

**ENTERPRISE RISK MANAGEMENT AND CHANGES IN  
ORGANISATIONAL STRUCTURE AND ROLES AND  
RESPONSIBILITIES OF SENIOR MANAGEMENT – A CASE STUDY  
OF A NON-LIFE INSURANCE COMPANY**

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# **ENTERPRISE RISK MANAGEMENT AND CHANGES IN ORGANISATIONAL STRUCTURE AND ROLES AND RESPONSIBILITIES OF SENIOR MANAGEMENT – A CASE STUDY OF A NON-LIFE INSURANCE COMPANY**

## **ABSTRACT**

This aim of this paper is to investigate the changes that surround the introduction of a new risk management technique, enterprise risk management (ERM), within a single non-life insurance company. The paper explicates the institutionalisation of ERM practices using institutional theory and drawing on empirical evidence from multiple sources. It focuses on intra-organisational changes around ERM implementation and embedding rather than the extra-organisational processes of change. We investigate ERM and the changes it drives in organisational structure and risk officials' roles and responsibilities. The change agents established a Risk Management Department that has a professional team and formed a Risk Committee to implement ERM related routines. This study extends the institutional analysis scope into the risk management field and explains how institutions affected the role of risk management team and officials who modified existing risk management routines or introduced new risk management routines within the organisational environment.

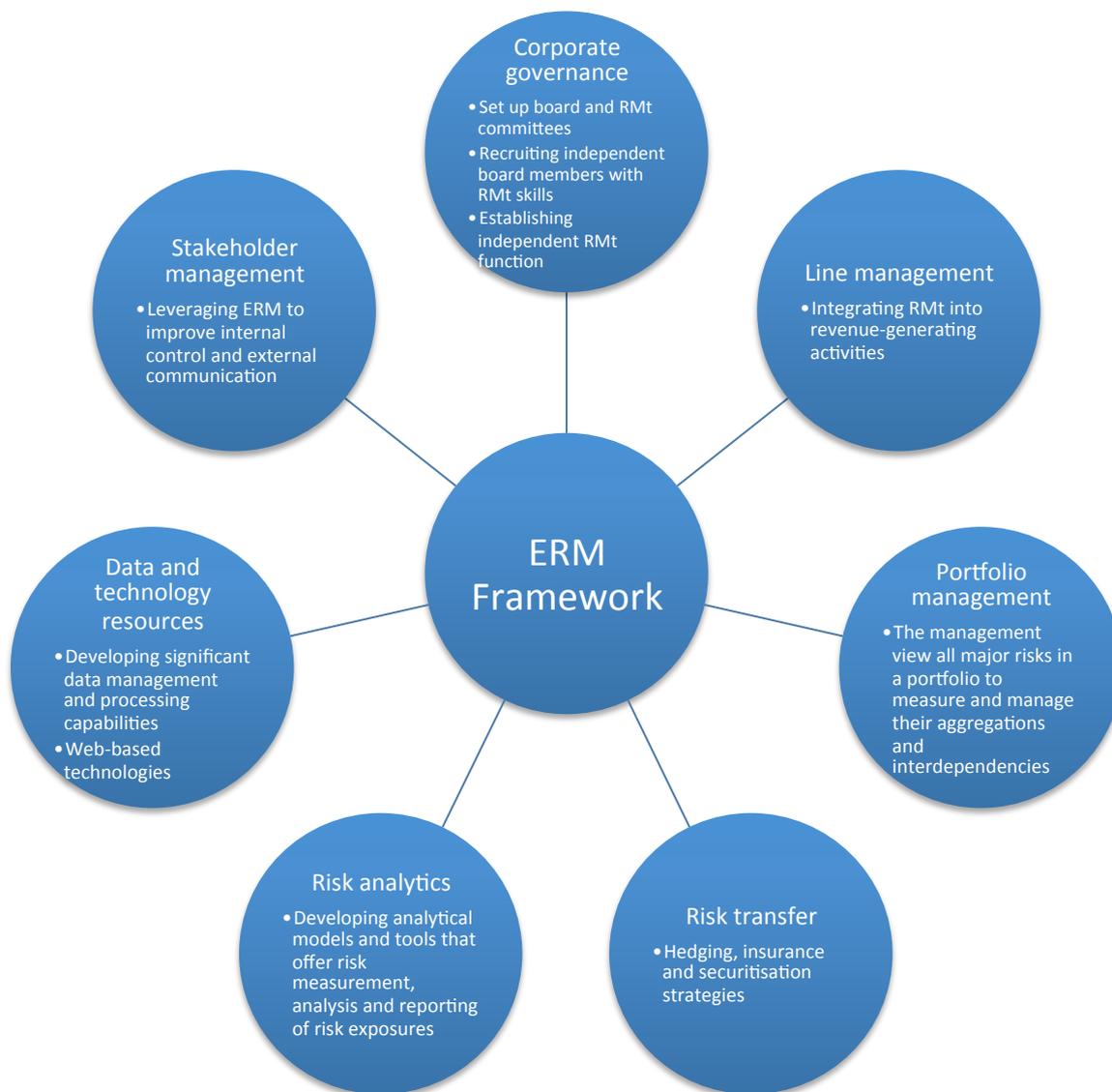
**Keywords:** ERM, Risk Management change, Case study, Insurance sector.

## **1. Introduction**

Senior managers are obligated now to comply with a number of laws, regulations, and listing standards, which call for strengthened corporate governance and risk management as a result of the business failures, scandals, and frauds over the past years. Corporate scandals, such as Enron, has led to further accounting and governance reforms. Notably, Sarbanes Oxley Act (SOX) was introduced in 2002 to enhance responsibility and financial disclosures and to fight corporate and accounting fraud. SOX required companies' executive to confirm that evaluation of internal control effectiveness has been undertaken over financial reporting (Woods, 2011). The Securities and Exchange Commission (SEC) rules show that in order to demonstrate the effectiveness, there should be a suitable internal control framework in place. Consequently, ERM frameworks have been released and developed over time. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) (1992) guidelines has been seen as an example of a suitable framework (SEC, 2006, pp. 5). This framework was redrafted in 2004 and titled: 'Enterprise Risk Management - Integrated Framework'. Since then, this version has been used to assess the compliance with SOX. The changes in the new framework served to significantly promote the risk management profile (Woods, 2011). ERM has become a term incorporating the internal control framework and becomes the overall control system (COSO, 2004). Such changes have an impact on risk professions. COSO framework has become the dominant guideline used by financial companies.

The COSO framework was issued to help managers comply with the new regulations and standards. The main objective of this framework was to help firms standardising risk management approaches. Thus, organisations can easily benchmark, establish best practices, and have a meaningful dialogue about the risk management critical issue (Ballou and Heitger, 2005). However, this has not been the case in practice. Each specialty of risk management has its own terminology, methodology and focus even though a common and integrated approach to risk management is seen to be preferable to an individual approach (D'Arcy and Brogan, 2001).

Seven main internal control and risk management components should be addressed by an ERM framework. Each of them should be developed and linked to work as an integrated whole. These components are classified by Lam (2006) and presented in Figure 1. Recognising that the appropriate ERM system will vary from company to company, COSO recommended a contingency perspective when introducing an ERM system for a specific company. This contingency view is consistent with the literature examining the more generic notion of management control systems (e.g. Gordon and Smith, 1992; Gerdin and Greve, 2008).



Note: RMt = Risk Management

Figure 1: Internal control and risk management components addressed by ERM framework

Considering that insurance industry is heavily regulated, the insurance company's management is expected to compose an effective risk management system as it is the foundation for the safe and sound operation of insurers (Asian Development Bank (ADB), 2002). As such, there has been a transition from traditional risk management techniques to a more holistic approach of risk management, i.e. an increasing number of insurance companies have adopted ERM mission and principles (e.g. Dickinson 2001; Acharyya, 2008). In this regard, ERM implementation processes are expected to make a significant change in

their operations. However, little is known on ERM implementation and the changes it makes in practice. The management control systems literature can help us making sense of ERM implementation. Exploring ERM as a facet of control and its implementation effects can enrich the existing body of research on management controls (Mikes, 2009). A common area of interest is the role ERM plays in changing the organisational structure and roles and responsibilities of senior management and staff..

This paper aims to investigate the organisational processes through which ERM embedding and use is made prominent and risk is treated on holistic bases across the whole organisation. We use a qualitative case study in a large non-life insurance company where ERM is considered to be at a mature level. The remainder of this paper is organised as follows. Section 2 reviews ERM literature and articulates the research questions. Sections 3 and 4 detail the theoretical underpinnings and the research design of this study, respectively. Sections 5, 6 and 7 present the main findings of the study. The final section is the discussion and conclusions.

## **2. Literature Review and research questions**

Risk management has tended to be in “silos” even in the most successful businesses. Insurance risk, technology risk, financial risk and environmental risk were managed independently as separate compartments. There was no coordination of risks, and sluggish identification of emerging risks (Cowherd and Manson, 2003). ERM is a holistic approach for risk management and its implementation will lead to significant changes in the company. In this section we review the relevant literature related to ERM process and practices and related changes in the insurance sector.

### **2.1 ERM Process**

The International Federation of Accountants’ (IFAC) global survey of senior managers revealed that the board in most companies lead the ERM development. A number of case studies and surveys examined the implementation process and explored ERM benefits. Aabo et al. (2005) found that at Hydro One, a Canadian utility, the ERM process begins with identifying all the risks facing the business and then assessing the consequences of these risks along with the controls in place in order to respond to those risks. Management then makes the decision on whether tolerate or mitigate a risk. This process is consistent with traditional risk management. However, ERM differs as it attempts to manage all risks, including operational and reputational risks which cannot usually be hedged (Pagach and Warr, 2011). A survey of senior finance and risk management executives concluded that ninety per cent of companies that implement ERM were very confident in their ability to manage risk (Ng, 2008; Nocco and Stulz, 2006).

Four areas of analysis were suggested by Lermack (2008) when implementing ERM. First, companies need to understand the long-term strategic objectives and focus their effort on creating value prior to initiating ERM processes. Second, examining the competitive landscape in which the companies operate to benchmark against others operating under similar circumstances. Third, organisational culture is important. It helps dictating how well any management initiative changes will be received and what approach should be taken towards strategic initiatives. Finally, understanding perceived primary risk exposures on attaining long-term strategic objectives is required prior to implementing ERM. Such analysis could help companies in achieving their objectives and lead to a successful ERM

implementation. However, limited empirical evidence has been provided on how to implement ERM strategy effectively and the related determinants.

There is a need to employ both quantitative and qualitative elements to implement ERM frameworks as not all risks can be quantified, and people and companies are involved in this process. Intangible issues; cultural of the company; and market economics also play a major role. There should at least be a convergence among five academic disciplines in order to build and execute an ERM framework. These are: economics, finance and accounting, management, psychology, and sociology (Acharyya and Johnson 2006). Power (2007) argued that there has been a shift from the calculative concept of risk management towards the managerial concept of risk management.

Two alternative types of ERM implementation models were introduced. The first one is driven by a strong shareholder value imperative (value-based ERM). The second corresponds to the demands of the risk-based internal control imperative (strategic ERM) (Mikes, 2005; 2009). Both commitment and a hard effort are required when implementing ERM practices. Schneier and Miccolis (1998) stated that there are two major phases for applying ERM: risk identification and assessment (risk scanning) and risk mitigation and financing (risk shaping). The objective of risk scanning phase is to identify, prioritise, and aggregate all the risks. It encompasses six elements: infrastructure review, qualitative risk threshold assessment, preliminary risk definition, preliminary quantification, risk prioritisation, and strategy outline. In risk shaping phase, managers need a more substantive measure of their company's risk factors before designing risk shaping programs. They need a firm understanding of the way their company works and change its behaviours. It consists of 4 components: modelling, risk quantification, organisation change, and risk financing.

Lam (2006) presented four stages for the ERM implementation process, which are ERM foundation setting, risk identification and assessment, risk measurement and reporting, and risk mitigation and management. Figure 2.2 depicts ERM process.

