

Determinants of Enterprise Risk Management Adoption: An Empirical Analysis of Malaysian Public Listed Firms

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Abstract—Purpose: This paper aims to gain insights to the influential factors of ERM adoptions by public listed firms in Malaysia.

Findings: The two factors of financial leverage and auditor type were found to be significant influential factors for ERM adoption. In other words the findings indicated that firms with higher financial leverage and with a Big Four auditor are more likely to have a form of ERM framework in place.

Originality/Value: Since there are relatively few studies conducted in this area and specially in developing economies like Malaysia, this study will broaden the scope of literature by providing novel empirical evidence.

Keywords—Enterprise Risk Management, Risk, Public Listed Company

I. INTRODUCTION

AS the dynamics of the market and business environment are ever changing for almost all industries, it becomes harder for companies to plot the right course for their continued success [18]. One fundamental concern in today's dynamic environment for organizations is risk management. Traditional risk management focused on individual risks existing in the organizations with a silo-based perspective. However, today this perspective has undergone an extreme evolution and organizations view risk management from a holistic perspective. This holistic approach towards managing risk in an organization is often referred as *Enterprise Risk Management* (ERM) [15]-[28]. In today's business environment firms have become more risk-aware and this may be the result of corporate governance scandals and improper financial management cases and also terrorist attacks threat for firms [28]. Since its inception, ERM has gained a large momentum in the literature and many researchers have provided insights of factors influencing organization to implement ERM (i.e. see [2], [15], [19], [20]).

In the academic literature there are various studies, which have linked implementation of the new financial technology of ERM with improved firm performance (e.g. [9], [13], [15], [17]). In contrast there are also many studies in academia surrounding the drawbacks and challenges that firms may face in implementing an ERM framework [1]-[16]-[27]. Meanwhile, adoption of ERM is still a voluntary concept among the firms. Moreover, as the research studies demonstrate, although ERM is known as an effective and useful tool for managing risks surrounding today's firms, not all firms have adopted ERM yet. For instance [19] have identified only 26 firms in the US that have adopted ERM during 1997 to 2001, and even the most recent study of [20] detected only 138 firms in the US, which have adopted ERM framework during 1999-2005. Another example is the survey results of the Economist Intelligence unit, which discovered that only 41 percent of companies in Europe, North America, and Asia have adopted some form of ERM. The reason behind this fact is that there still exist many barriers and challenges for designing and implementing such a comprehensive approach for managing risk across the firm. Some of the challenges based on [17] include the resistance of board of directors or senior executives, improper understanding of top-down approach and confusion about the purpose of ERM adoption as merely to comply with regulations. Therefore, it can be concluded that there are certainly many factors that act as drivers for the adoption of this relatively recent organizational development. Hence, it is necessary to study common factors among firms, which have adopted ERM. To date there have been a few studies which have considered the aforementioned problem and studied the factors which urges firms to adopt ERM framework (e.g. [2], [13], [19], [20], [23]). All the aforementioned studies have been carried out in the US and there are very few studies, which have examined this issue among companies incorporated and listed in developing countries. This research study focuses on one of the quickly developing economies, namely Malaysia, which is the 32nd fastest growing economy with 7.2% GDP growth rate in 2010 [6]. Throughout this study the determinants for adopting an ERM framework in Malaysian public listed firms will be identified.

II. LITERATURE REVIEW

Risk is a phenomenon that by definition and by nature cannot be eliminated. Although risk and uncertainty are often used interchangeably, there is a distinction between them.

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Uncertainty is referred to not being sure of what is going to happen in the future and risk is the degree of this uncertainty [12]. Traditionally when one talked about risk management, what came to mind was rather insurance, broker or auditor. The concern was on the negative impacts of risk exposures and the risk specialist job was only to diminish this negative impact to its least level. However, in recent years the concept of enterprise risk management has emerged. In ERM the focus is on both positive and negative side of the risk [24].

There are various definitions of ERM appeared in the literature. Reference [4] stated that ERM is a process of determination and analysis of risk from an integrated, enterprise-wide perspective. Reference [19] which is an often cited study in the field of enterprise risk management has mentioned that ERM enables organizations to take advantage of a broad and integrated approach to risk management. This approach is more offensive and strategic unlike the silo-based risk management, which was primarily a defensive method of managing risk. According to [25] and [28], ERM is a fundamental element of modern business. From their perspective, in ERM risk management's focus has changed from merely operational hazards and financial risks to a much more strategic view of opportunities and threats. In their view, ERM is a robust and dynamic risk management framework, which elevates the appetite for upside risk. And finally yet importantly COSO, which is known mainly as the inventor of ERM framework among scholars, has defined ERM as:

"a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives [9]".

