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ENTERPRISE RISK MANAGEMENT: A REVIEW OF TWO DECADES

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Abstract:

This paper is a modest review spanning a 20-year period on Enterprise Risk Management. Enterprise Risk Management (ERM) deals with risks and opportunities which have an impact on value creation. Unlike traditional risk management (TRM) which is silobased, ERM is a holistic approach to risk management. Past studies have produced many contradicting results on the impact of ERM implementation on firm performance and also on the factors which are crucial for the successful implementation of ERM. As such, it is of absolute necessity to identify the determinants of ERM implementation and also how ERM improves performance. The research methodology for this paper began with a literature search for ERM-related articles from journals of various rankings from 2000 to 2020. Relevant papers for the review were selected by using the `going backward' and `going forward' process. Fifty research papers were selected in this manner for this review. Prior studies have used different variables to show how implementation of ERM can create value. Further, in recent years, there has been an increase in studies reporting the importance of strong ERM and its link with performance. Although only fifty research papers were reviewed for this paper, yet a few gaps in the extant literature on ERM have been identified. As such, suggestions on how future research can be conducted in this field are given at the end of the review.

Keywords:

Literature Review, Enterprise Risk Management, 2000-2020

Introduction

Enterprise Risk Management (ERM) is a holistic approach to risk management, unlike traditional risk management (TRM) which is silo-based. Since the interaction of multiple of risks causes more damage than individual risks (Simona- Iulia, 2014), therefore, Lam (2000)

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as cited in Razali & Mohd Tahir (2011) calls for a holistic approach to manage multiple risks. Meier (2000) says that ERM is a systematic approach to manage risk which enables firms to avoid risks by identifying processes which create risk and then planning strategies to minimize these risks. Lundqvist (2015) refers to ERM as a combination of traditional risk management and corporate governance.

ERM deals with risks and opportunities which have an impact on value creation (COSO, 2004). According to Galloway & Funston (2000), ERM implementation is necessary as firms which have implemented ERM have an advantage over their competitors since they are in a better position to anticipate risk. Studies (Teoh & Muthuveloo, 2015; Callahan & Solidieau, 2017; Tasmin, Muazu, Nor Aziati & Zohadi, 2020) have used the Resource Based View (Barney, 1991) to show that ERM is valuable resource which can give a competitive edge to firms. The value created by ERM is effective at both the 'macro' (company-wide) and 'micro' (business unit level) (Nocco & Shultz, 2006). At 'macro' level, top management are able to quantify and manage risk whereas at 'micro' level, ERM becomes the routine for employees at all levels.

Literature Review

Traditional Risk Management (TRM) Vs Enterprise Risk Management (ERM)

There are many differences between TRM and ERM: In TRM, each department is responsible for its own risks, risk management is done on an 'ad hoc' basis and the focus is narrow whereas in ERM risk management is a coordinated, continuous process with a broad focus (Rao and Marie, 2007). Further, Bromiley, McShane, Nair and Rustambekov (2015) add that while TRM only deals with insurable risks like accidents, ERM also deals with strategic risks like competitor actions. According to Meier (2000), in the traditional school of risk management, risk managers did not make decisions on the basis of maximising shareholders as is the norm in the present day.

Since effective risk management needs an in-depth understanding of a firm's financial policies and well as its operation processes, Melbroek (2002) recommend a holistic approach i.e. ERM.

Enterprise Risk Management and Firm Value

Many studies have shown that implementing ERM is able to improve firm value (Smithson &Simkins, 2005; Abdul Manab, Kassim & Hussin, 2010). Firm value is improved via a reduction in cost of capital (Berry-Stölzlea, & Xub, J., 2013; Annamalah, Raman, Marthandan & Logeswaran, 2018), increase in Tobin's Q (Gallagher & Farrell, 2015; Hoyt & Liebenberg, 2011), increase on Return on Average Equity (Soliman & Adam, 2017); Share Price Return / Shareholder value (Soliman & Adam, 2017; Annamalah et al., 2018) and Return on Assets (Iswajuni, Manasikana & Soetedjo, 2018).

ERM maturity or the level of ERM practised by a firm also has a huge impact on firm performance. Recent studies (Callahan & Soileau, 2017; Florio & Leoni, 2017; Annamalah et al., 2018; Iswajuni et al., 2018; Perez-Cornejo, de Quevedo-Puente & Delgado-García, 2019) have reported that firms with high level of ERM have shown better firm performance when compared to firms with less mature ERM in place.

However, there are also studies which have found ERM to be insignificant on firm performance and value creation. In their study on firms in the banking industry in the United States, Pagach

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& Warr (2010) found that ERM implementation had no impact on firm performance or value creation. Similar findings were reported by Quon, Zeghal & Maingot (2012). Further, McShane, Nair & Rustambekov (2011) found that while firm value increased with more sophisticated TRM, firms which practised ERM did not show any improvement in performance.