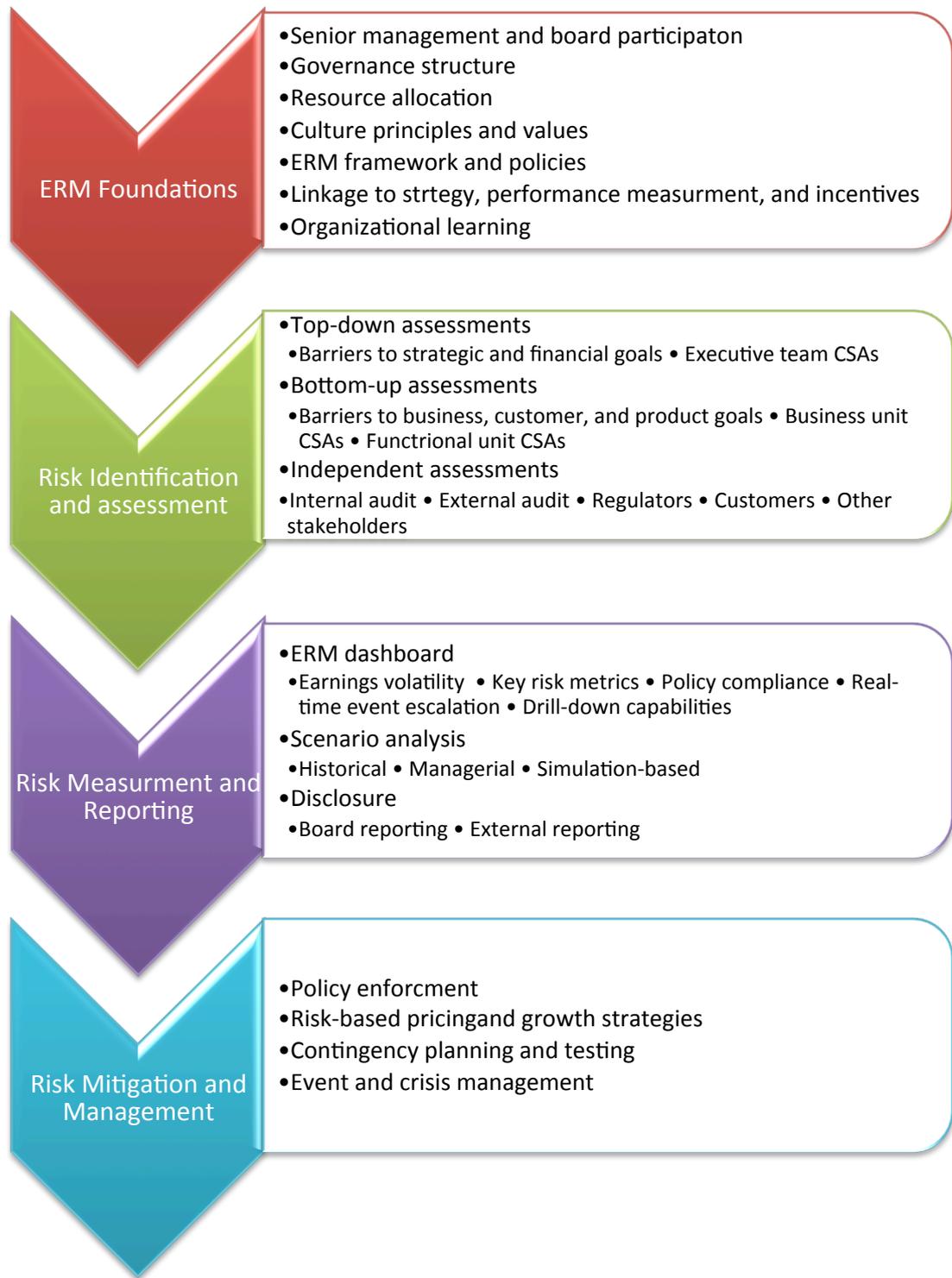


Figure 2.2: The stages of ERM process

(Source: Lam, 2006)

It is not necessary to implement the four stages of the ERM process in a sequential way although they are discussed in turn. A sequential approach means that a company spends the first year establishing the ERM foundation, the second year identifying and assessing risks, and so on. Management needs to concentrate on the most critical risks and apply the overall ERM process to them instead of taking a sequential approach (Lam, 2006). Although

a number of researchers summarised ERM implementation process, little empirical research have addressed ERM foundation stage, which is the most important stage in our opinion and provides the sound basis for successful implementation of the other different stages. Therefore, this study investigated how ERM foundation executed in practice and what various processes and frameworks support ERM implementation process.

## 2.2 ERM practice in insurance and its related changes

Insurers have increasing incentives to consider ERM programs, which implicates a potential value of ERM programs in insurance. One reason could be the increasing focus on risk management, specifically ERM, by the main ratings agencies as a part of insurers' financial review. In October 2005 Standard & Poor's (S&P) announced that, following the ERM emergence, risk management will become a separate, main category of its analysis. In February 2006, A.M. Best released a report that describes its increased focus on ERM in the rating process (Hoyt and Liebenberg, 2011). As such, it has become a best practice for companies to provide more information about their progress in the ERM implementation in corporate reports. Companies have started to report on how risk management is integrated into the organisational structure and its interface with internal auditing (De La Rosa, 2007).

Two aspects of risk management integration were subject to surveys. These were on the risk managers' involvement in managing pure and financial risks which face their companies, the non-operational risks which are handled by risk managers, and the techniques used to handle a wider set of risks (Wojcik, 1994; Banham, 1995; Cenicerros, 1995; McLeod, 1995). Risk managers are now involved in the management of a broader spectrum of risks. Historically, non-operational and financial risks have been avoided, passively retained, or managed by a different unit within the company. Cenicerros (1995) stated that "enterprising risk managers are increasing their value and their influence on the employer's bottom line by looking beyond 'pure' risks to managing speculative risks". The structure of risk management within companies has been affected by this broadened focus which also affects the tools of risk management that are being used. Thus, risk managers should enhance their financial skills in order to effectively deal with the broadened set of risks which they are required to manage.

Further, some surveys considered the effect of various factors such as the company's size, the company's industry, and the risk manager's background and training on participation in the activities of ERM (Colquitt et al., 1999). Liebenberg and Hoyt (2003) found out that companies with greater financial leverage were more likely to appoint a CRO. Pagach and Warr (2011) improved upon Liebenberg and Hoyt (2003) and supposed that CRO hiring coincides with the decision to follow an ERM program by any company. For instance, the Economist Intelligence Unit (2005) reported that a number of companies appoint a member of the senior executive team, often called the CRO, to supervise ERM process. Walker et al. (2003) indicated that ERM needs significant support from senior management as a result of its scope and impact. Beasley et al. (2005) illustrated that a CRO's presence is related to a greater stage of ERM adoption. Three major enablers for ERM in financial institutions were presented as board-level support; management processes which make the whole company aware of risk; and putting the right people and systems in place in order to make sure that risk-aware decisions can be taken (PricewaterhouseCoopers/Economist Intelligence Unit, 2002).

Beasley et al. (2005) found that the stage of ERM implementation is positively related to the presence of a chief risk officer, board independence, CEO and CFO apparent support for ERM, the presence of a Big Four auditor, entity size, and entities in the banking, education, and insurance industries. Further, ERM has required cultural change, which is

driven from the top down and adopted from the bottom up. Therefore, the task of promoting risk management and compliance culture should be addressed by the CEO, CRO, and the risk governance function (Salvador, 2007). ERM was considered to be necessary and applicable to all types of companies. In this regard, its framework should be adapted with relation to the company's culture specifics (Shenkir and Walker, 2006; El Baradei, 2006; Jablonowski, 2006; Yilmaz, 2009). Hoyt and Liebenberg (2011) showed that ERM usage is related to the company's size and institutional ownership positively, and to reinsurance use and leverage negatively. ERM implementation process differs in practice as each company has its own characteristics that determine the ERM usage and program. Systematic variations in ERM practices in the financial services industry were proved to exist (see Mikes, 2009).

Deloitte (2011) conducted a survey of CROs in financial companies and indicated that ERM is gaining ground and the CRO role is more prevalent and prominent (reporting to higher levels in the company and playing a more 'strategic' role). However, many companies were having difficulties putting in place a risk infrastructure and to integrate risk data across the whole company. Adapting the programs of risk management to changing business models at the same time as meeting regulatory requirements was another difficulty.

Although academics and practitioners have showed a considerable interest in ERM and survey evidence has been largely presented on ERM prevalence and characteristics (e.g. CFO Research Services, 2002; Kleffner et al., 2003; Liebenberg and Hoyt, 2003; Beasley et al., 2005), there is an absence of empirical evidence concerning the ERM models and strategies in the insurance sector, as well as its effect on companies' structure and risk officials' roles and responsibilities. Such lack of empirical evidence continues to limit its growth (Hoyt and Liebenberg, 2011). Further, only a few field and case studies have been conducted to study ERM strategies (see, for example, Mikes, 2009). The mainstream of extant research took a form of surveys. These studies are valuable as a source of descriptive information concerning ERM use but do not address the fundamental question of how ERM works in action. Little research has addressed the impact of ERM on roles and responsibilities of senior management and staff in insurance companies' context. The aim of this study is to gain an understanding of ERM evolution and process, and how ERM drives a change in a company's structure and roles and responsibilities of risk officials. Our research addresses this issue using a case study methodology. In particular, the following research questions are addressed:

- How is ERM implemented and embedded within the company?
- How does ERM change the organizational structure?
- How does ERM change the relationships of risk team with other staff within the company?
- What are the roles and responsibilities of risk officials in ERM environment and how they have changed?

### **3. Theoretical underpinnings**

Institutional theory is adapted for this case study because it is traditionally considered as a theory of stability and hence there is a need to extend it to incorporate the changes (Sharma et al., 2010) such as ERM practices. The main interest of institutional theorists (e.g. Barely and Tolbert, 1997, DiMaggio, 1998) has been addressing the way in which institutional structure and agency, which is exercised by different actors, influence each other (Sharma et al., 2010). However, there has been limited usage of institutional theory within the risk management field and to address the different mechanisms affecting the choice of specific risk management rules and routines to implement, and the circumstances under which risk officials can affect the institutional change. More recently, researchers addressed similar issues in different fields to risk management (e.g. Modell et al., 2007; Cruz et al.,

2009). Seo and Creed (2002) explained that existing organisational structure and processes can be one basis for understanding the change processes. In responding to extra institutional forces such as regulations, these structures and processes may need change (Seo and Creed, 2002). The risk management team can be seen as an internal agent of change. Our research will highlight how internal institutional forces can play a role in changing the organisational structure of an insurance company and also roles and responsibilities of risk officials. These changes can allow the risk management team to deinstitutionalise the previous risk management rules and routines and embed new ones.

As such, the concepts of rules and routines as introduced by Burns and Scapens (2000) are used in this study. Rules are distinguished from routines. Whereas rules are “the formalised statement of procedures”, routines are “the procedures actually in use” (Burns and Scapens, 2000, p.7). ERM rules can be in the form of frameworks and policies used by the company's employees. ERM routines can be the conduct frame within which the risk management team acts to implement and embed ERM and to promote ERM culture. The everyday risk practices are shaped to a large extent by routines, as rules (ERM) are set by individuals into practice. Routines could also affect the rules as established practices could be formalised in new rules. Therefore, rules and/or routines could be adopted habitually, but they could also be chosen according to proper deliberation. The institutional logics, which agents adopt in the specific context, shape the rationality of this deliberation. In turn, institutions will form these logics (Burns and Scapens, 2000). Burns and Scapens (2000, p. 10) treat rules (or ERM rules as will be used here) as modalities. Actor's actions direct the change in these rules and routines. These actors, risk management officials, can mobilise other actors and resources in order to bring about any institutional change (Sharma et al., 2010). The new ERM rules are considered in this research as an action in the implementation phase and the new emergent routines (risk management routines embedded in the new roles and responsibilities) as modalities in the use phase.

Further, OIE is applied to clarify the stabilising role of ERM and the evolutionary or revolutionary change possibility and to understand organisational routines and their institutionalisation. It also deals with a number of the difficulties that arise because of using the structuration theory in accounting research and management accounting change research especially (Burns and Scapens, 2000). The analysis takes into account whether the new routines have implications for the wider institutional realm of the whole firm beyond the limited field of a specific department. The analysis in this study is conducted at various levels: action, routines, and intra-institutionalisation. Giddens’ concept of dialectic of control in social relationships or the relations of autonomy and dependence is further used to address the changes in roles, responsibilities and relationships of risk management team.

In brief, using these institutional concepts help explaining how ERM implementation shape the individuals behaviour within an insurance company and analysing how these individuals modify or transform the routines and the company.