To the author's knowledge there are only few studies, which have focused on the influential factors of ERM adoption among firms. Table I provides an overview of these studies.

TABLE I
COMPARATIVE STUDIES ON ERM ADOPTION AMONG FIRMS, SOURCE:
AUTHOR'S COMPILATION

Authors	Type	Focus
Liebenberg & Hoyt (2003)	Quantitative study including 26 firms in the US	Determinants of ERM adoption including firm size, firm industry, earnings volatility, stock price volatility, average leverage, average market-book value ratios, financial opacity, average institutional ownership, subsidiaries' countries
Beasley, Clune, & Hermanson (2005)	Quantitative study of 123 firms in the U	Influential factors on extent of ERM adoption including Presence of CRO, independence of board of directors, management commitment, auditor firm type, firm size, firm's Industry, firm's country

Authors	Type	Focus
Pagach & Warfield (2011)	Quantitative study of 138 firms in the US	Examining the characteristics of firms that hire chief risk officer (CRO). These characteristics include four perspectives of financial, asset, and market perspectives

The factors influencing ERM adoption, which were mainly mentioned in table I, are discussed below.

- *Firm Size*

It is a logical argument that when an organization's size increases, the nature, timing and the extent of the events threatening it will be different as well. Additionally, larger entities are able to dedicate greater resources for implementing ERM [2]. Consistent with these rational theories [8] found that larger firms are more likely to implement integrated risk management concepts than smaller firms. Consistent with these results the study of [20] who investigated the characteristics of firms that hire CROs revealed that larger firms have greater risk of financial distress and more volatile operating cash flows and as a result they are more likely to adopt ERM practices.

H1: Larger firms are more likely to implement ERM.

- *Firm complexity*

Firm complexity is referred to the number of business segments within a firm [11]. This means that a firm with higher number of business segments is considered more complex. According to [15] and [20] firms, which are more complex are more likely to implement ERM concept.

H2: Firms that are more complex are more likely to implement ERM.

- *Firm's Industries*

The fact implies that some industries are more regulated than the others. Therefore, firms operating in intensive-regulated industries are more likely to adopt ERM and they have been at the forefront of ERM implementation. Two examples of these regulated industries are financial firms and energy firms [20].

Moreover, industry competition acts as a fundamental concern for all the organizations. At one hand, in some industries, there are many firms providing the same services/products and therefore services/products of a firm's competitor are a substitute for the firm's services/products. This kind of industry is referred as a competition-intensive industry and firms operating in them face substantial risk of not earning a sustainable level of profits. On the other hand, in some industries firms have monopolistic situation. In such a situation firms face a relatively low risk of not earning a sustainable level of profits, while as long as the demand for such a product/service exists the firm will have sales and will earn profits.

Due to the above reasons, the industry that a firm operates in is assumed as an influencing factor for ERM adoption among firms. As such, [2] in their study of the level of ERM adoption of 123 firms found that firms in banking and insurance industries have deployed further-developed ERM.

Consistent with this result [19] and [20] affirmed that firms in financial services industry have long been implemented ERM. Also among studies performed to identify riskiest industries utilities, telecommunications, and oil & gas have been determined to be industries with highest risk [14].

H3: Firms operating in banking, insurance, utilities, and telecommunication industries are more likely to implement ERM.

- *Country of domicile for the firm's headquarter as well as the subsidiaries*

Various rules and regulation in different countries such as Sarbanes Oxley Act and Australia or New Zealand 4360 standard have acted as an external pressure for firms to adopt ERM concept. As [2] has mentioned ERM frameworks were invented in United Kingdom, Australia, New Zealand, and South Africa before the emergence of COSO's ERM framework. Moreover, [21] claimed in their survey that 46% of Asia-Pacific CEOs strongly agreed that ERM is a top priority compared to only 28% of their US counterparts. Additionally, as in [19] firms based in United Kingdom and Canada are more likely to adopt an ERM program than firms headquartered in the US.

