# The Moderating Role of Intellectual Capital Between Enterprise Risk Management and Firm Performance: A Conceptual Review

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ABSTRACT

Nowadays, businesses have focused more to develop effective risk management practices to enhance firm performance as managers and decision makers are considering holistic view of risk management despite of silo-based context. In recent years, many organizations have improved their performance by utilizing ERM framework to manage diversified range of risks because enterprise risk management (ERM) is considered as most admirable practice in this era. Therefore the current study will help to investigate the influence of ERM on the firm performance by the moderating role of intellectual capital in relationship between ERM and firm performance. As, the firms with higher intellectual capital could more likely withstand the effects of unanticipated changes in economies and markets. Nonetheless, in future, the proposed framework and research model will also be empirically validated in the context of emerging country such as Pakistan, which will definitely contributes by filling the gap in the literature by delivering a clear deliberation for ERM implementation to achieve firm performance.

***Keywords:*** *ERM, Intellectual capital, Firm performance.*

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# 1. INTRODUCTION

Performance of firms is of dynamic significance for economic development, stakeholders, and investors. Investors need high returns on their investment and well-organized business could bring long-term profits for its stakeholders. Companies with higher financial performance and profitability may have better environment friendly production units, bring better quality products for its clients and enhance the income of employees (Mirza and Javed, 2013). Nevertheless, firms need to face different kinds of risks in order to gain high returns. Therefore, management need to distinguish the prospect to allow the organization to enhance profits while mitigating the risk. According to Nocco and Stulz (2006) companies who are not practicing contemporary risk management techniques may face loss or produce less profit due to high competitive market and fast changing technological trends. Therefore, from past few years, companies have interchanged their conventional risk management systems with enterprise risk management (Robinson, 2002).

As an extension of control system, enterprise risk management (ERM) processes at strategic level and centralizes comprehensive risk management structures. According to Banham (2004) enterprise risk management is an integrated and comprehensive technique that ensure high degree monitoring of the firm's risk portfolio despite of analyzing risks one by one. The basic implications of ERM is to stabilize the expect cost of capital as well as earnings to enhance the capital efficiency of the firm (Berry-Stölzle and Xu, 2016). Although developed countries have overcome their risk issues through sophisticated risk management systems but the developing countries like Pakistan are still facing this dilemma.

Corporations in Pakistan are way behind in adopting efficient risk management practices. For instance, according to Subhani and Osman (2011) Pakistan scored lowest among the countries who adopt Enterprise Risk Management (ERM) technique in their capital markets. It is very unlikable situation for Pakistan that Bangladesh got independence prior to the independence of Pakistan and score higher than Pakistan. Therefore, the importance of ERM should be highlighted in the context of Pakistan. Nonetheless, till date, there is no empirical study in the perspective of Pakistan which ensured the effect of ERM on firm performance.

Adoption of ERM gives number of benefits to organization such as effective coordination of compliance matters, efficient use of resources, standardized risk reporting and efficient risk focused culture. However, it is also proposed that intellectual capital can significantly moderate the relationship between ERM and firm performance. Intellectual capital of a firm is a fundamental determinant of its success especially in competitive and knowledge-based economy. Intellectual capital gained importance in previous literature as it deals with intangible and knowledge-based assets which includes detailed information about suppliers and customers, technologies, trade secret, employee's skills, brand names and patents which could enhance shareholder's wealth (Stewart, 1997). Firms are shifting their attention from tangible assets to intellectual capital as it creates competitive advantage for them (Sarmadi, 2013). Intellectual capital improve competitive advantage and performance more efficiently as compared to tangible assets (Edvinsson, 1997; Bontis, 1998; Carrell, 2007). Therefore, it is assumed that higher intellectual capital in a firm can give boost to ERM adoption in order to enhance firm value.

# 2. DEFINING ENTERPRISE RISK MANAGEMENT

According to the definition of Casualty Actuarial Society (2003) enterprise risk management (ERM) is an approach through which organization monitor, finance, exploit, control and assess all types of risks from different resources in order to enhance the short-term and long-term firm value. Nonetheless, ERM is not designed to benefit only a specific type of shareholders but it enhance the value of all stakeholders. All sorts of businesses face challenges, risks and uncertainties though ERM identify that how much risks are acceptable in order to sustain value of stakeholders. All uncertainties come along both opportunities and risk. The main purpose of ERM is to guide managers which one is a risk and which one is an opportunity. Organization can achieve optimal value when they keep balance between related risks, return goals and growth. ERM strategies keep balance between risk and return and direct managers to effectively organize resource in order to attain maximum growth (COSO, 2004).