#### **4. Research design**

Case study methodology suites studying risk management systems as the role of controls cannot be understood in isolation, and it allows for a more comprehensive in-depth examination of the empirical target over a considerable period of time (Lukka, 2005; Otley and Berry, 1994). Further, the use of the qualitative methodologies; explanatory case study, is consistent with institutional theories and structuration theory. Case study methodology is used in this research as it is useful when studying complex social phenomena such as ERM and the related processes. It implies the use of various data collection methods (Yin, 2009). Case studies help understating the dynamics of a specific phenomenon within a particular

context (Eisenhardt, 1989; Yin, 1994). It further implies focusing on a single analysis unit, and collecting in-depth, contextualised data on that particular unit.

A case study is relevant to this research because the research questions in this study seek to explain various current circumstances and hence how and why the social phenomenon works. The research questions need an extensive and in-depth description of the specific social phenomenon (Yin, 2009). Case study approach is seen to be very useful for the study of actual practices and the details of significant activities (Cooper and Morgan, 2008). As this research aims to understand ERM process and explain how and why ERM drives a change in organisational structure and roles and responsibilities, and thus, a single large insurance company within which ERM is considered to be at a mature level was selected for the empirical study. An interpretive case study is used. It adopts a holistic approach in which the relationships between various parts of the system under study and the system's own relationship with its context serve to explain the system. Interpretive case studies aim to provide theoretical generalisations so that theories give explanation to the observations made.

Case studies are widely accepted as an appropriate methodology for management accounting research and an increasing number of case studies have emerged in the accounting literature (Ryan et al., 1992). A large number of management accounting empirical studies, which are informed by structuration theory, are based on the interpretive approach and a case study methodology (e.g. Scapens and Roberts, 1993; Granlund, 2001). It seems that case study methodology better suits the core of structuration theory (e.g. Macintosh and Scapens, 1990). Thus, a case study methodology has been chosen for the empirical work. Further, due to the lack of empirical published research on ERM effect on organisational structure and roles and responsibilities in the insurance companies' context, there is a need to investigate such relationships using detailed case studies. In response to this need, this research conducts an explanatory case study investigating ERM process, as well as how and why ERM implementation affects organisational structure and roles and responsibilities in insurance industry. More specifically, it aims to address the research questions related to how ERM changes the relationships of risk team with different members within the organisation; and what the roles and responsibilities of risk officials in ERM environment are. Explanatory case study is seen to be the most appropriate method to be used in this research. Further, little research has adopted this methodology in previous ERM studies. A case study protocol and database were also developed.

#### 4.1 Data collection and analysis methods

Multiple data collection methods are used in the case study research to get a rich set of data that surrounds the specific research issues and to capture the contextual complexity (Benbasat et al., 1987). Semi-structured interviews and documentary evidence were used in this study. A digital audio recorder was used to record the conversations which were transcribed subsequently and validate by the interviewees. Notes were also taken during the interview, and more detailed notes were written up as soon as possible following the interview. Interviews are considered as a fundamental source of case study evidence because generally case studies are about human relationships or behavioural events. Significant insights into such relationships or events can be provided by well-informed interviewees. However, interviews are considered as verbal reports only. Therefore, the interviewees' responses are exposed to the general problems of bias, poor recall, and poor or inaccurate articulation. To avoid such problem, there is a need to corroborate interview data with other sources of information (Yin, 2009).

Both internal and publically available sources of data were used in this research. The internal company documents accessed were ERM policies and framework documents, business plans, operating performance records, a CFO report, management analysis reports,

and documents concerning training programs - either general ones or those directed to specific people such as underwriters. Some other computerised processes were viewed at the company at the time of the interviews or after conducting the interview. Reference to publicly available data sources such as annual reports and the company's published information is made. Such triangulation helps improving the internal validity of research. Data collection sources are selected in order to obtain the type of data which is required to answer each research question.

Fifteenth 15 face-to-face semi-structured interviews were conducted with a number of officers and staff from different levels within the company. The respondents are presented in a chronological order according to the interview date in Appendix I. Getting access to the potential participants was facilitated by the company's CRO because he showed interest in providing help and put us in contact with other officers, who, in turn, put me in contact with people from various departments in the company (a snow balling approach). Both phone calls and emails were used to contact potential the participants. Persistent contact was needed to get appointments with a number of the interviewees. The participants were interviewed for an average of 45 – 60 minutes. The questions asked were directed to get detailed information about ERM implementation and embedding processes, and how this is affecting the company structure and the risk officials' roles and responsibilities. The interview schedule was prepared to suit the role and background of each participant with regard to risk. In the subsequent interviews, a number of issues, which represent an extension of questions that were asked in the first interview, were subject for discussion. These issues provide a main basis to determine whether additional explanation was given in the following interview. Some other issues were not addressed in the first interview. Thus, the second interview by its design would provide new and further information on the issues under the study.

Two approaches are commonly used for analysing open-ended interviews; realist approach and narrative approach (Silverman, 2009). Realist approach tends to treat the answers of respondents as describing either external reality such as facts and events or internal experience such as feelings and meanings. It is called realist approach to interview data as it contains elements of positivism and emotionalism (Silverman, 2010). In this study, narrative analysis is used as it is one of the approaches which are widely used for analysing data from semi- structured interviews. This approach “treats interview data as accessing various stories or narratives through which people describe their world” (Silverman, 2010, p. 225). Narrative approach claims that by not treating the respondents’ accounts as true representations of reality, there is a chance to analyse the culturally rich methods through which both interviewers and interviewees create reasonable world accounts (Silverman, 2010). The interviews were visited more than five times when conducting and writing the analysis of the data, which was further discussed with another academic.

## **5. The case company: VC**

Ahrens and Chapman (2006, p. 827) argue that “for qualitative field researchers the field as a social reality can only be made sense of if it is defined with reference to theories that can illuminate its activities”. The chosen setting is ‘intrinsic’ and ‘instrumental’ at the same time (Silverman, 2009, p. 139). It is intrinsic because there is a clear lack of knowledge about ERM effect on organisational structure and roles and responsibilities of risk officials. It is also instrumental because, in studying this context, there is a potential to contribute to the literature on risk management and hence management control.

The selection of this specific company was made for two main reasons. First, it is a large global insurance company. Prior accounting research emphasises that firm size is an explanatory factor for the emergence and use of management control systems (Haka et al.,

1985; Myers et al., 1991; Shields, 1995). Similarly, firm size is found to be positively related to ERM adoption and use (Beasley et al., 2005; Hoyt and Liebenberg, 2011). Second, ERM is considered by the company officers to be mature and fully implemented across the company. This is also obvious in the annual reports. A mature company helps when considering all the aspects of ERM throughout its evolution.

The choice of interviewees was based on the assumption that ERM is at a mature level and hence embedded across all departments and all levels of the company. Therefore, I targeted people from almost all departments and at different levels (senior and non-senior), who are expected to have risk responsibilities and use ERM in their day-to-day job. This helped covering various views on ERM and the way it has been used by different people and different levels.

### 5.1 Case company profile and ERM

The insurance company that is used as the case in this research, VC, was founded in the late eighteenth century as a general insurance company with various lines of business. It is one of the largest insurance groups in the world. A large number of offices are situated across Europe, USA, Asia and Oceania. The company had a merger with another insurance company in the early 2000s. VC is reputable as a leading commercial insurer. It has gained this reputation because of its solid underwriting expertise, financial strength and an excellent security rating. This corporate consistently enhances its value with customer trust at the base of its activities. These strengths could considerably benefit their customers and distinguish VC from their competitors.

Client satisfaction is a part of the company's day-to-day rationale and business activities are fundamentally directed to gain the clients' trust. VC is a compliance oriented company, which increases the trust of its clients. Therefore, the company standards are clearly outlined and all directors, officers and employees put this into action. VC showed a sustainable growth through good management that takes into consideration all social, environmental and economic aspects. VC has net premium income of over thirty three billion dollars and more than twenty five thousand staff worldwide.

#### 5.1.1 Risk management: an overview

VC is rated AA for financial strength by Standard and Poor's (S&P). Such high rating and assessment indicates the company's financial security in terms of its ability to meet financial commitments and contractual obligations. Various services and strategies are conducted by a professional team to address exposures and provide efficient solutions. These services provide a great help to the company's risk managers in assessing the risks portfolio, allocating premiums and budgets for risk improvements that are based on possible loss expectancies. The company risk managers have an internet based access to all the information provided by their team, which assists in monitoring risk improvements. Training programs concerning loss prevention are continuously carried out in the company to enhance the awareness of loss prevention and to assist corporate risk managers in carrying out risk management activities.

As stated in the company's documents, VC establishes its own basic principles for risk management and keeps all risks associated with carrying out its business under control by having a department responsible for risk management. All the company's risks are managed through processes of the specification, evaluation and control of risks, contingency plans, monitoring and reporting. Necessary adjustments are made according to the particular natures of risks. Principles for integrated risk management are established and quantitative risk management is conducted, with the aim to maintaining credit ratings and preventing

bankruptcies. The size of the risk management and actuarial departments has been increased and specialised people were recruited to embed ERM since its adoption.

Being aware that what companies achieve is so often well short of what they think they are doing. This research is about establishing whether or not the ‘department responsible for risk management’ is effective or not.

## **6. Findings and Analysis: ERM within VC**

This section provides the case study findings in relation to the institutional pressures driving ERM implementation in VC, the level of its embedding, and ERM implementation and embedding process whereby risk officials introduce new ERM routines.

### **6.1 Institutional pressures**

VC adopted and implemented ERM in 2002 and developed a stronger ERM activity and risk management routines in the last six years. ERM adoption occurred at a specific point in time, whereby risk management systems deinstitutionalised from their historical circumstances. Traditional risk management systems were replaced by new holistic approach to risk management; ERM. These traditional systems basically focused on operational risk, whilst underwriting risk (or credit risk) was managed by the Chief Underwriter and CFO. However, ERM embedding was a long process evolving over time

ERM model in VC is a strategic ERM. It corresponds to the demands of the risk-based internal control imperative rather than shareholders'. ERM adoption was an action that responded to five internal institutional pressures. First, the nature of the case company business. VC has considerably changed its business operations over the last ten years. This change in business operations has led to ERM usage as a way to centrally manage information from various branches all around Europe, which is used for monitoring business and managing risks.

Second, internal drivers related to achieving the company’s objectives including increasing return on capital. VC’s risk strategy document indicated that the company’s strategy is mainly linked to the achievements of the company objectives.

Third, the CRO’s interest and passion was a key institutional driver for the taking actions towards adopting and implementing ERM. Having a qualified risk officer who is very interested in ERM and recognises its benefits and value to the company led him and his risk team to act in a way that was convincing for other people across the whole company and hence facilitated the promotion of ERM culture. RM/1-VC commented:

*"He is very active and very involved on the day-to-day operations. A lot of the work I perform is for him to help him in deliver against his and the department’s objectives."*  
(RM/1 - VC)

Fourth, efficient control of capital allocations was an institutional driver for ERM implementation and its embedding into operations. This implies that ERM has been extensively embedded into capital allocation routines in VC. OM stated:

*"... to allow more efficient control of capital allocations from home office and to demonstrate also to local regulators, the FSA, that we are in control of our business."*  
(OM - VC)

Finally, VC as a large company holding large risk considered ERM as a social responsibility because if they were to go bankrupt, there would be a great knock on effect on the local economy and worldwide. Therefore, the need to implement ERM is obviously more significant for larger industry players in the organisational field. A positive relationship exists between ERM implementation and insurance companies’ size.

As such, political institutions exerted little institutional pressure on VC to adopt and implement ERM. This can be attributed to that VC is far ahead in adopting ERM and a large

company that seeks doing what is for its own benefit and competitive position. Therefore, social and economic institutions imposed internal pressures that significantly affected VC's actions to adopt and implement ERM. Even though ERM model was a strategic one, the analysis shows that there will be always a consideration of increasing shareholders' value, but this is the ultimate benefit when having a strategic ERM in place.

The following sub-sections will highlight the role and objectives of the risk management function, risk management strategy, and ERM maturity level within VC.

## 6.2 ERM embedding in VC: maturity level

The concept of ERM maturity level refers to the extent to which ERM is actually embedded across the whole company and into all of its levels within all departments. ERM maturity level can then be also linked to ERM having clear framework and policies to facilitate its embedding through providing detailed information on ERM importance and staff's roles and responsibilities in ERM environment. ERM was considered to be at a mature level in VC. Different views on why ERM is mature and four reasons supported these views. Firstly, the level of ERM maturity was primarily linked to it being embedded into capital allocation routines in VC case. This can be explained as some risk management routines such as risk register, risk assessment has been already in use since ERM adoption, but capital management routines were not present until five or six years later. Therefore, ERM reshaped or changed existing risk management routines and institutions.