H4: Firms headquartered or having subsidiaries in United Kingdom, Canada, Australia, and New Zealand are more likely to implement ERM framework.

- *Financial leverage*

Average leverage of a firm is considered to be an influencing factor in ERM implementation decision making [19]. Firms with higher financial leverage have higher cost of financial distress [20]. In a similar vein, higher financial leverage indicates that the firm is depending more on debts to payout its liabilities and therefore it would face higher risk of defaults. Therefore, it is reasonable that a firm with higher amount of leverage is more likely to adopt ERM in order to decrease the risk of debt-payout defaults.

H5: Firms with higher amounts of leverage are more likely to adopt ERM concept.

- *Presence of the Big Four auditors*

Reference [2] shows that the stage of ERM implementation is positively affected by the firm's auditor type. They have proved that if the firm's auditor is one of the Big Four (KPMG LLP, Ernst & Young LLP, PriceWaterhouseCoopers LLP, and Deloitte Touche Tohmatsu Limited [26]) the firm is more likely to have adopted a more-developed framework of ERM. The rationale behind his argument is that the Big Four audit firms are more careful about ensuring the transparency and error-freeness of firms' annual reports while they have a greater reputation to uphold [22].

H6: Firms, which have one of the Big Four accounting firms as their auditor, are more likely to have adopted ERM framework.

- *Independence of board of directors*

While today's market situation guides organizations to embed some risk-taking framework, in many cases the board and the management do not have shared perspectives of risk, reward preferences, and trade-offs. Meanwhile, the board of directors in many organizations, who are the ultimate stewards

of the company's capital, are often unaware of their responsibility in developing a risk management strategy within the organization [5]. On the other hand, management should realize that their responsibility differs from that of the board. Management is accountable for developing strategies and business plans that are consistent with the board's risk-taking approach. Fig. 1 presents the risk contract between the board of directors and the management.

Hence, as fig. 1 shows, the independency of the board of directors from the management team of an organization is a crucial factor of ERM implementation throughout the firm.

Meanwhile [2] revealed that independence of the board of directors will positively affect the stage of ERM implementation among firms.

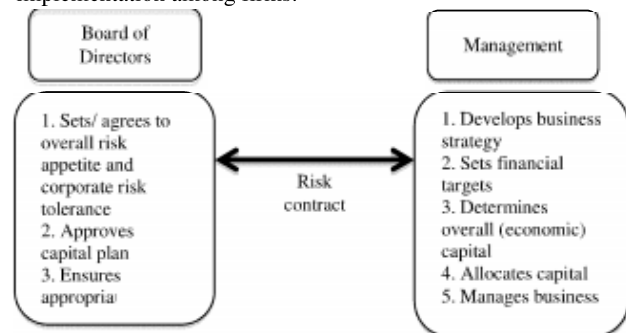


Fig. 1 The risk contract between the board of directors and the management, Source: [5]

H7: Firms with higher percentage of independent board of directors are more seemingly to adopt ERM framework.

- *Assets' opacity*

Reference [20] in their relatively large study of 138 firms found that firms with more opaque assets are more likely to implement ERM. The opacity of assets is referred to the tangibility of assets. Firms that have more intangible assets often have more difficulty in selling these assets at their true value. One main reason behind this is that intangible assets are associated with more asymmetry of information and they are more likely to be underrated [20].

H8: Firms with more opaque assets are more likely to adopt an ERM program.

- *Stock price volatility*

References [19] and [20] both hypothesized that stock price volatility plays as a determinant of ERM adoption. However, [19] did not support this hypothesis. On the other hand [20] claimed that insignificant result of [19] was due to the small sample size (n = 26 firms), and their study resulted in contrary significant result. In order to investigate these inconsistent results the following research question will be gauged through this study:

H9: Firms with higher stock price volatility are more likely to adopt ERM.

- *Institutional ownership*

Nowadays external stakeholders are more and more requesting information about the nature and amount of risk that a firm undertakes. This pressure from the external stakeholders would even become more intense when the

majority of the external stakeholders are other firms and organizations. This factor's effect on ERM adoption has been also investigated in researches by [19] and [20]. Only the latter one has proved the significance of this hypothesis. Therefore, to test this hypothesis the following research question will be examined in this research:

H10: Firms, which have higher percentage of institutional owners, are more likely to adopt an ERM framework.