There are many benefits of using ERM within organization as it improves deployment of capital, seize opportunities, manage and identify cross-enterprise risks, mitigate operational losses and surprises, enhance risk-response decisions and align risk with strategy and appetite. Basically, ERM guide firms with strategies to manage and control all types of risks within an integrated model. Despite of dealing different risks separately, ERM evaluate which uncertainty could have positive or negative effect on firm performance. ERM analyze different risks by correlating them and treat wide range of risks in a holistic way (Walker *et al.*, 2002). The companies with better risk management practices could take a large market share and leverage their risks to gain competitive advantage (Davenport and Bradley, 2000).

## 3. ENTERPRISE RISK MANAGEMENT (ERM) IN PAKISTAN

The clear picture on the current situation of ERM practices in Pakistan is difficult to grab due to lack of academic literature and reports. Current century analysts argued that ERM is the future of risk analysis and strategy. Despite of its complex implementation in an organization, ERM is different than conventional risk management practices and it will benefit the organization in long-run. Subhani and Osman (2011) evaluated that developed countries have adopted the ERM strategies in their capital markets, however, developing nations such as Nepal, India, Bangladesh and Pakistan still far behind developed nation in adopting ERM practices.

Pakistan is facing several challenges like shortage of IT workers and negative security image but despite of these challenges, Pakistan is thriving to develop risk awareness among educational institutions and organization through which economic uncertainties, terror attacks and strikes will less likely to affect businesses. Commercial banks in Pakistan have already incorporated advanced risk management practices including ERM in the organization and sooner other sectors will also adopt them to get competitive advantage (Subhani and Osman, 2011). Consistent with the previous argument, ERM is a newly developed concept in the capital market of Pakistan. The companies in Pakistan have developed ERM framework in order to facilitate their decisions and to acquire overall knowledge of risk that can be faced by firm in future. Securities and Exchange Commission of Pakistan (SECP) has also advised companies to form a board risk management committee who would be responsible of regulating ERM framework in the company (Choudhry, 2010).

## 4. ENTERPRISE RISK MANAGEMENT AND FIRM PERFORMANCE

In today's vibrant worldwide environment, managing risk is an essential concern for businesses (Gordon *et al.*, 2009). According to Stanton (2012) "risk management refers to the process through which firms evaluate and examines intimidations, analyze substitutes and mitigates or accepts those threats". Researchers estimated that enterprise risk management (ERM) is one of the effective tools that is using by companies to mitigate their potentials risks (Culp, 2002). Overall, the main purpose of risk management is to provide constant monitoring of daily operations, constructing recovery plans and indication of all risky activities which sometimes offer abnormal revenue to the organization. There is lack of academic literature regarding the effectiveness of ERM and its effect of overall firm value (Andersen, 2008; Gordon *et al.*, 2009; McShane *et al.*, 2011).

Over the last decade, risk management has grabbed a wide range of risk measures as well as multiple risks (Nocco and Stulz, 2006). The first priority and major concern of firms these days is understanding and dealing with different kinds of risks (Liu, 2012). Risks may turn out into an opportunity if dealt adequately (Aabo *et al.*, 2005). These days, businesses are less concerned about dealing with various risks individually, thus, the terms such as integrated risk management, firm-wide risk management and enterprise-wide risk management has emerged (Kalita, 2004). ERM has the capability to retain some risks while mitigating the others and thereby, through sophisticated risk portfolio management it enhances the shareholder value. In most of the companies, only chief risk officer is held responsible for dealing all types of risks but in fact, risk links and structures should be developed at all corporate levels (Moeller, 2007). Although developed nations have already adopted ERM practices but emerging economies are still struggling to implement ERM framework on their capital markets. For instance, Soltanizadeh *et al.* (2014) investigated that ERM implementation varies across industries in Malaysia as firms in the technology, hotel and infrastructure sectors are most likely to implement ERM framework earlier.

Gordon *et al.* (2009) presented a holistic approach to assess the effect of enterprise risk management (ERM) on firm performance. By considering the sample of 112 American firms, they argued that the association between ERM and firm performance is contingent upon the adequate match between ERM and five factors affecting an organization, i.e. board of director's monitoring, firm complexity, firm size, industry competition and environmental uncertainty. Shad and Lai (2015) adopted ERM implementation framework to ensure its effect on firm performance (EVA). By employing 120 Malaysian public listed companies, positive effect of ERM implementation on firm performance is validated by researchers. Ping and Muthuveloo (2015) also evaluated the implementation of ERM and its effect on firm performance in public listed companies of Malaysia. Through survey method, they analyzed almost 103 responses with structural equation model. Their findings suggested that the implementation of ERM could positively influence the firm performance.

Ahmed and Manab (2016) collected data from chief financial officers and chief risk officers in Nigeria through survey method. They purported that ERM implementation could positively affect both financial and non-financial performance of the firm. Florio and Leoni (2016) also found positive effect of ERM implementation on firm performance in Italian firms. On the other hand, Quon *et al.* (2012) did not find any significant effect of ERM on firm performance. Similarly, Eikenhout (2015) also found insignificant relationship between ERM implementation and firm performance in Dutch insurance companies.

