk management issues are being discussed in the AC meeting. The AC usually meets for a few times a year and investors might have doubt in terms of the depth of risk management issues discussed in the normally short time period of meetings (Agrawal & Chanda 2005).

*Additional Analysis on Hypothesis 2* This study runs an additional analysis to test Hypothesis 2 by measuring AC quality based on an index. A score is given if the company possesses every quality characteristics of AC (i.e. quality characteristics in terms of AC size, ACInd, ACEdu and ACMeet). Table 6 shows investors do not take into account the level of AC quality in assessing VRMD. This finding is

consistent with the findings that have been shown in Table 5. A conclusion that can be made regarding Hypothesis 2 is, investors seem to ignore the AC quality in assessing VRMD possibly because the AC quality characteristics have been imposed through the MCCG. Thus, investors do not perceive the AC quality as a symbolic of risk governance quality and all companies are expected to comply with the Code.

## CONCLUSION

Our paper addresses the question of whether the establishment of RMC and the appointment of AC matters for investors in evaluating risk management information. The main hypothesis predicts that the establishment of RMC will provide better reliability on risk management information compared to the appointment of AC. Our findings show that the existence of RMC as the entity that manage risks do increase the reliability of risk management information compared to the existence of AC as the committee to manage risks in our sample firms.

TABLE 6. Result for additional analysis on Hypothesis 2 (N = 258)

Variables	TobinsQ	
	Year End	6 months after year end
Constant	0.518 (0.783)	0.680 (1.007)
VRMD	0.002 (0.691)	0.002 (0.671)
ACIndex	0.032 (0.679)	0.029 (0.671)
VRMD*ACIndex	0.000 (0.051)	-0.000 (-0.187)
LnSize	-0.075 (-2.401)**	-0.077 (-2.437)**
Lev	0.602 (4.286)***	0.611 (4.258)***
ROA	0.050 (1.046)	0.048 (0.962)
Growth	0.029 (0.315)	0.095 (1.027)
BODSize	0.018 (1.144)	0.014 (0.842)
BODInd	0.037 (0.151)	0.013 (0.812)
CEODual	0.071 (0.649)	0.006 (0.055)
BODMeet	0.034 (0.356)	0.009 (0.091)
AuditQual	0.024 (0.443)	0.063 (1.154)
Industries	<i>Included</i>	<i>Included</i>
Adjusted R <sup>2</sup>	0.163	0.192
F-Statistics	3.508***	4.049***

Note: \*\*\*significant at 0.01 \*\*significant at 0.05 \*significant at 0.10

To some extent, this provides preliminary evidence on the usefulness of RMC establishment in a company.

We also test the moderating roles of AC quality which consist of AC size, independence, education and activeness. Our empirical analysis shows that investors do not take into account the AC quality in evaluating risk management information. The justification is that the AC quality characteristics have been imposed through the Malaysian Code on Corporate Governance and all companies are to comply with this recommendation. In the view of investors, possibly it is observed as a minimum requirement and hence they do not perceive the AC quality to create “added value” that can improve current risk governance practices and hence do not influence their judgement on risk management information. These results extend our understanding in resource dependence theory whereby the RMC is viewed to have enough risk management resources to provide sound risk management practices in a company. Our findings have also extended agency theory whereby the RMC is regarded as a good risk governance mechanism that could increase risk governance independence and eventually increase investors’ confidence in the risk management information. Our results are expected to be of relevance to the company and regulatory bodies in Malaysia such as Securities Commission in terms of providing empirical evidence on new direction to strengthen risk governance practices among non-financial companies. Specifically, we suggest the management of company to establish RMC as a separate committee from AC to manage firm’s risks.

Notwithstanding our findings, we would like to caution on the generalizability of our findings since we only utilize on a one year data, hence limited to a one time economic situation only. Future studies might incorporate a longitudinal data in their analysis to cover for multiple economic time periods. Besides that, future studies might also consider another method to analyze the moderating effect between RMC and AC such as match-pair method, among others. Future studies can also extend on other AC qualities, such as skills and knowledge of AC members in risk management. We do not include the skills and knowledge in risk management because our focus is to provide evidence based on current recommendation by the MCCG (2007, 2012).

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