5-3-2015

Downside-Upside Duality: The Role of Ambidexterity in Enterprise Risk Management

Emanuel V. Lauria Jr

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Emanuel V. Lauria, Jr.

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The author of this dissertation is:

Emanuel V. Lauria, Jr.
J. Mack Robinson College Of Business
Georgia State University
35 Broad Street, Room 1139
Atlanta, Ga 30303

The director of this dissertation is:

Conrad S. Ciccotello, Phd
J. Mack Robinson College Of Business
Georgia State University
35 Broad Street, Room 1139
Atlanta, Ga 30303

Downside-Upside Duality:

The Role Of Ambidexterity In Enterprise Risk Management

BY

Emanuel V. Lauria, Jr.

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY

ROBINSON COLLEGE OF BUSINESS

2015

ACCEPTANCE

This dissertation was prepared under the direction of Emanuel V. Lauria, Jr.'s Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Executive Doctorate in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard D. Phillips, Dean

DISSERTATION COMMITTEE

Conrad S. Ciccotello

Lars Mathiassen

Harold A. Weston

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ABSTRACT

Downside-Upside Duality:
The Role Of Ambidexterity In Enterprise Risk Management

BY

Emanuel V. Lauria, Jr.

JULY 7, 2015

Committee Chair: Conrad S. Ciccotello

Major Academic Unit: J. Mack Robinson College of Business

Enterprise risk management (ERM) is a widely studied management control process, representing an important advancement from the traditional methods by which firms control the risks they face. This study steps back from attempts to quantify the relationship between ERM and firm performance. Instead, it explores how non-financial institutions with significant time and resource commitments to ERM configure those resources to effectuate a downside-upside duality as ERM is adopted, using for the first time in ERM research the theoretical lens of ambidexterity as a dynamic capability. This duality is the simultaneous engagement in mitigating existing and emerging risks while pursuing new value contributions from risk management processes. Empirical evidence indicates that the downside-upside duality is asymmetric, and challenges exist in quantifying the upside. The upside value component is most closely associated with raising the level of the risk discourse in firms. This is accomplished structurally by establishing new ERM-focused organizational subunits, and contextually by stretching capabilities. Dynamic capabilities emerge as firms sense, seize and reconfigure resources in the operationalization of ERM to supplant core competencies associated with traditional modes of risk management. Practitioners will gain from this research a richer understanding of the fit, form and function of ERM informed by empirical data and extrinsic theory.

Keywords: *ERM, ambidexterity, value, dynamic capabilities, upside, downside*

I CHAPTER I: INTRODUCTION

Exposure to the probability and severity of adverse events, or simply, to *risk*, is an unavoidable condition in the flow of commerce (Kulp, 1928). Risk is most often defined by its potential for negative outcomes (Athearn, 1971) as in "the chance of injury, damage or loss; dangerous chance, hazard" (Webster, 2014) and "a person or thing regarded as a threat or source of danger ("Risk," 2010). This *downside* directional characteristic of risk in organizations (Barton, Shenkir & Walker, 2001; Beasley, Branson & Hancock, 2012; Francis & Paladino, 2008; March & Shapira, 1987; Stulz, 1996) manifests as exposure to human, property and financial losses, and in the disruption of the pursuit of business goals and strategies (Purdy, 2010; Rao & Marie, 2007). A positive correlation is usually assumed of risk and the chance of loss. When there is too much risk facing the firm, or the plans to deal with such excessive levels of risk are inadequate, long-term survival is threatened.

Encountering risk, and the consequences that follow, may be thought of in a bipolar sense, however. Downside loss potential arising from risk arguably has an inverse, which is the possibility of an *upside* benefit (Anderson, 2008, 2009; Fraser & Simkins, 2007; Paladino, Cuy & Frigo, 2009; Sobel & Reding, 2004; Verbano & Venturini, 2011). "Nothing ventured, nothing gained" and the tradeoff of "risk and reward" (S&P, 2008) are familiar aphorisms that translate into organizational settings. Under the right conditions the presence of risk, rather than its elimination, may have the means to become a vehicle for accretive value delivery, although given its contingent liability nature, such conditions are "not now fixed and absolute, but which will become so in case of the occurrence of some future and uncertain event" (Black, 1990).

The way in which a firm chooses to define and mobilize its response to risk (Athearn, 1971), whether by strictly minimizing the downside only effects or by concomitantly pursuing an explicit contribution to upside gain, is a decision with strategic implications. Resolving this choice will be an essential factor in determining how risk is managed.

Risk management, as it is customarily conducted, is a blend of art and science (Bernstein, 1998) commonly referred to as "traditional risk management", or TRM. When in the TRM mode, risk management acts as a downside control function, accomplishing this purpose through defensively oriented approaches that reduce or remove risk (Andersen, 2008; Barton et al., 2001; Gatzert & Martin, 2013; Liebenberg and Hoyt, 2003). Commercial insurance purchasing to transfer risk contractually is a recognized, integral component of the practice of TRM. Insurance buying cycles, in which the availability and affordability of insurance products are major contributors to establishing the firm's total cost of risk calculus, play a prominent role in guiding the TRM process (Colquitt, Hoyt & Lee, 1999).