Pagach and Warr (2010) also examined the effect of ERM adoption on firm's performance. They took a sample 106 firms and measured the ERM adoption through the recruitment of Chief Risk Officer. They assumed that Chief Risk Officer may frequently adopt and implement ERM in the organization. Thereby, they found that adoption of ERM could reduce earnings' volatility. Nonetheless, they did not find value creation mechanism of ERM adoption. Most of the previous studies have either utilized survey method to measure ERM adoption/implementation or dummy variables. The disclosure policy in Pakistan is weak in order to capture these proxies. Therefore, the researchers should use the measurement utilized by Tahir and Razali (2011) who also assess the effect of ERM on firm performance in Malaysia. They measure ERM through dummy variable (1= if company is practicing ERM, 0= otherwise). Hoyt and Liebenberg (2008) also measured ERM with the similar proxy to evaluate its vain insurance industry of United States. Bertinetti *et al.* (2013) also utilized dummy variable to measure ERM in European firms.

## 5. MODERATING ROLE OF INTELLECTUAL CAPITAL

In the modern economy, organization become the hallmark who have utilized their intellectual assets substantially. Although with the high intellectual capital, the requirement for financial reporting may increase but it enhance the value of the firm. Valuable intellectual assets in an organization could resolve some prominent issues such as risk policy, oversight of internal control, accountability and reporting to shareholders, strategy by the board and monitoring of senior management (Kirkpatrick, 2006).

Prior studies also purported that firms with high intellectual capital are better positioned to be able to withstand the effects of unanticipated changes in economies and markets. These firms can adequately anticipate the exposure to risks and could handle them in better way (Sofian *et al.*, 2004). Firms with higher intellectual capital adopt enterprise risk management practices in order to effect the operating and market performance of the firm positively. The advocates of resource-based view consider both ERM and intellectual capital as the prestigious resources of firm. Thus, consistent with this view, it is proposed that the combined effect of ERM and intellectual capital can enhance firm performance efficaciously. Consequently, the conceptual framework for futuristic research is proposed in Figure 1.

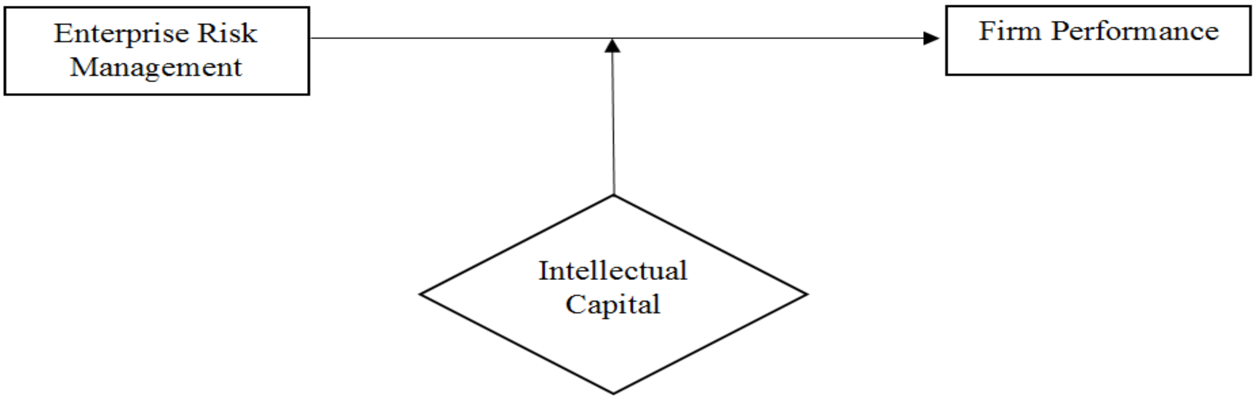


**Figure-1.** Moderating Role of Intellectual Capital between ERM and Firm Performance
**Source:** Author's Own Elaboration

## 6. CONCLUSION AND RECOMMENDATIONS

This study proposed that there is a significant and positive influence of enterprise risk management (ERM) on firm performance. Especially in the context of Pakistan as there is lack of empirical evidence on the relationship between ERM adoption and firm performance. Therefore, this conceptual review has also proposed the moderating effect of intellectual capital with theoretical arguments on the relationship between ERM and firm performance. It is also suggested that future studies should test this relationship separately in both financial and non-financial sector of Pakistan. In order to broader the perspective, studies should ensure the effect of ERM on both operating and market performance. The disclosure policy of Pakistan is weak, therefore, the effectiveness of ERM cannot be tested with conventional ERM index developed by prior researchers. It is suggested that an ERM index in the reference of Pakistan should be developed to further explore the ERM success in Pakistan.

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