Second, ERM basic structure was completed within VC. Thus, ERM rules expressed in policies and framework have been clearly set up with the intention to facilitate a full ERM embedding. However, there will be always a need for some minor changes or upgrades to support ERM embedding into the company's lower levels. Third, ERM has been embedded into critical decisions such as retention decisions which affect capital significantly. This indicates that ERM has been further embedded into day-to-day business and different levels of the company. Thus risk culture has been promoted and risk has become a main factor to consider when making important decisions. Finally, ERM was seen to be more advanced and easier to embed because of not having a complicated business structure. Therefore, ERM embedding called for simplicity and going back to basics in the sense that this could lead to a more developed and successful business. However, there will be always steps to take and ideas to improve in order to continuously achieve a better strategy.

CUO- VC argument supported that ERM is mature in VC. He stated:

*"... we already started to change our day to day guidelines, day to day operational manual to follow, to contribute, to achieve the goals. So not just methodological model itself, we are now trying to implement it into the real day to day business."* (CUO - VC)

Even though ERM was considered to be mature, the concept of delivering the ideas to the business still needs to be improved. Reporting at actuarial level and risk and control levels has become an active part of the business. There was an indication that some frontline underwriters might not fully understand the language of ERM and why it should be embedded into their daily work. The risk team have taken steps to overcome this challenge including continuous compulsory training programs to embed ERM into lower levels. On the other hand, there was evidence from officers; EOO-VC, CUO-VC and SCU-VC, who works closely with front-line underwriters that they are familiar with ERM concept and embed it into their day-to-day activities. This was illustrated as they clearly realise how their decisions have a direct impact upon the amount of capital that should be held by the business and why risk is a major factor to consider throughout this process. SCU-VC stressed that compulsory training programs are tailored for front-line underwriters to enhance their awareness of capital and thus the related risks and risk appetite:

*"Yeah all frontline underwriters have to attend a course on capital allocation and underwriting last year and this year.... I think they have an appreciation of the capital more of the capital side and the appetite and the disciplines." (SCU - VC)*

EOO- VC shared the SCU- VC 's view and illustrated that, more recently, an ERM quiz has been conducted frequently. Thus they have been testing if people can speak about ERM or not. He added that there is compulsory training every year for underwriters on ERM. These steps supported ERM embedding and helped avoiding decoupling the formal structures from the companies' technical aspects. Thus, VC implemented and embedded the new risk management routines, and took specific actions to secure that they are not decoupled from daily operations. This can be attributed to that VC considers ERM as a way of preserving the company's technical efficiency.

Even though ERM is at a mature level in VC, COO- VC saw ERM maturity to be somewhere in the middle; i.e. neither at a very mature level nor at early stages. He emphasised that the understanding level is very high but the actual embedding level is not as it should be. This is not consistent with other officers' view of ERM maturity level. OM- VC saw ERM to be still at early stages of implementation. This implies that ERM might not be equally embedded across all VC's departments. As stated:

*"I don't think it is as advanced as it should be, no. I think it is more advanced than it was three years ago... It still has some way to go. In terms of maturity level, I think it is embedded but it is not really driving it the way it should be yet. A lot of that will come from the fact that we are doing a lot of work to create the data and to have reliability on that data to generate what you need to have a true ERM culture. We haven't completed that work yet. So a lot of the management information and the ultimate quality of reports which come out of it is not quite there yet. It is not far off." (COO - VC)*

However, COO- VC showed confidence in the way the risks in his areas are being managed. People in operations have become more objective and much more business focused after ERM implementation and embedding. Thus, informed decisions could be taken if measures were in place.

*"I think my areas are managed pretty well and we haven't had any major problems which might imply that we are not missing any. But you don't know until it happens." (COO - VC)*

CUO- VC 's view was shared to an extent by CRO- VC 's and CA- VC. CRO- VC described ERM as well prepared in the sense that it is difficult to precisely self-assess the level of maturity and hence embedding. He realised that further efforts are necessary to further embed ERM regardless of how mature it gets. In this regard, ERM is considered to be mature by CRO- VC, but its maturity level can be seen as a process of continuous embedding.

As ERM embedding will be improved over time, there will be always a space for it to become more and more mature. Thus, there is no clear cut about ERM maturity level considering that there is no assessment system, but it could be related to and differs according to the intensity of its usage and embedding within each department. The different views about ERM maturity lead to a result that ERM might not be equally embedded across all departments of the company.

### 6.3 ERM implementation and embedding process

ERM implementation and embedding was followed by an accumulated change in the risk management routines done by VC. There has been a shift in risk management routines from being mainly qualitative to be a combination of qualitative and quantitative aspects. This helped in the sense that risk management routines has become more focused and

stronger. This implies that risk management rules and routines have been integrated over time and become key processes that should be significantly embedded into the business. CA- VC stated that in the past, it was enough to just say that the company has got this risk and this is what is done to manage this risk.

### 6.3.1 ERM-related actions and routines

Actions were taken by VC to ensure a successful implementation and full embedding of ERM. For the purpose of creating ERM culture, VC intensively has trained its staff to help them understand ERM processes and their responsibilities. Clear understanding of responsibilities helps avoiding any conflict caused as a result of dialectic of control. Any new person joining the company should have an induction with ERM to get them to understand why ERM is important and why they are asked to take specific responsibilities and actions to support ERM embedding. This has led to create an ERM culture facilitating the process of its implementation and embedding. Continues internal risk management training programs have been carried out to further educate people across the whole company about ERM and to help them understand the impacts of its implementation. This can increase the acceptance of responsibility of the new company for delivering change in the business. VC further monitored ERM embedding to ensure that the new risk management rules are not decoupled from their daily operations. As such, online ERM questionnaires were frequently sent out to people across the company to check whether people clearly understand what they are doing and how they actually embed the risk management routines required by ERM. In addition, two lines of compulsory training initiatives have recently started to ensure that people are embedding ERM into their day-to-day jobs. One line is led by the CRO's area of business. Another one is led by underwriting which talks in underwriter terms but then shows and explains the ERM that sits behind it.

Such continues training programs are steps in the process of having ERM fully embedded by all people from different levels in VC to run their jobs. These compulsory training programs and online questionnaires have further supported the implementation and embedding of ERM into lower levels. One instance on ERM being embedded into lower levels is that MA- VC is totally aware of ERM importance and why it should be embedded into accountants' daily work. It affected accountants' daily job from an awareness point of view and the experience that they have acquired on a day-to-day basis. Periodically, there have been communications, workshops or training either directly or indirectly through the compliance or legal departments. MA- VC is totally convinced that it is almost impossible to impart a culture and structure to a company without something like ERM. He stated:

*"So, I think ERM as a culture underpins that... it is a constant reminder that it's starting to provide a structure in something that can be quite amorphous and it is very difficult to define what can be quite abstract concepts. It is easier for accountants largely because the nature of double entry book keeping is to create a structure double entry book keeping to analyse transactions in an abstract way where previously no structure ever existed to invent the concept of having two sides to a transaction or discovering that there are two sides to a transaction was quite a different concept to come up with and ERM is not an equivalent of that."*

(MA - VC)

Alongside the generic training to all staff members, specific training programs have been directed to specific people with regard to their job nature and the extent to which risk is involved within it. Specific training is particularly tailored for underwriters in the company. Therefore, the realisation of ERM effect on capital allocation routines and the need to embed risks into the process of capital allocation are growing over time. Thus, Underwriters are internally required to go through certain programmes to understand the basics behind how to

allocate capital to the company; how to achieve rate of return on capital in the company. RM-VC stressed the latter discussion and stated that the training courses are becoming compulsory. The risk management team has set up a course for every single department, so they focus not just on how staff can affect the whole company, but how their own department can affect the whole company. By making it obligatory to attend these training programs, staff can then track risks much better and VC can ensure that no decoupling is taking place.

The discussion above implies that VC targets using the full potential of ERM because of the intensive training programs that have been run with the intention to get ERM fully embedded within the company.

Risk reporting was a key part in the process of ERM implementation and embedding in the sense that it is the way of passing messages that are sometimes complicated to staff, management and board. Thus, ERM implementation and embedding was supported by enhancing communications across the company and requiring people to look at not only existing risks, but also new risks. Such risks might come from people at different departments and lower levels not only from risk management team or people at senior levels, which affected the risk management routines implemented. People have started to look at all risks categories including the ones they don't own and observe whether they are properly calculated. This explains the interdependencies of the effect of various risk types on each other regardless of where they basically exist. Therefore, ERM has created an effective network of risk communication. Such effective communication strategy could assist in embedding ERM culture into the Board and management decision making process. Therefore, the Risk Management function needs to consistently train the staff to make sure that all of them have the knowledge and the essential tools to embed ERM. RM- VC explained how one of the company's main objectives is to embed a risk culture. This culture has been embedded at the top level (executive), so that drives a "top down" approach. However, VC is also seeking a "bottom-up" approach where staff communicates with all levels of the company.

*"Because as part of our risk framework we have "culture and communication", so we are really trying to get out there and embed a risk culture within the company... One of the objectives of the CRO and the CEO is every member of staff has to have training on ERM by the end of this year."* (RM/1 - VC)

Consequently, people across the whole company have started to think about risks in the way ERM requires. Thus, ERM has become holistic as a result of putting it by the CRO team and internal reporting team into the language that people can understand and drowning it into lower and lower levels. For example, MAs have started to think about risks in a different way.

For a successful implementation and embedding of ERM within VC departments, the CRO asked other officers to primarily improve data quality and reduce their key risks as a part of their risk management routines. For instance, everybody in operations has been engaged with the data restructure which has helped to improve data quality and to reduce risk. Simultaneously, the Risk Department supported the implementation and embedding process by providing more visible and clear to other departments such as updates on the impact of the processes on data quality improvements to see a reduction of risk. This has helped them to manage their risks better and take into consideration the broad context not only risks affecting their own department. Further, ERM rules facilitated and improved the risk management routines linked to risk identification and location within departments. When risk is found at various departments, they all have to take joint ownership over it. This leads to a better and more efficient mitigation of those risks. The CRO's team was responsible for ensuring that everyone is taking its ownership over certain risks. CA- VC illustrated how risk team made life easier in terms when people look at risk and think how to mitigate it. Thus, if it is involving other departments, they look at what the impact is for their underline and take their ownership over risk and take steps straight to eliminate it. He further stated:

*"It has been quite a difficult change because it is about getting people in a room together and discussing it. People can be very senior that is nothing to do with me as an account issues or it could be an underwriting issue. But, I think the CRO team should be a quite instrument to bring us saying no you have got to sit down. They actually have facilities to that issue. It actually encompasses three different departments and you have to take joint ownership over it." (CA - VC)*

Further ERM implementation process called for people with certain educational backgrounds and professional qualifications. Background and qualifications support ERM implementation and embedding processes as they increase the awareness and sensibility about certain aspects of the business, which leads to better management of risk. For example, RMs were appointed as a result of being very qualified and experienced in risk management field, which would facilitate ERM implementation and confirm the need for people with specific qualifications and experience.