Prior studies have shown that some variables have played an important in determining ERM implementation. These determinants will be discussed in the following section.

Determinants of ERM Implementation
Prior studies have used different variables to show the implementation of ERM. Some of the variables are discussed in this section.

The Role of The Chief Risk Officer (CRO)
Many studies have found that the Chief Risk Officer plays a vital part in ERM implementation (Lee, 2000; Kleffner, Lee & McGannon, 2003; Aabo, Fraser & Simkins, 2005; Arena, Arnaboldi & Azzone, 2010; Mensah & Gottwald, 2016; Ojeka, Adegboye, Adegboye, Alabi, Afolabi & Iyoha, 2019). According to Liebenberg & Hoyt (2003), the role of the CRO is to reduce information asymmetry over the firm's existing and anticipated risk profile. Further, Wan Daud (2011) says that the quality of the CRO helps to improve the level of ERM practised by a firm.

However, Lundqvist (2014) has shown that though the presence of a CRO does lead to stronger ERM, the presence of a CRO alone is not sufficient to be used a proxy for ERM implementation. Grace, Leverty, Phillips & Shimpi, (2014) argue that the ERM is only effective when the CRO needs to report to the risk management committee.

The Role of The Risk Management Committee
According to Sobel & Reding (2004), while risk management is the responsibility of senior managers and risk owners, the risk management committee is responsible to provide the direction for the senior management. Florio and Leoni (2017) argue that ERM is only effective when the risk committee is required to report to the board of directors. Further, in a recent paper, Malik, Zaman and Buckby (2020) contend that the Risk Committee must comprise Board Members for better governance.

Although it is obvious that the risk management committee plays an important role in ERM implementation, yet Maruhun, Wan Abdullah, Atan & Syed Yusuf (2018) found the role of the risk management committee to be redundant in their study on Shariah compliant companies in Malaysia. This suggests that the role of the risk management committee is still not clear and therefore, requires further investigation.

The Role of The Board of Directors
Board of Directors monitoring plays a huge part in the implementation of ERM by firms (Gordon, Loeb & Tseng, 2009; Teoh & Muthuveloo, 2015). This is because the board takes the main responsibility for corporate governance (Sobel & Reding, 2004). Wan Daud (2011) states that the quality of the board of directors help to improve the level of ERM practised by a firm.

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Maruhun et al. (2018) found that board size and board expertise played an important part in ERM implementation. Further, Kleffner et al. (2003) discovered that the board of directors were instrumental in encouraging the adoption of ERM strategies. The role of the board of directors monitoring was further emphasized by Beasley, Clune and Hermanson (2005) who found that an independent board of directors could give instructions to the firm's CEO or CFO to improve ERM implementation by requesting for internal audit team's involvement.

The Role of Internal Audit / Audit Committee

The role of internal audit is to "provide independent, objective assurance to senior management and the board of directors about the effectiveness of risk management, control, and governance processes" (Sobel & Reding, 2004, p. 31). Perez-Cornejo et al. (2019, p. 505) attest that the audit committee acts as "the supervisor of the ERM system and as guarantor of corporate reputation".

While Mensah & Gottwald (2016) found that the presence of an audit committee was sufficient to implement ERM, Beasley et al. (2005) insist that auditors from Big Four audit firms play a bigger part that those from non- Big four firms. Further, studies by Callahan & Solidieau (2017) and Wan Daud (2011) have shown that the quality of the audit committee lead to higher levels of ERM implementation by firms.

The Impact of Firm Size

According to Iswajuni et al. (2018), firm size, in the finance context, can be expressed as total assets or total net sales. Many studies have found firm size to be a determinant of ERM implementation (Sprcic, Kozul & Pecina, 2015; Brustbauer, 2016; Teoh & Muthuveloo, 2015; Gordon et al., 2009; Iswajuni et al., 2018). This is because larger firms are able to absorb the high expenses associated with ERM implementation and also because large firms are more exposed to risks. (Sprcic et al., 2015)

The Cost of ERM Implementation

Cost is a major barrier for ERM implementation. Cumming & Hirtle (2001) attest that cost incurred during ERM implementation can be in the form of information or regulatory costs. Risk is not only confined to the finance industry (Soin & Collier, 2013). Beasley, Pagach & Warr (2008) found that the cost and benefits of ERM are different for firms in the non-finance and finance industries. Studies (Soltanizadeh, Abdul Rashid, Gulshan, Quoquab & Basiruddin, 2014) have found that the level of ERM practised by firms vary according to the industry as the expected outcome is different.