Based on the hypotheses presented above the conceptual framework depicted in fig. 2 will be assessed throughout this study.

III. METHODOLOGY

A. Sample

In order to examine the effect of the hypothesized factors on ERM framework adoption among firms, the sample was derived from the main board of the Malaysian Bourse (Bursa Malaysia). This study began with a search for companies that indicated they were utilizing ERM framework or that they have a chief risk officer or equivalent position in their annual reports. At the time this study was conducted totally 993 firms were listed on the main board of the Malaysian Bourse. The sample firms were gained through searching for various terms, which are indicators of ERM framework adoption based on the studies of [15] and [19], and [20]. The terms that the author searched for in Malaysian Bourse database include "enterprise risk management", "chief risk officer", "senior risk management", "risk management director", "vice president risk management", and "vice president enterprise risk management". After searching these terms on Malaysian Bourse database, totally 379 results were obtained, out of which only 142 firms were identified to have adopted ERM framework. These 142 results were gained by reading the complete sentences that contained the above terms to gain a better understanding of whether or not the ERM framework is actually being used. Moreover, repetitive results of one firm have been omitted and only the earlier result has been recorded. Each observation is unique to a firm, in the sense that it represents the firm's first announcement since its date of incorporation. By executing the search without any period limit in the Malaysian Bourse database, we hope to capture the adoption of an ERM framework by all public listed firms in Malaysia. Appendix A is meant to present some examples of these key terms disclosure in companies' annual reports.

Thereafter, matching each firm to their top competitor created a control sample for the ERM-adopting firms. The purpose for shaping this control sample was to examine the significant factors, which have resulted ERM adoption. The reason for choosing one of the top competitors as the matching control sample was that the competitor is in the same industry, and normally has closest total assets to the ERM-adopter firm. For identifying the top competitor with closest total assets the ISI Emerging Markets database has been utilized.

By following the above-explained approach the sample population resulted in totally 284 firms 142 ERM adopters and 142 non-ERM adopters. However, only 90 companies out of

284 ones were selected for conducting this research through simple random sampling method. These 90 companies included 48 ERM adopter firms and 42 non-ERM adopter firms. The list of 48 ERM-adopting firms used for this study is presented in Appendix B.

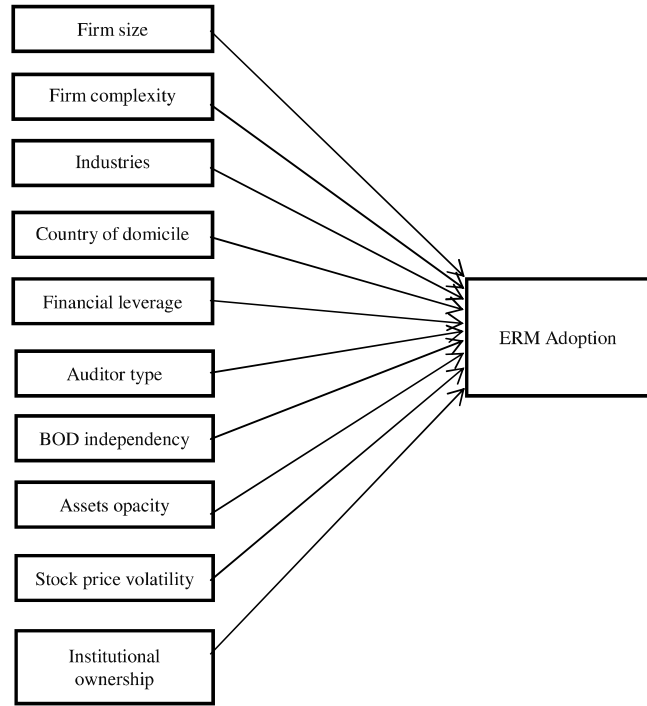


Fig. 2 The research conceptual framework

The data required for measuring the variables included in this research were extracted primarily from selected companies annual reports of the year prior to ERM adoption following the approach used by [3]. Another source used to extract financial data of the sample firms was Datastream database. This database is provided by Thomson Reuters and covers all public listed companies worldwide, including Malaysia. Datastream is the world's largest financial statistical database.