As such, a biggest operational risk in VC was the people risk, which is the most difficult to quantify. Insurance companies are very people dependent because they don't have something which is tangible and evident that is manufactured. They don't actually know their input cost until after they have sold the product. Therefore, insurance companies mainly rely on people to make the right decisions. There is a risk around that good quality people may leave at any time then there is a need to start all over again and look for such people. This implies why ERM successful implementation and embedding required specific backgrounds and professional qualifications. COO- VC stressed that VC is very exposed to what an individual does and gave the following example:

*"In terms of our risk environment... all the operational risk areas will be my main concerns within that I'd say our biggest operational risk is our dependency upon key personnel. We have got other measures which are around reinsurance management or misprocessing or poor claims handling etc. but the biggest one among those is the people one." (COO - VC)*

There was an indication that ERM implementation is strongly linked to accounting techniques as they generally involve lots of internal control procedures. They have fed each other. MA- VC said that he have yet to see anything that goes beyond normal systematic internal control procedures and stressed that there are many of these that could be implemented further. He further argued and gave an example:

*"... but just using even some standard accountant techniques are preparing control accounts, total population control as probably the most important tool that we would use for American data to actually determine what are the total sum of the amount passing through a process or as a classic business because without those totals you don't know what the total picture is. You can't then schedule the work, you can't assess what the problems are, and you can't even quantify the risk because if you have hundreds of items twenty of which are risk items. If you don't know that there are a hundred in the first place the figure could be twenty, thirty or fifty you will otherwise know the quantity or the quality of that risk." (MA - VC)*

MAs' work is always concerned with any risk whatsoever, so they might be looking at changes to how one of their branches works or how one of their agency companies works so as no longer be working with them and thus the risks surrounding these conditions. The nature of MAs' work makes them responsible for thinking and monitoring the processes of risks related to data capturing, storing, integrity, validity and reporting, which is done by other people across the company. MA- VC explained how ERM is used in his day-to-day job:

*"So I'm involved in the regular try risk which often encompasses a fairly comprehensive range of what you might consider to be enterprise risk so many of*

*the questions you will be asked would be on capital risk, trading risks, industry risks, structural risk so you have to report to those correctly. And because I'm also involved in the data capture at a granular level, I am also having to think along quite ahead about somebody else's data; how is that data captured, how is it stored, what's the integrity on that data, is there any validation, how is it to be recalled and are we going to be able to report it? So those stages normally are in my mind when I look at every single transaction capture, repository, storage, recall reporting and that's the nature of my work." (MA - VC)*

The outcomes of ERM implementation and embedding were still not quite clear for some people within the company, specifically operations people. However, CROs and CUOs provide a number of benefits gained as a result of ERM implementation. OM- VC expressed that it is still difficult to quantify such benefits:

*"I think we know what we are required to provide, but I do not know what the benefit is and what the consequences of the improvements. The adherence is to demonstrate to me what the saving is or what is the impact has been of performing like that." (OM - VC)*

### 6.3.2 Structured process vs non-structured process

Macintosh and Scapens (1990) argued that management accounting knowledge is a key element in the process of accountability. In VC, the risk management team have led the implementation process, which started with the definition of risk concepts, policies and framework, as well as business requirements. Then a capital model was built and after that incremental steps were regularly taken to further implement and embed ERM across the whole company. Certain routines have been built into the capital model such as limits for capital margins and loss ratios (LR). To monitor these processes and ensure ERM embedding, meetings at senior level management were held to know what each department has done and what is needed to be done. Based on these meetings, the workflow and the business processes which ought to be done were developed.

The process of ERM implementation and embedding process was fully structured at VC, where detailed policies are laid out and frameworks are put in operation. The risk management framework that is employed in VC depicts how structured ERM processes are (see Figure 2). It is to an extent similar to the standardised approaches, such as the COSO framework (COSO, 2004), ISO 31000 (ISO, 2009) or Basel II/III (Basel Committee, 2006), and follows the risk standards and objectives presented in the latter frameworks. ERM framework in VC was set out in four documents which are governance framework, risk appetite framework, own risk and solvency assessment (ORSA), and risk reporting, culture and communication framework. These documents were customised to suit VC 's needs identified through the business analysis and to help people across the company understanding ERM and their own risk responsibilities.

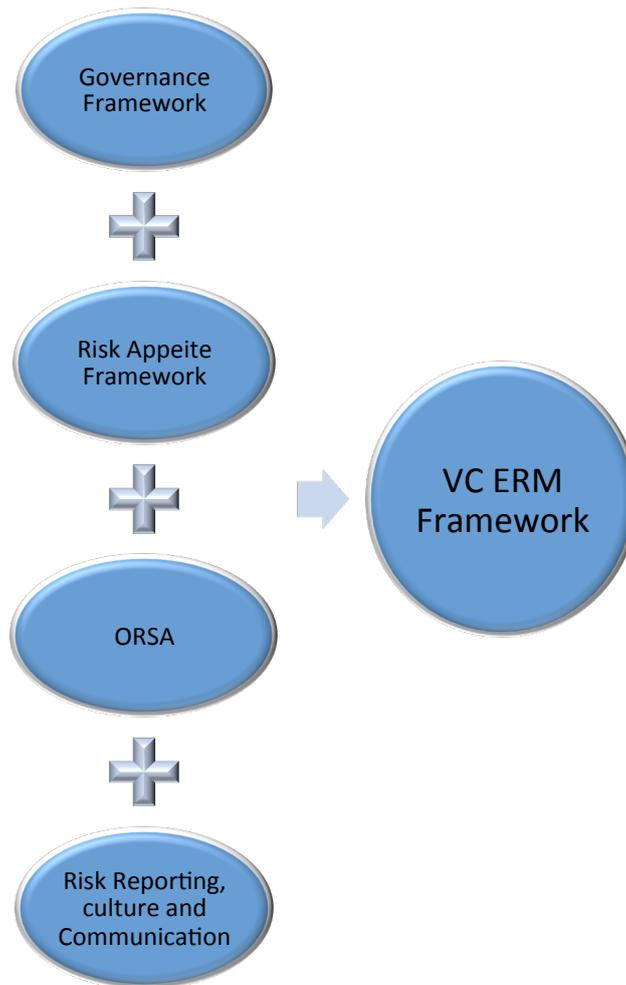


Figure 2: VC ERM framework

The governance framework is developed about a system of lines of defence. There are three lines of defence system and some related key risk functions. Risk management, actuarial functions, risk compliance functions and audit are the key functions related to the risk. Thus, everybody in the company who has any risk responsibility and particularly in the risk functions should be fit and proper, as well as his/her roles and responsibilities should be very clear. All VC policies, strategies, and staff responsibilities are written in a way that is expected to be clear and simple in order to facilitate the way they do their jobs, and identify and manage their own risks.

The Risk appetite framework deals with the concepts of risk appetite, risk tolerance and risk limits. Risk appetite is a qualitative type of statements, while risk tolerance and limits are quantitative type of statements. The exposures are monitored from a quantitative perspective on quarterly basis. This risk appetite statement has to be disclosed. VC 's risk has eight components including underwriting, reserving, credit, market, liquidity, operational, group, reputational and strategic. There is a clear precisely risk strategy and risk appetite for each risk.

The ORSA is a main component that encompassed lots of traditional risk management but quite developed in the VC. The ORSA has three components: risk profiling, risk quantification, and capital adequacy assessment. Risk profiling includes a sort of approach which starts with the objectives as the risk for VC is linked to achieve a number of objectives, risk assessment, risk identification, risk analysis and evaluation, and risk treatment and action

plan. Risk monitoring and reviewing are done on regular basis to make sure that improvements are taking place. Risk quantification is done by using in parallel an internal model for all risk components using stochastic approach and quite complex tools that is developed by the company and also using a more standard formula from regulatory perspective. At the same time of monitoring and quantifying risk, ERM team is supposed to compare the two approaches to understand the differences between them. Capital adequacy assessment is the key aspect that is a sort of output about how much capital the company has, does it respect various tolerance, and so on.

Risk reporting, culture and communication has got a big effort especially in the last years as VC try to report the risk in order to create a proper risk culture and communication. A set of reports on risk are produced for the Board and management. Risk Management Department creates a type of reports with input from different functions such as Accounting and Finance, Internal Audit, Compliance and Actuarial. The Risk Management Department creates another type of reports where there are material changes to the environment of risk. The CRO also report directly to the Board on major changes which need immediate attention. ERM Risk Culture is embedded via risk management related training sessions, and business plan cascade. VC intensively trains its staff to help them understand these processes and their responsibilities. There is continues communication and consultation with both external and internal stakeholders during all stages of the risk management process.

Even though ERM implementation and embedding was very structured, there is always a need to review the policies and framework to address the challenges and problems facing these processes. Implementing and embedding ERM rules and routines to VC's different levels was not any easy task. The challenges encountered the implementation of ERM were mainly cultural issues, and limitations to data recourses. Risk modelling has been an important issue for insurance companies as they need to measure and manage their risks as good as possible in order to maintain their business continuity. The quality of data inputs has played a major role in risk modelling outputs. Having a structured risk management framework gave VC formalisation of reduction in objectives.

### 6.3.3 *Evolutionary vs revolutionary*

In VC, the process of ERM implementation was described as evolutionary system changes whereby small changes are embedded into the people's daily routines over a relatively long period of time. This was considered to be a good approach because people need time to digest all the changes accompanying the implementation process. It would also provide the opportunity to correct the mistakes and deal with the obstacles that appear throughout the implementation process more efficiently and effectively. The latter discussion is illustrated by CRO- VC:

*"We had a lot of things, but without a big picture to put things together. And then it started to be something which looks like really comprehensive and it is becoming a real ERM framework." (CRO - VC)*

Although ERM implementation was described as an evolutionary process, there was evidence that ERM implementation and embedding process is different from one department to another. It was described as revolutionary process at operations level whereby large changes are embedded into the staff daily routines over a relatively short period of time. As VC processes have been so radically over held as a result of the operational changes required, a major rethink of how to adapt its existing systems has been needed in order to meet such requirements. New frontiers were introduced and centralised analysed approach was adopted, which were considered revolutionary steps. This indicates that ERM process varies among VC departments from being incremental in most of them to revolutionary in others. Such

variations may occur as a result of not embedding ERM simultaneously and equally at all departments. OM- VC explained:

*"We have introduced, for instance, a new frontier called management system. So I would say that was fairly a revolutionary step. Eliminating responsibilities from the branches and adopting a centralised analysed approach is in my opinion is a revolutionary step for the company."* (OM - VC)

These variations could be attributed to that ERM as a part of accounting system and control system was used it for different purposes by different people, which affect the level of its embedding. For instance, COO- VC mostly uses ERM in the claims area but it is less and less direct in the IT or HR. Claims Department is where most of VC 's money gets spent. CAC- VC illustrated the different uses of ERM within different departments:

*"I think our finance department is using it to help in deciding its investment strategy. Our underwriting department is using it to assess the performance comparing different lines of business."* (CAC - VC)

Although there were different uses of ERM by different people and departments, its main use was considered to be for monitoring specific targeted improvements in data quality, reduction in risk and management of capital. ERM has helped managing risks by bringing priority and prioritisation to areas of focus that have key impact on the company. Focusing on those areas impacting the company has allowed VC to allocate resources and effort where it is most benefit to it.

*"Same, it is about to be specifically focused on those areas that are impacting the company to allow us to allocate resources and effort where it is most benefit to the company."* (OM - VC)

ERM was embedded into lower levels of VC as a part of ERM process to help achieving a fully embedding. Although ERM was embedded into lower operations levels, they might not understand ERM terminology. They could understand more about performance management. Thus, a part of ERM was translating to people their personal objectives that have monitoring against those objectives. On the other hand, MA- VC 's views showed that he was completely familiar with the meaning of ERM and how to embed it into his daily work, which indicates that people at lower levels have a clear view of ERM concepts and its usage.

SCU- VC saw ERM as a government situation and indicated that there is a huge regulatory pressure on risk management. This regulatory situation was considered to be very beneficial because it imposes a lot more strict controls around what to do. Although it gave less flexibility, it offered more consistency. SCU's understanding of ERM was clearly from a governance type point of view. However, he realised its processes and the need to implement it. He further explained the actual risk management routines ERM rules shaped in the following quotation:

*"Well, it sets a number of things. Firstly, we do have to comply with regulations but mainly, from my point of view, it sets things such as risk appetite, deals with risk insurance concentration because I do quite a lot on the modelling side, looks at our rate of return on capital and things like that... so, it's kind of, from a higher level, it sets benchmarks lower down so if we don't comply with those things then we are really doing something wrong."* (SCU - VC)

This indicates that people across VC have various perceptions of ERM, which could be attributed to their different involvements with risk and how ERM is embedded in their day-to-day jobs and its related level of usage. ERM has been working well at VC, but it has not been working yet at its maximum efficiency. It could be infer that ERM full potential is not used in VC. This could explain the intensive training programs run at the company level that will enhance the embedding of ERM. CA- VC illustrated:

*"I wouldn't say it is working as good as the ideal scenario would be. But I think as good as it can be." (CA - VC)*

## **7. Findings and Analysis: ERM and the change in organisation structure and roles and responsibilities**

As ERM is an action that encodes institutional principles at VC, various changes in organisation structure and roles and responsibilities of senior management and staff are expected to exist. This section provides the case study findings in relation to how change agents actions change the company structure , as well as change other actors' routines and hence their roles and responsibilities.