Beasley, Chen, Nunez & Wright (2006) argue that it is not necessary to install a new system or infrastructure when implementing ERM. Instead, firms can efficiently leverage existing infrastructure. A good example, according to Beasley et al. (2006), would be the Balanced Scorecard (Kaplan & Norton, 1992) as it is a strategy-based performance management tool which is linked to the firm's mission. According to Shenkir & Walker (2007), it is worthwhile for a firm to implement ERM as managing risk can add value by increasing a firm's bottom line.

Studies Which Need Further Exploration

In their study on Jordanian firms, Althanashat, al Dubai & Alhety (2019) used many new variables namely, Internal Environment, Event Identification, Risk Assessment, Risk

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Response, Control Activities, Information and Communication to determine ERM implementation. Since their study was geographically limited, these same variables could be tested in other countries as well. Further, there seem to contradicting findings on the role of the Chief Finance Officer or CFO. Beasley et al. (2005) found the role of the CFO as very crucial in ERM implementation. However, in a recent study, Ojeka et al. (2019), reported that the CFO had absolutely no role in ERM implementation. The role of the CFO is another variable which can be explored by researchers.

Recent studies are also testing the role of ERM as a moderating variable (Shatnawi, Hanefa & Eldaia, 2019) and mediating variable (Perez-Cornejo et al., 2019; Tasmin et al., 2020). Academicians can also conduct more research in this area.

Research Methodology

The research methodology for this paper began with a literature search for ERM-related articles from journals of various rankings from 2000 to 2020. Relevant papers for the review were selected by using the `going backward' and `going forward' process (Webster and Watson, 2002) i.e. by using two frequently-cited papers on ERM (Gordon et al., 2009); Hoyt and Liebenberg, 2011) as the reference papers. A total of 50 papers were selected this way. A summary of all the research papers which were used in this study have been given in Table 1.

Table 1: A Summary of All the Papers Which Were Used in This Study

Year	References	No of papers
2000	Galloway & Funston (2000); Lee (2000); Meier (2000)	3
2001	Cumming & Hirtle	1
2002	Melbroek (2002)	1
2003	Liebenberg & Hoyt (2003); Kleffner, Lee & McGannon (2003)	2
2004	Sobel & Reding (2004)	1
2005	Aabo, Fraser & Simkins (2005); Beasley, Clune & Hermanson (2005); Smithson &Simkins (2005)	3
2006	Nocco & Shultz (2006); Beasley, Chen, Nunez & Wright (2006)	2
2007	Rao & Marie (2007); Shenkir & Walker (2007)	2
2008	Beasley, Pagach & Warr (2008)	1
2009	Gordon, Loeb & Tseng (2009)	1
2010	Arena, Arnaboldi & Azzone (2010); Pagach & Warr (2010); Abdul Manab, Kassim & Hussin (2010)	3
2011	Razali & Mohd Tahir (2011); Wan Daud (2011); Hoyt & Liebenberg (2011); McShane, Nair & Rustambekov (2011)	4
2012	Quon, Zeghal & Maingot (2012)	1
2013	Soin & Collier (2013); Berry-Stölzlea, & Xub, J. (2013)	2
2014	Soltanizadeh, Abdul Rashid, Gulshan, Quoquab & Basiruddin (2014); Grace, Leverty, Phillips & Shimpi (2014); Lundqvist (2014); Simon-Iulia (2014)	4
2015	Gallagher & Farrell (2015); Bromiley, McShane, Nair & Rustambekov (2015); Lundquist (2015); Teoh & Muthuveloo (2015); Sprcic, Kozul & Pecina (2015)	5
2016	Mensah & Gottwald (2016); Brustbauer (2016)	2
2017	Florio & Leoni (2017); Callahan & Soileau (2017); Soliman & Adam (2017)	3

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2018	Maruhun, Wan Abdullah, Atan & Syed Yusuf (2018); Annamalah, Raman, Marthandan & Logeswaran (2018); Iswajuni, Manasikana & Soetedjo (2018)	3
2019	Ojeka, Adegboye, Adegboye, Alabi, Afolabi & Iyoha (2019); Perez-Cornejo, de Quevedo-Puente & Delgado-García (2019); Shatnawi, Hanefa & Eldaia (2019); Althanashat, al Dubai & Alhety (2019)	4
2020	Malik, Zaman & Buckby (2020); Tasmin, Muazu, Nor Aziati & Zohadi (2020)	2
	Total	50

Conclusion

Although only fifty research papers were analysed for this paper, the main determinants for ERM implementation have been identified. In addition to this, the importance of the level of ERM practised by a firm and its relationship with firm performance has also been discussed. Further, suggestions for future research have also been provided. Researchers can use these recommendations to do a more in-depth exploration for ERM.

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