B. Variables' Measurement

• ERM Adoption

Most studies in the literature that identify the determinants for ERM adoption by firms across the world have used chief risk officer (CRO) appointment as a proxy for ERM implementation among firms. Examples include: [10], [19], and [20]. The main reason for utilization of this proxy for measurement of ERM adoption is that most firms tend not to disclose complete information about their risk management programs. Meanwhile the research of [2] revealed that presence of CRO is associated with a more intense adoption of ERM program among firms. However for having a more precise measurement, the measurement used by [15] has been followed. Reference [15] searched for the relevant terms in

companies' 10K or 10Q reports. For this study the following terms have been searched in Malaysian Bourse official website at URL address: <http://www.klse.com.my/website/bm/>

- "Enterprise risk management",
- "Chief risk officer",
- "Senior risk management",
- "Risk management director",
- "Vice president risk management",
- And "vice president enterprise risk management".

Consequently, the sentences containing the following key words have been read to have a more comprehensive understanding whether or not ERM concept is used in the firm. Those cases where firms are only adopting a partial risk management or a silo-based risk management are eliminated from the sample.

The measurements used for the variables included in this study are presented in table II.

TABLE II
VARIABLES' CODING AND MEASURES

Variable	Variable Measure	Source
ERM Adoption	Dummy variable ERM adopted=1 ERM not adopted = 0	Bursa Malaysia Database
Firm Size	Ln (Total Assets)	Thomson Reuters Datastream
Firm Complexity	Number of segments	Firms' Annual Report

Variable	Variable Measure	Source
Firm Industry	Dummy variable Banking, insurance, utilities, telecommunication = 1 Otherwise=0	Star Online Business Database
Country of domicile	Dummy variable HQ or Subsidiary in UK, Canada, Australia, New Zealand=1 Otherwise= 0	Firms' Annual Report
Financial Leverage	Debt to Asset ratio	Thomson Reuters Datastream
Presence of a big 4 Auditors	Dummy variable Audited by KPMG, Ernst, PWC, or Deloitte Touche Tohmatsu =1 Otherwise=0	Firms' Annual Report
Independence of BOD (percent)	Number of independent members of the board/total number of BOD*100	Firms' Annual Report
Assets' Opacity	Intangible assets/total asset	Thomson Reuters Datastream
Stock price volatility (MYR)	Difference of year high and year low stock price	Thomson Reuters Datastream
Institutional Ownership (percent)	Number of shares owned by institutions/ total number if firm's shares *100	Firms' Annual Report

IV. FINDINGS AND DISCUSSION

The univariate statistics are presented in table III. This table mainly represents the differences of ERM adopters and non-adopters in terms of the magnitude of means differences. Moreover, in this table the standard deviation, minimum, and maximum for each independent variable is presented.

TABLE III
UNIVARIATE STATISTICS

Variables	N	ERM Adopters N= 4				Non-ERM Adopters N= 4			
		Mean	SD	Min	Max	Mean	SD	Min	Max
Firm Size	90	17.98	3.12	9.31	25.24	17.58	2.82	12.91	21.80
Firm Complexity	90	3.02	1.95	1.00	7.00	3.40	1.98	1.00	10.00
Firm Industry	90	0.19	0.39	0	1	0.14	0.35	0	1
Firm's HQ/subs country of domicile	90	0.21	0.41	0	1	0.24	0.43	0	1
Financial Leverage	90	0.41	0.31	0.06	1.45	0.31	0.15	0.08	0.79
Presence of a Big Four audit	90	0.81	0.39	0	1	0.50	0.51	0	1
Independence of BOD (Percent)	89	37.09	10.6	16.7	71.43	37.91	12.44	15.38	71.43
Assets' Opacity	90	0.04	0.09	0.00	0.53	0.03	0.08	0.00	0.46
Stock price volatility (MYR)	80	1.03	1.92	0.00	12.50	0.67	0.47	0.08	1.72
Institutional Ownership (percent)	90	89.36	18.3	7.54	100.00	87.24	19.70	1.92	100.00

A. Independent sample T-Test

Sample T-test is used to examine the significance of mean differences presented in table III. The result is demonstrated in table IV. The results indicate that there is significant difference between ERM adopters and non-ERM adopters in terms of their financial leverage and engaging a Big Four auditor at 5 percent and 1 percent significance level respectively. Moreover observing the eta squares calculated for each variable reveal that financial leverage has a moderate effect on ERM adoption ($\eta^2= 4.56$) while having a Big Four Auditor has a large effect ($\eta^2= 11.56$) [7]. This result is consistent with the findings [19] and [20].