### **7.1 ERM implementation, embedding, and institutionalisation: organisation structure change**

The organisational structure of VC has changed following the adoption of ERM. ERM in VC was described as an action that encodes institutional principles. VC took actions to promote ERM culture as a part of its implementation process. The existence of this culture was obvious because VC's employees have perceived ERM as a technique that has been used since a long time and a necessity for running the insurance business. VC then could see the benefits of implementing a holistic approach to risk management rather than following what regulators suggest. To ensure a successful implementation of ERM rules and related risk management routines, and hence to manage the business, there was a need to set up a risk function. The function has been directed and managed by the CRO, and encompasses a professional risk management team. The risk function supported ERM implementation and embedding in the sense of providing the criteria against which the business performance could be assessed, as well as promoting the culture of not only taking risks but also taking a holistic view of risks. ERM put a formal framework around that in terms of clear specific rules to be followed. MA- VC viewed ERM as helping them to better manage their risks and thus achieve the business objectives. He stated:

*"So I think the approach that we take here to ERM is to try to assess all risk in an intelligent manner and not in sort of that US living by regulation existence." (MA - VC)*

Considering that ERM implementation and embedding has become a necessity to run the insurance business, there has been a need to keep improving the process of its implementation and embedding over time. In order to achieve this, specialised people are needed to manage and run all risk management processes within VC and help other people to run their specific risk responsibilities and thus embed ERM into their day-to-day job. As such, the Risk Department has become an independent function that helps balancing the relationship between business development and operations sides and monitoring their acts. ERM then played a key role in ensuring that all business areas work in unison and in the way ERM requires, which in turn helped balancing the dialectic of control in the social relationships. This provided the bases for the business to continue and to have a competitive advantage. COO- VC illustrated the risk function role as a catalyst for helping people to evaluate risks: He indicated that because the risk function doesn't have any accountability for delivery, it is able to be much more dispassionate in the presentation and the challenging. He added:

*"I will define the business into three different areas. On one side of our business, we have one area which is really around the business development... My side of the house is really about spending that money, so I've got all of the infrastructure areas... In the middle we have the control functions of which risk function is one. So risk function takes an independent view and helps either sides of these to*

*understand what are all the facts, the performance imperatives in that area."*  
(COO - VC)

As a part of ERM implementation, embedding, and institutionalisation, a steering committee was also established to run and develop the risk management function and chaired by the CRO. This committee is responsible for discussing risk management from total and comprehensive angles. The Chief Executive gives the Risk Committee a responsibility for ensuring that risk awareness culture is pervasive throughout the company. It consists of various risk sponsors including CRO, CFO, COO, CUO and CAc each of whom has precise risk responsibilities. Therefore, manager level is very much involved in the ERM implementation and embedding process. VC also had a network of many risk representatives in its different branches in order to implement the regulatory requirements. This emphasise that the role of the risk function has expanded over time in response to have ERM fully embedded across the whole company. CRO- VC illustrated that ERM is promoted to be a way to achieve VC 's objectives and hence it is a necessity rather than being a burden, which facilitates its embedding into day-to-day job:

*"It is very much shared and my role it is that everything is taking place smoothly and people always understand it is not burden, it is not administrative task, but it is something which serves the company objectives."* (CRO - VC)

VC Group approximate organisational chart is presented in Figure 3 and depicts the organisational change that followed ERM implementation.

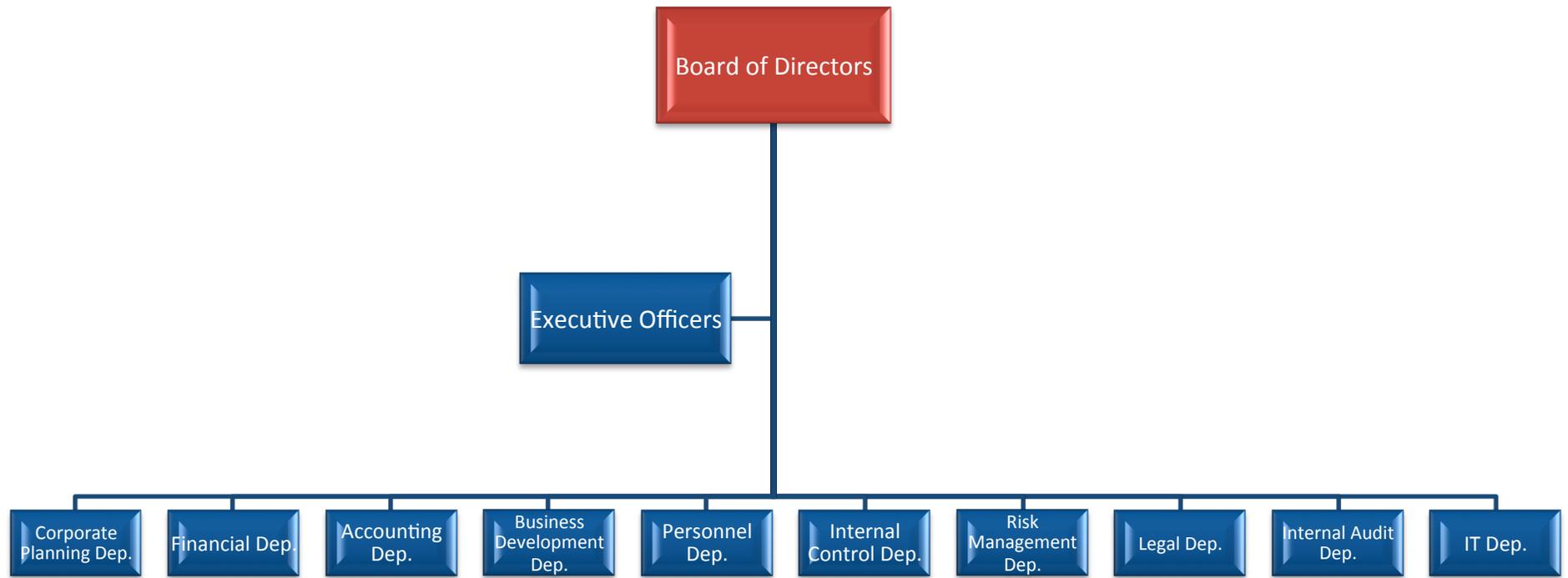


Figure 3: VC Group Approximate Organisational Chart

The chart shows that Risk Management is an independent department and separated from Internal Control department, which implies that VC has given a greater importance to the issues related to risk management as a result of implementing and embedding a stronger ERM.

The relationships between the Risk Department and other departments have changed as a result of expanding its role. The Operations Department and the Risk Department are getting closer as ERM becomes more mature. Actuarial Department now works quite closely with the Risk Department, which was not the case before ERM embedding. This can be explained as the Risk Department is becoming more interactive with other departments as a part of promoting ERM culture and to facilitate its embedding into their day-to-day jobs. Risks should be recorded and then reported to the Risk Committee. Thus the role of the Risk Function has expanded over time.

ERM implementation and embedding required VC to strengthen its infrastructure, particularly IT areas. Having a good infrastructure supported the business development and provided the data required to make informed decisions. As such, all of the infrastructure areas are in support of the VC 's business strategy and ERM requirements. COO- VC considered ERM to be about performance management and clarified that he was appointed to mainly help strengthening VC 's performance management:

*"So when you talk about some of my infrastructure areas, the IT area, it is all about producing an infrastructure which is capable of supporting the business from which you can obtain the data or the information necessary to take informed decisions. So that is ERM and that is also performance management. So that is really what the link is as I think." (COO - VC)*

As ERM is seen to be about performance management, there is an implication that ERM implementation and embedding can affect the value and performance of VC.

## 7.2 ERM implementation and embedding: roles and responsibilities of senior management and staff

ERM implementation and embedding was followed by changes in roles and responsibilities of people across the company considering that ERM is a holistic approach and incorporate specific risk management rules within its framework. Thus, changing roles and responsibilities will involve changing the risk management routines applied into senior management and staff's day-to-day jobs. These changes in turn supported ERM institutionalisation within VC case. The analysis in this research revealed that these changes occurred at two levels. First, at actions level; change in roles and responsibilities for risk in ERM implementation process. Second, at routines level; change in roles and responsibilities for capital allocation processes. Those will be discussed in the following sub-sections.

### 7.2.1 Roles and responsibilities for risk in ERM implementation process

Implementing and embedding ERM has become a shared responsibility across the whole company. Thus, all departments including finance, actuarial, strategy etc. have assisted in the implementation and embedding processes. However, CRO- VC and his team were responsible for initiating the process of ERM implementation. The CRO set the ERM manuals and policies, then the process was taken forward by him and people from his department. Each sponsor of the ERM steering committee has become responsible for a certain stream of embedding ERM. The CRO tend to be the focal person. CUO- VC has been responsible for the embedding process within the Underwriting Department. The CFO- VC has been responsible for the investment and financial aspect of the implementation and embedding processes. COO- VC expressed that CRO- VC just provided assistance in defining and evaluating risks in all departments and do not do the whole job:

*"It helps us to evaluate risk but I think it is for the managers of each of the functions to take the responsibility for those areas of risk. So that is the supervisory role which they have. I work very closely with the risk manager in term of defining the risk measures." (COO - VC)*

Over time, the more mature ERM has become, the more its embedding has become the responsibility of the different departments officers. Thus, the CRO would monitor the process and check whether the ERM rules are coupled with operations. For example, COO-VC was responsible for implementing ERM into his departments including human resources, general affairs, IT, operations and claims. He did not report to the Risk Department. In this sense, the risk team was mainly responsible for monitoring and assessing the implementation process in the departments COO- VC manages.

There was an indication that senior management level was responsible for taking actions, and hence takes on the responsibility of implementing and embedding ERM into their departments such as CUO- VC, while people from lower levels are only responsible for delivering what ERM requires. For example, OM- VC thought that he and people from the same level contribute to the delivery of the requirements of ERM, and thus they are not responsible for the implementation within the department. However, when explaining how they embed ERM into his day-to-day job, he was clearly contributing to and developing ERM implementation and embedding process. ERM cannot be fully embedded without the efforts of each and everyone in VC. It could be infer that senior management has overall responsibility for initiating the implementation process and promoting ERM culture within the context of achieving the company's overall goals, accompanied with all staff assistance to further embed ERM.

MA- VC supported the latter argument. He did not think that he would be involved in risk management process prior to ERM and thus he had no risk management experience. Recently, he interacted with the Risk Management Department to formalise the practice and routines that he has put in place because of his involvement in putting institute systematic internal control over every single activity he does. He explained:

*"Over the years, I've often been involved in what is transpired to be a discipline I didn't think I would be involved in. And recently any involve or interaction I've had with the risk management department is merely been to formalise the practice.... So most of those things are done, are fed back to me as questions from the risk management department." (MA - VC)*

MA- VC stated that he can no longer just be an accountant. Within an ERM environment, He needed as an accountant to have a very wide IT skills, database skills, system analysis skills and spread sheets skills to be able to model the company. He added:

*"... and prefer to call accountants financial mode lists now not financial accountants because they should be able to model the company in terms of its internal structure and how is manifested the finance in the world financially and legally and indeed in any way." (MA – VC)*

However, MA- VC stated that MAs' role and the routines in place has slightly changed after implementing ERM in the sense that they have always thought in risk terms and applied risk management disciplines. But, ERM helped formalising the risk management routines by mainly filling some gaps that are related to compliance by providing appropriate education and detailed risk information, which enhances and explains the logic behind the routines they follow in their work, and improved their way of thinking regarding risk embedding. This indicates the absence of a formal clear framework of risk management prior to ERM. He stated:

*"Because of my auditing background, I'm always thinking about impact for any reason whether it's loss, fraud, liability of any sorts because of the need to assess*

*whether the company financial statements are stated right and that includes looking at what I refer to as foot prints on the sand where my implication if one thing is happening there is likely to be another implication particularly around going concern in an organisation." (MA - VC)*

Further, MA- VC provided an example on some of the gaps that ERM helped to overcome in his role:

*"It might be from things such as... the compulsory compliance courses that we are required to do they might provide an ethical insights to something that it is not that you learn a new ethic or new standard or new tenants but the fact that they've mentioned something and in a certain way might make you appreciate that you can't necessarily rely on a common sense approach in a situation you might have to actually think what the prescriptive approach is and what was the logic that went into that. You might be looking at the spirit of the legislation as opposed to a sense of justice, fairness or morality so even the smallest amount of training can be fairly significance from my point of view." (MA - VC)*

ERM adoption and implementation processes within VC received a significant support from the CRO, CEO and CFO in terms of financial support, educational support and promoting the culture as a result of being totally convinced of how ERM can help the company achieving its objectives. Such support on different levels facilitated the process of the implementation as people will be aware of how to embed ERM rules and related routines in their daily job. As AA/1- VC explained:

*"These are where we were made aware of the education part, that they have been very good as they are making us aware of how the company can affect so much of the risk and ERM. We just think we sit at the desk and our job might be that important, but they manage to educate us so we could be responsible for liquidity risk, credit risk, reputational risk, all of the risks. And how each one of them, a small thing that we do, could end up causing risk in any of those nine categories." (AA/1 - VC)*

### *7.2.2 Changes in roles and responsibilities for capital allocation*

As stated earlier, ERM was gradually implemented across the whole company. During the first stage of implementation, ERM was implemented and used at the managerial level. Then it was pushed down to lower levels over time. Everyone at various departments in the company then shared a specific risk responsibility and implemented specific risk management routines. Capital allocation routines were one of the key risk management routines that have changed in VC as a result of changing the roles and responsibilities of people involved in this process. VC has moved to risk-based capital allocation five or six years later to ERM adoption, which means when ERM got more mature. Capital allocation was the responsibility of CUO- VC prior to ERM implementation and embedding. After embedding ERM, risk management, underwriting and actuarial teams have had specific responsibilities for capital allocation in VC. There has been a distribution of responsibilities among all people that have to deal with risk and capital routines, which shows the strong link between risk and capital in VC.

Previous knowledge and/or training of VC 's underwriters have taught them about risk in a different manner than what is required as per ERM. There was a shift in the way underwriters exercise capital allocation routines with regard to risks. CUO- VC expressed that underwriters did not understand the interaction of capital in the decisions that they make previously. Now, they have been taught what that means. He said:

*"... So this is a fundamental shift in the way that underwriters would have got those process in the past... This is quite difficult to change for underwriters have*

*been doing the same thing the same for twenty years to do it and think differently." (CUO - VC)*

The role and understanding of underwriters has been widened and changed. They started to think about the border picture. ERM taught them to think in more detail and more sophisticated way. Thus, it broadened out their understanding of risks, how they impact the business, and the need to implement risk management routines into their day-to-day obs. In this regard, ERM has extended their role to look at other risks not only the ones that exist in underwriting department. SCU- VC emphasised that in the past underwriters looked very much at the specific account and accountancy and at what is the set LR within certain parameters that seems acceptable. Now, they realised that there is a need for more detailed understanding of the characteristics of that case. SCU- VC 's view was shared by EOO- VC 's, who explained:

*"I guess traditionally insurers in particular look at loss ratios and combined operation ratio and that is really the world that I would brought up and you live in that underwriting risk... So, I guess my experience and my understanding have broadened out what was kind of important but narrow in insurance context into a much broader understanding of how we think about risk. Talking about the same thing like operational risk, how are we sure that our data is accurate, complete, persistent, what will happen if we operationally fail to pay a reinsurer when a claim came in and we are left with a non-reinsured loss. Those types of risks you need to think deeply about that and then how do you control, how do you mitigate?" (EOO - VC)*

COO- VC and his departments have become indirectly involved in capital allocation. This was demonstrated in the relation between operations and underwriting. Basically because COO- VC designs all the systems for underwriting team, which actually determine the data which they must collect, underwriting team highly depends on operations team work. So, operations team redesigned the whole of the business model and the data management systems which generate the reports that allow underwriters to assess the results and take decisions.

Extra risks responsibilities for capital allocation were further added at operations level. EOO- VC expressed that because the underwriting function reports to him, he would have operational risk responsibilities as a result of how that the data captured is followed by the process of having the data in the granular level needed. He has been required to make sure that the data is it complete, accurate, and consistent. So that is part of it. He stated that other key risks he owns are reputational risk and strategic risk.

The Risk Department and Committee have significantly become involved in the process of allocating capital. All the sponsors have worked very closely and met on quarterly bases to discuss how to improve the company's risk management. Each six months, they have also met with the risk representative actuary and Actuarial Department. They questioned their work and required them to fill in questionnaires in order to manage and control capital routines. Thus, capital allocation can be seen as the heart of ERM, which implementation has led to continuous changes in capital allocation practices over time. AA/1 stated that reserves are calculated on quarterly basis. ERM has been considered when setting out VC reserves as the actuaries' role is extended to specify how much risk there is around reserves and the level of uncertainty around them. He commented:

*"The reserving risk then I'll have to then justify why I have chosen certain methodologies, the way I have approached certain classes of business, I have to be able to, sort of, justify these two. Once we calculate the reserves then the risk committee become involved and they want to know how much, how the reserves have been calculated, different risks that are behind it. We also have each year,*

*maybe every six months, we sit down as a department with the Risk Department and we have to go through each of the set of questions that we have designed that we have to look at. So maybe the risk of having the reserves wrong and how much money that might cost us, then how that would impact the capital that we hold and how that might cost us as company." (AA/1 - VC)*

In general, the capital allocation routines implemented by actuaries has been basically quantitative and linked to pricing insurance policies, reserving and capital allocation. Within Actuarial Department, responsibilities and hence routines were distributed among people. Capital allocation process has been the responsibility of specific actuaries, which emphasise the growing recognition of the importance of this process that incorporates different routines after ERM implementation. There was evidence that ERM is extensively used for capital allocation and well embedded in its daily processes. For instance, ERM is becoming a part of the actuaries' day-to-day job and thus risk is considered at all stages of capital decision making. They will not go for a new line of business without considering the capital implications or the risks surrounding it. This is illustrated by CAc- VC:

*"We would not enter now any new line of business without considering the capital implications or the risks surrounding it. And not what the profit is, but what that profit means compared to the risk it brings in to the company. Whether it's a new line of business or a new investment strategy and that goes right the way from internal management teams and also the board." (CAc - VC)*

The risk management roles and routines, and the management of capital routines are linked in VC. Internal capital model has been put in action which is a key strategic and operational decision making tool as it enables the company to integrate the process of both risk and capital management. It is under the supervision of the Risk Committee and the CRO. The output of the internal model has been systematically used to manage the daily business. Then the company has monitored the capital needed to support its business plans. VC has thought about enhancing such strategy because it may help achieving better management systems and efficient usage of resources.

RMs' responsibilities were defined as performing the qualitative routines of the risks whereby risk assessment is the main thing of the risks. They have been required to assess all of the risks to which the company is exposed, so it is done on inherent bases where there are no controls in place at all. When there ERM put controls in place, they could reduce the exposure down. RMs needed to understand the potential impacts of these risks and then put mitigation plans in place. Thus, their role has been to facilitate the risk management function and its roles and routines. The CRO has worked closely with the actuarial team to perform the quantitative routines of the risks embedded into capital allocation process using complex models. The models have been primarily used for non-life underwriting risks and insurance risks, which cover risks relating to premiums, large losses and attrition losses. Such models use historic loss data. As explained by RM/1- VC:

*"An example could be internal fraud and if you assume there are no controls to mitigate internal fraud, the exposure to fraudulent cheques being drawn or money fraudulently being taken out from accounts might be millions of pounds. But when you put controls in place such as systems access controls or cheque signature reviews, the controls could reduce exposure down to thousands of pounds as opposed to millions.... The part I am doing is more the qualitative side. The main thing is risk registers, which I refer to as risk assessment. It is when you identify all the risks within the company and assess these to work out what the exposures is on an inherent and residual basis. At present, we have circa one hundred risks recorded on our risk register at the moment and an extract of this (covering operational risks etc) is input into statistical models in order to*

*calculate the amount of capital required to cover these risks on a one in two hundred basis. This result is then combined with output from other statistically software used to calculate the capital required for the non life underwriting risks to created the total capital requirement." (RM/1 - VC)*

Therefore, RMs have been mainly responsible for providing the qualitative side of risk inputs for the actuaries who run statistical models and then they compare the Risk Department's qualitative outputs with their model quantitative outputs and make sure they work in unison. However, the qualitative side has not driven the figures primarily. Most recently, risk management team ought to be involved in the internal capital model and the quantitative routines. This exemplifies how ERM is driving and affecting capital allocation practices.

RMs were further expected to undertake further training programs in order to be able to perform the quantitative routines of risk and thus ERM will lead to a change in RMs roles and responsibilities. As such, ERM could help combining and converging risk management and actuarial work. This is a part of a more holistic risk management approach which considers capital allocation as a key part of ERM strategy. Further, some risks that are used in capital modelling exercise such as reserving risk used to be calculated by external actuaries. After using ERM, the actuaries of the company have become more involved in such risk management routines in terms of looking at these risks each and every year and constantly updating them. Thus, they moved away from looking at a task completed by external entities and moving it forward. AA/1- VC emphasised the latter argument:

*"So, reserving risk is to be calculated by our external actuaries at KPMG and now we've become a lot more involved with that. So we'll look at risk behind my reserves, how likely it can go wrong. And then that is used in the capital modelling exercise. They will rather than looking at a task that was completed a few years ago by KPMG and just moving it forward..." (AA/1 - VC)*

Consequently, ERM drove a change in the routines embedded into and the responsibility of capital quantification and allocation to be CRO- VC 's overall responsibility rather than CAC- VC 's only. CAC- VC has also started to report directly to CRO- VC with regard to capital issues. This could be attributed to the fact that after using ERM, the capital model has become much more integrated part of the business. The internal capital model has become broader than it used to be. Previously, the capital model used to be an actuarial tool which was developed and run by actuaries and hence very few people understood it other than actuaries. As explained:

*"Capital allocation is not my responsibility but it is controlled by the CRO and decided by management committee and the board. Of course, financial figures prepared by my department are important sources to make a decision on the capital allocation." (CFO - VC)*

## **8. Discussion and conclusion**

This research was based on interviews with people at different levels in VC and documentary evidence. It provided a view of risk management at an important time for the insurance industry. The aim of this study was to understand how ERM is embedded in practice into all levels and key decisions of the company and how it has been affecting and changing the organisation structure and risk officials' roles and responsibilities over time. Overall, this analysis indicated that ERM initiated a change in the organisation structure and risk officials' roles and responsibilities in a large UK insurance company where ERM is at a mature level. ERM was the main institutional force behind introducing such changes in VC. Figure 4 summarises the main findings from this case study.