TABLE IV
T-TEST OF MEANS

Variables	N	T-test for Equality of Means		Eta squared (percent)
		t	Sig. (one-taile	
Firm Size	90	0.632	0.2645	0.50
Firm Complexity	90	-0.926	0.1785	1.06
Firm Industry	90	-0.562	0.288	0.39
Firm's HQ or subsidiaries country of domici	9	0.3	0.3	0.1
Financial Leverage	90	1.954	0.0275*	4.56
Presence of a Big 4 Auditor	90	-3.234	0.001**	11.56
Independence of BOD	89	-0.337	0.3685	0.14
Assets' Opacity	90	.127	0.4495	0.02
Stock price volatility	80	1.132	0.1305	1.58
Institutional Ownership	90	0.529	0.299	0.35

* Significant difference of means at 5% level
** Significant difference of means at 1% level

B. Logistic Regression

For testing the predictive power of each variable in ERM adoption logistic regression has been utilized. The result of the test is presented in table V.

TABLE V
VARIABLES IN THE EQUATION

Variables	Wald statistics	Bvalue	Sig.
Firm Si	0.00	0.00	0.9
Firm Complexity	1.458	-0.175	0.227
Firm Industry	0.131	0.261	0.717
Firm's HQ or subsidiaries country of domicile	0.120	-0.220	0.729
Financial Leverage	3.474	2.191	0.062*
Presence of a Big 4 Audit	5.1	1.3	0.016
Independence of BOD	0.032	-0.004	0.858
Assets' Opacity	0.067	0.754	0.796
Stock price volatility	0.233	0.194	0.629
Institutional Ownership	0.040	-0.003	0.841

* Contributing predictor of ERM adoption at 10% significance level
* Contributing predictor of ERM adoption at 5% significance level

The B values listed in second column are used to identify the direction of the relationship of each of the factors with ERM adoption. For the two contributing factors to ERM adoption with significant p-values (financial leverage and presence of a Big Four Auditor) the relationship is positive. From the result of the logistic regression it can be concluded that ERM adoption is positively associated with having a Big Four auditor, plus being more leveraged. This result is consistent with the findings of [3], [19] and [23].

V. CONCLUSION

The main objective of this study was to identify the most influential factors that impulse ERM adoption among firms. From the results of this study it can be concluded that firm's financial leverage and presence of a Big Four auditor are the two influential factors of ERM adoption. In fact firms with high financial leverage finance higher portion of their liabilities through debt rather than equities. Therefore, they have higher cost of financial distress. Meanwhile highly leveraged firms should disclose their risk exposure comprehensively in their financial reports in order to reveal their commitment to the existing debt holders and their future creditors. Hence, it is reasonable that they employ an ERM framework in order to mitigate the risks. Also the reason that engaging a Big Four auditor has a significant influence on ERM adoption is that the Big Four auditors have higher reputation to maintain; therefore they take the necessary actions to ensure the highest quality of financial reporting according to the regulations and standards. On the other side, one major driver of many ERM adoptions around the world is the pressure of regulations. Hence, the Big Four auditors are more likely to recommend their clients about ERM adoption.

While this study makes an important contribution to academia by expanding the knowledge about risk management and the recent developed ERM concept, it provides value to practitioners as well. ERM professionals can benefit from the results of this research by understanding, which firm-specific characteristics call for implementation of ERM framework. The results of this study indicate that firms should consider some factors internally and externally in the surrounding environment when making decisions for implementing ERM. Meanwhile, this study contributes significantly to regulatory parties who enact corporate governance rules.

Like every other study in social sciences, this study has confronted with some limitations as well. One of the limitations is that for the purpose of this study secondary data was gathered. Although the most important advantage of secondary data is its availability, an inherent disadvantage is the question of its accuracy. It is recommended that future research would be conducted through questionnaire surveys or in-depth interviews to provide more meaningful insights to the findings of this research.