# VC

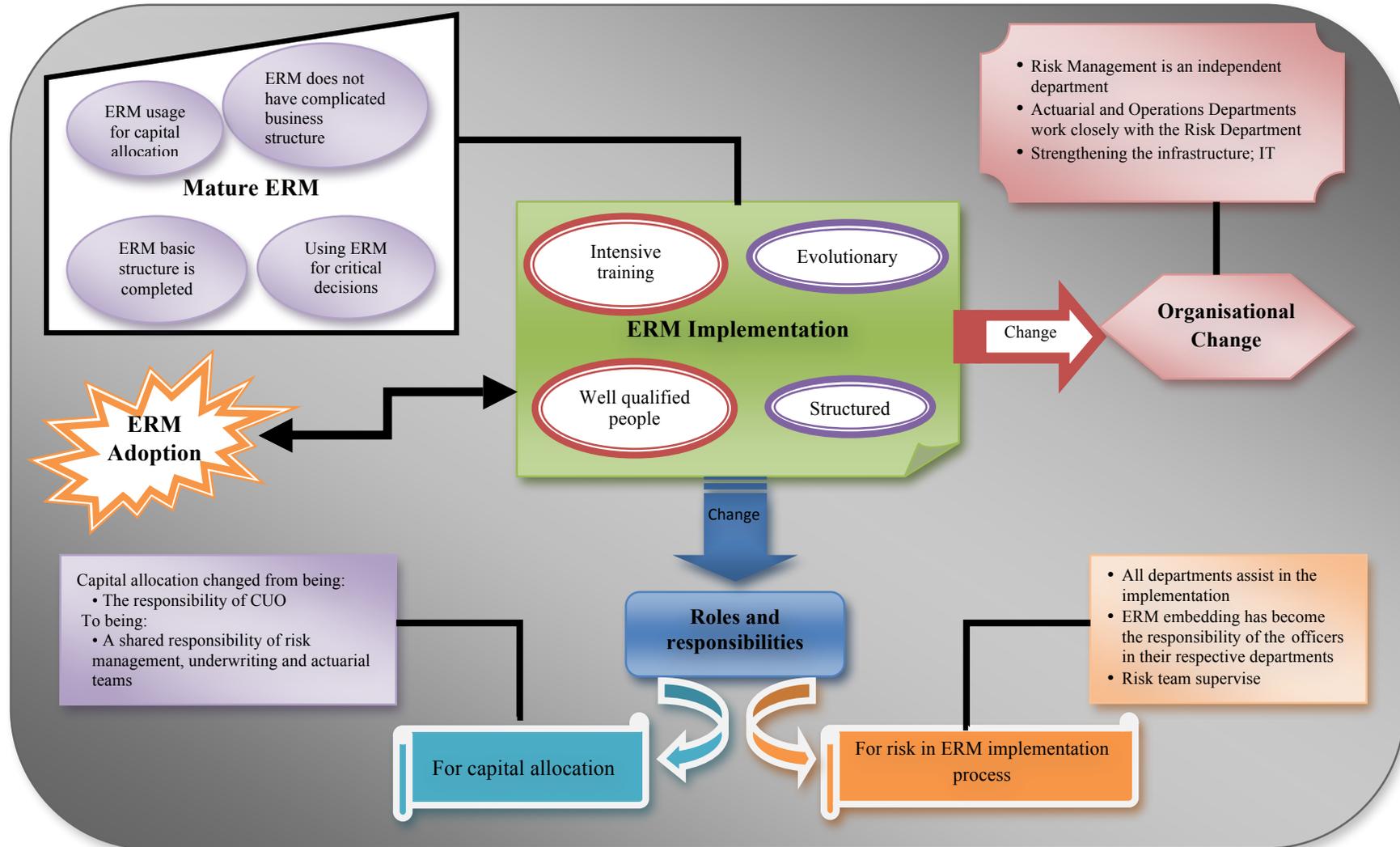


Figure 4: VC's ERM and related changes

The realm of action was analysed to identify the main actors in the new risk environment and their relationships with the institutional realm. The chief risk officer and risk team were the key actors in the process of ERM implementation and embedding, who facilitated promoting a risk culture and led people to think in the way ERM requires. Setting up a risk management department with clear roles and responsibilities that is directed by the CRO, following ERM adoption, has supported ERM-related actions and managed staff resistance. Running ERM training programs at the company level, which are tailored to different departments' requirements, supported ERM embedding across the whole company. Underwriting and Actuarial Departments were identified to use ERM extensively comparing to other departments considering that they mainly deal with capital routines. The risk function was given the appropriate power to run ERM implementation and embedding, and moved out from under the CFO to the CEO. Initiating a Risk Committee and/or a risk coordinator at every department, which included a number of chief officers who have precise risk responsibilities, illustrates how ERM is the responsibility of everyone across the company. Even though most departments in the insurance companies assisted in the ERM implementation and embedding process, the risk function team have been the key actors with regard to managing and monitoring ERM processes across the whole insurance company. Reflexive monitoring of day-to-day job was implied by all the people with risk responsibilities to monitor their actions and the actions' settings and contexts as a result of the need to embed ERM requirements.

VC moved towards the holistic approach of ERM through establishing a Risk Committee, which is responsible for running and developing the risk management function, and preparing for any new regulatory requirements. Thus, this facilitates the enacting and encoding process of ERM-related routines. The Risk Committee included a number of risk sponsors who have precise risk responsibilities. Similarly, Ashby et al. (2012) found that implementing risk culture has led to structural change in terms of creating new, small groups to oversee silos, support the board and provide risk oversight as previously missing or inadequate. This implies that silo approaches are still used in banking sector. However, Ashby et al. (2012) indicated that companies are concerned about breaking down silos and encouraging risk information sharing. My findings supported their result to some extent in the sense that VC have expanded the role of risk function and directed extra efforts to promote a risk culture in order to fully embed ERM across the whole company. However, banks are considered in the literature to be the first to accept and implement a wide-view approach of risk, which does not support Ashby et al.'s (2012) findings.

ERM formalisation tended to reinforce, reshape or change existing routines and institutions. ERM helped formalising the risk management practice in VC. For example, new capital allocation routines were produced. The latter finding is consistent with the survey findings indicated by AON (2010). This argument is consistent with Burns and Scapens' (2000) view regarding the possibility of formalising existing organisational routines into rules.

The CRO and his team have been able to access real-time risk information to check the availability of resources and analyse their portfolio. "At the root of ERM is the idea that risk management is embedded right across organisation, and consequently is the responsibility of everyone. Specialist experts have their place but they need support from operational staff" (Woods, 2011, p. 41). Putting in place a mature ERM internal model using both historical and real time information leads to better decision-making process. ERM helps providing information and guidance for senior management, as well as offering lessons to RMs who are seeking to make an enhanced contribution to the success of their employer (Woods, 2011).

The case study results showed that ERM model in VC is a strategic ERM. It corresponds to the demands of the risk-based internal control imperative rather than

shareholders'. There will be always a consideration of increasing shareholders' value, but this is the ultimate benefit when having a strategic ERM in place. Embedding risk management into operations is shown to be an extremely challenging and long term process. However, the risk management function in VC has a direct contact with day-to-day operations, but it holds little meaning for some front-line staff according to the extent ERM affects them. The ERM system is linked to the attitude to risk. Thus, it will be different where staff is encouraged to be 'risk aware' and take responsibility for risks control from the one if risk taking is encouraged as an approach for boosting short-term profits. In a company, the Board of Directors' and senior managers' views are reflected in the common attitude to risk and risk appetite. This could be formalised in producing the related risk taking documented guidance and rules (Woods, 2011).

Mikes (2005; 2009) showed that there are systematic variations in ERM practices in the financial services industry. However, the findings of this study indicate that ERM practices and uses also differ among departments and levels within the insurance company. This can be attributed to the lack of detailed information about ERM and its necessity in a specific department. It is clear that Underwriting and Actuarial Departments use ERM more extensively than other departments as it mainly deal with capital requirements and allocation.

Management accountants are now involved in the risk management process and interact with the Risk Management Department, which was not considered to be happening by them. However, there is always a space for improvements and further actions should be taken to better align ERM to the company's. ERM is an on-going process that involves continuous education and training. In this regard, continuous improvements should be made to the risk management system in order to keep the business healthy and competitive. Further, Ashby et al. (2012) showed that risk ownership has been driven more into the front line of business. The findings of this research showed that ERM is driving the latter process in insurance industry as a part of its framework.

Even though people with different professions may not have risk management experience, they are required by the CRO to be completely aware of ERM policy and to embed ERM in their day-to-day job. This is achieved through the comprehensive internal training programs from the board level to junior levels. The MA illustrated the actions taken to get everyone fully understand ERM policy and how that affects VC business and particularly the risks each person mainly responsible for.

Regulations allow faster and easier embedding of ERM in terms of both technical and financing issues. They also add credibility to ERM usage. This explains how extra-organisational pressures lead to changes in activities, rules and routines (Burns and Scapens, 2000). Although regulation requirements might have had only trivial effect on ERM adoption decision in VC as a result of ERM being adopted a long time ago, they can be considered as an institutional driver to continuously improve and strengthen ERM strategy. The RM explains that there is a need to implement elements of ERM anyway. As it becomes more embedded within the company over time, it is going to be refined and improved. Thus, the whole process will be enhanced. Although the RM sees that ERM might expand within the industry, he is convinced that it might just be a case of it maturing and improving.

The institutionalisation process involved a dissociation of risk management routines from their historical circumstances. For instance, ERM did not support the existing capital allocation routines and institutionalised the new capital allocation routines; risk-based capital allocation (path dependent process). Capital allocation routines were expected to institutionalise after moving to risk-based capital allocation and little further changes are expected to occur. Risk reporting structure was also enhanced after ERM embedding. Such intentions and changes facilitated ERM and risk management routines institutionalisation. Thus, the new risk management rules and routines became the way processes are executed,

i.e. institutions. These institutions were encoded into the on-going risk management rules and routines and formed new rules. The insurance companies under study have become more capital oriented, and risk-based capital allocation routines have been embedded into different functions. The new routines were at different levels of routinisation and intra-institutionalisation as a result of their level of usage within each department. The new risk management institutions decided the different meanings, norms, values, and powers of different actors. For example, a risk function was established following ERM implementation and expanded over time, which shaped the institutionalisation of risk management routines. The roles and responsibilities of people across the company have changed as a result of adding particular clear risk responsibilities to them. The risk management routines were showed in this study to be programmatic rule-based behaviours, which explains the way in which new risk management rules became institutions over time.

Random elements, systematic mechanisms and internal forces have shaped the implementation and institutionalisation process. For instance, the existence of the CRO, the chairman of Risk Committee, who has significant experience in ERM system, was one of the most influential conditions for the successful implementation of ERM in VC. The negative reaction to changing process by people in the company and limitations to data resources threatened the implementation process and the possibility of ERM success. However, the CRO, who is the leader of ERM implementation and Risk Department, successfully managed to complete the implementation of ERM through taking actions to improve the communication process across the company and hence people with different roles understand ERM and its importance, as well as their risk responsibilities clearly. The ERM has been embedded gradually to include the lower levels in the company. For example, underwrites are aware of ERM and its relation to the capital allocation. They are also using it in their daily job.

The establishment of the Risk Management Department is another event that followed the ERM adoption decision and shaped the future of ERM in VC. The CRO and his team were able to convince people, who were against the change and refused to use or embed risk aspects into their daily job, to reconsider it by meeting and presenting to them how ERM can add value to the company and improve the quality of their work or by making them attend compulsory internal training programs which enhance their understanding of the whole process.

The new UK Corporate Governance Code recognised the importance of maintaining a risk aware culture. Ashby et al. (2012) in their interim report suggested that existing ERM systems are not directly related to risk culture work stream as may be imagined. However, my research indicated that having and developing risk culture in insurance companies is a part of ERM framework and process to get it fully embedded. Further work is needed on this issue. Ashby et al. (2012) considered the expansion of the role of risk functions as a part of implementing a risk culture. Expanding the role of risk function was shown in my research as a necessity to embed and promote ERM culture. Improving the communication network between the risk management team and people across the whole company gradually got people to work in the way that ERM requires, and thus led to a successful implementation and embedding of ERM in the companies under study.

The CRO's interest in ERM, his experience and his continues actions to fully embed it across the whole company indicate further developments of the ERM strategy. In addition, the significant support provided to the CRO and his team by the CEO and the CFO in terms of financial support, educational support and promoting the culture is a key base for taking further steps towards improving ERM strategy and getting it embedded within all levels of the company. According to Burns and Scapens (2000), if those who are responsible for

implementing new system possess sufficient power, they may be able to impose change, possibly with some difficulties.

There has been a general understanding among the people across the company about the importance of ERM and how that provides the best way to assess the profitability of VC. They realise that the company's profit was only part of the story and there is a great need to compare it to the risk taken on. This could be seen as a key factor of ERM success and quick embedding within VC. Furthermore, ERM has changed the culture and the key strategic goals to be achieved of the board. Return on capital is taken into consideration alongside with profits.

VC's business nature (as a large company working in insurance sector) and objectives also sharply affect the future of the ERM strategy. This has been reflected in the feelings of the VC 's staff towards this strategy. Current VC members, from various levels, are totally convinced of the importance of ERM and the need to embed it. They also can see ERM working. Thus, they have incentives to further embed ERM into their daily job and across the whole company.

ERM is considered to be embedded further at the company level because it has affected the return on capital ratio and people have been able to see its benefits over time. ERM will be embedded better into lower levels at VC over time. It might improve business acumen and business acumen might help with ERM acceptance and embedding. This could add value to the company ultimately. In the insurance industry, companies can get a wrong way with not understanding business or money. However, the temporary nature of ERM and the lack of precise information and explanations about it have been a problem faced the implementation and embedding process. Having ERM implemented since 2002 has given VC the opportunity to deal with all the technical issues alongside with cultural ones.

In short, institutions within insurance companies are the basis for the way in which ERM is practiced, the way in which risk management information is used, and the risk officials' role and responsibilities. To our knowledge, this research is one of the first studies to investigate ERM and its effect on risk officials' communications, roles and responsibilities. It builds on the existing risk management literature which suggests variations among ERM processes and frameworks among different companies.

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## Appendices

### Appendix I: Data Collection - List of interviews conducted

<b>Non-life Insurance Company</b>	<b>Interviewee</b>	<b>Code</b>
VC	Chief Risk Officer	CRO - VC
	Chief Underwriting Officer	CUO - VC
	Chief Underwriting Europe	CUE - VC
	Chief Actuary	CAC - VC
	Operations Manager	OM - VC
	Chief Accountant	CA - VC
	Actuarial Analyst 1	AA/1 - VC
	Risk Manager, 1	RM/1 - VC
	Chief Financial Officer	CFO - VC
	Actuarial Analyst 2	AA/2 - VC
	Risk Manager, 2	RM/2 - VC
	Chief Operating Officer	COO - VC
	Executive Operations Officer	EOO - VC
	Management Accountant	MA - VC
	Senior Corporate Underwriter	SCU - VC