Another limitation of this study was using single measures for each variable. Some of the measures may have not been the best proxy for the measured variables. For instance a dummy variable of 0 and 1 has measured the dependent variable of this study, which is ERM adoption. The value 1

indicates that the firm has disclosed either having a CRO (or equivalent position) or practicing ERM directly in their annual report. Otherwise this variable is set to zero. This may have not been a sufficient proxy for this variable while some firms might not have disclosed ERM adoption in their annual reports even though they practice it.

Finally other researchers may study influential factors behind ERM adoption in other countries and compare it with Malaysia, which is one of the fastest developing economies.

APPENDIX

A. ERM Adoption Disclosures

Some examples of ERM adoption disclosures in the firms' annual reports are presented in table VI.

TABLE VI
EXAMPLES OF ERM ADOPTION DISCLOSURES

No.	Company Name	Disclosure
1	HONG LEONG BANK BERHAD	<p>"In January 2002 the Chief Risk Officer ("CRO") of the Group was identified as custodian of the Integrated Risk Management Framework. The CRO is responsible to:</p> <ul style="list-style-type: none"> Evaluate all identified risks for their continuing relevance in the business environment and inclusion in the Integrated Risk Management Framework; Oversee and monitor the implementation of appropriate systems and risk management controls to manage these risks Assess the adequacy of action plans and control systems developed to manage these risks; Monitor the performance of management in executing the action plans and operating the control systems; and Regularly report to the Audit & Risk Committee and the Board on the state of internal controls and the efficacy of management of risks throughout the Group." <p>Appeared in company's : nual report, FY 200</p>
2	SHL CONSOLIDATED BHD	<p>"The Board has delegated the responsibility of reviewing the effectiveness of risk management to the Risk Management Committee. The effectiveness of the risk management system is monitored and evaluated by all levels of management i.e. the Chief Risk Officers on an ongoing basis. All employees are encouraged to identify weaknesses so as to improve efficiency and effectiveness within the Group.</p> <p>In embedding the risk management policy into the Group's management system, each Chief Operating Officer and/ or the Head of Department acts as the Chief Risk Officer for his business unit and/or department. As such it is his responsibility for promoting and managing risk management and control systems within his unit and/or department."</p> <p>Appeared in company's annual report, FY 2002</p>

No.	Company Name	Disclosure
3	SELOGA HOLDINGS BERHAD	<p>"The Board of Directors is pleased to announce that as part of the measures to mitigate the inherent risk faced by the property construction and development industry, the Company has appointed Ernst and Young to undertake the setting up of a formalized enterprise risk management framework to identify and evaluate the principal business risks critical to the Seloga Group, as well as to ensure the compliance with the Malaysian Code of Corporate Governance. Ernst & Young will also be appointed to undertake the Internal Audit Services of the Group."</p> <p>Announcement on Bursa Malaysia website, July 2003</p>
4	DOMINANT ENTERPRIS E BERHAD	<p>"The Board of Directors of Dominant Enterprise Berhad ("DEB") wishes to announce on the Company's establishment of the Enterprise Risk Management Committee ("ERMC")."</p> <p>Appeared in company's annual report for FY 2005</p>

B. List of 48 ERM-Adopting firms

Company Name	Company Name
Alliance financial group berhad	Mmc corporation berhad
Allianz malaysia berhad	Mtd capital bhd
Analabs resources berhad	Narra industries berhad
British american tobacco (malaysia) berhad	Oriental interest berhad
Century logistics holdings berh:	Poly glass fibre (m) berh:
Consolidated farms berh:	Proton holdings berh:
D'nonce technology bl	Public bank berh:
Dataprep holdings bhd	Qsr brands bhd
Dominant enterprise berhad	Seloga holdings berhad
Fima corporation berhad	Shl consolidated bhd
Goodway integrated industries	Silk holdings berhad
Gopeng berhad	Sime uep properties berhad
Hexza corporation berhad	Sindora berhad
Hong leong bank berhad	Southern steel berhad
I egrax berh:	Star publications (malaysia) berh:
Johor land berh:	St way holdings berh:
Kfc holdings (malaysia) berhad	Telekom malaysia berhad
Kretam holdings berhad	Tenaga nasional bhd
Land & general berhad	Texchem resources berhad
Landmarks berhad	Tong herr resources berhad
Malayan banking berhad	Tpc plus berhad
Malaysia smelting corporation	Tradewinds (malaysia) berhad
Malaysian general investment	United malayan land berhad
Minetech resources berhad	Upa corporation bhd

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