Beyond diminishing the negative outcomes of risk addressed by TRM is a proposition for organizations to capture an upside advantage from risk. To realize such benefits, a notable trend in risk management is for companies to expand the scope of its practice. This redefined scope is captured under the umbrella term of enterprise risk management, or ERM (Power, 2007). Either independently or in tandem with other management control processes (Mikes & Kaplan, 2014), ERM is adduced for its potential to preserve, enhance or create value by positively impacting various aspects of firm performance (Arena, Arnaboldi & Azzone, 2010; Kraus & Lehner, 2012; Liebenberg & Hoyt, 2003; Pagach & Warr, 2010b; Scherzer & Mackay, 1998).

Plans to capture this additional risk-based utility are not fulfilled without significant institutional effort, however. In the transition from downward facing TRM to the bidirectional

modality of ERM, firms undergo a change process to inculcate ERM that stretches over a multiyear period. Companies choosing to pursue ERM strategies are faced with capability, infrastructure and resource development tasks to enable the simultaneous execution of both traditional downside risk management activities and to embrace new enterprise-wide upside dimensions (Nair, Rustambekov, McShane & Farnschmidt, 2013). ERM adoption produces a management dilemma that is recognized in other research domains: to attain an acceptable level of congruency between the "exploration of new possibilities and the exploitation of old certainties" (March, 1991).

I.1 Focus of Study

This dissertation is focused on examining the resolution of the downside-upside duality in ERM. Through a qualitative analysis of companies having earned reputations of significant commitments to ERM, I will apply theories of collective action to the risk management arena to address the control and the value contribution dimensions of ERM. In so doing, this dissertation seeks to develop a solid conceptualization of what ERM is, in all its richness, informed by extrinsic theory and empirical evidence.

Organizational ambidexterity will be used as a theoretical lens to explicate the change on resource configurations resulting from the transformation of TRM methods to an ERM platform (Burkinshaw & Gupta, 2013; Duncan, 1976; Junni, Sarala, Taras & Tarba, 2013; O'Reilly & Tushman, 2008, 2011, 2013; Tushman & O'Reilly, 1996). With its roots in the work of Duncan (1976) and March (1991) on the challenges facing firms to shift structures and adapt to changing conditions, ambidexterity is the simultaneous engagement in exploitation and exploration activities. As such, it affords a useful framework to analyze the concept of ERM, in which the exploitative efficiency and control mechanisms of TRM coexist with the exploratory, innovative

ways to add the value desired of ERM. To paraphrase Levinthal & March (1993), the basic risk management problem confronting an organization is to engage in sufficient exploitation to ensure that adequate control over the current risk environment is maintained and, at the same time, to devote enough energy toward exploration to capitalize on opportunities in future risk environments. ERM offers a potential solution to this challenge.

In this research, the prospect of ERM ambidexterity is considered from the perspective of dynamic capabilities (Jansen, Tempelaar, van den Bosch & Volberda, 2009), O'Reilly & Tushman, 2013). Teece, Pisano and Shuen (1997) characterize dynamic capabilities as "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments". Dynamic capabilities are distinguished from core competencies, which are the routines fundamental to maintaining a status quo competitive position (O'Reilly & Tushman, 2008). Instead, dynamic capabilities enable firms to sense and seize new opportunities through decisions made by senior management to reallocate organizational resources (O'Reilly & Tushman, 2013).

I.2 Research Design

As presented by Van de Ven (2007), this study takes the form of informed basic research, in which the social phenomenon being described is the outcome of a change in organizational architecture effectuated by the adoption of a new management process. The researcher is outside of the institutional system of companies under study. Perspectives of various stakeholders besides the interviewees, including practitioners and scholars, will be considered in the development of this study. The researcher will maintain control of all activities related to this research. The candidate is an experienced ERM practitioner with a desire to make a unique

contribution to theory and to inform practice, the combination of which is at the heart of engaged scholarship.

The study is focused on examining a small sample of institutions that have demonstrated serious commitments to the practice of ERM over a multiyear period, without judging how well this task has been accomplished. The evidence of continuing engagement in ERM itself creates a sufficient platform to support the research question. Rather, it is to understanding the resultant shift in organizational architecture that occurs to enable firms to adjust to the expectations of ERM effectiveness, and in particular for these companies to accommodate the bi-directional conception of risk contemplated by ERM.

I have undertaken an interpretive approach to this study at the firm level of analysis. Since the research question is "how" organizational change has taken place, a process study is necessary to explain observed sequences of events (Abbott, 1990). Accordingly, the focus will be upon progressions rather than a category of concepts concerned with variables that seek to explain change has occurred (Van de Ven 2007, p.196).

A heterogeneous group of four non-financial public institutions, a less documented sector in the literature (Arena et al., 2010), has been assembled to represent the field of highly experienced organizational practitioners of ERM. Three industrial enterprises and one higher education institution comprise the sample. The industrial organizations are public companies in the S&P 500-size category, and the university is a major teaching and research facility. These firms were selected from a population of businesses that have acknowledged their conduct of formal ERM programs through multi-year commitments resulting in substantive changes to people, processes, and practices. With four cases, this qualitative study will not necessarily be generalizable to the overall population of non-financial institution firms, but will attempt to have

analytic, or theoretical, and between-case generalizability. The cases were chosen on a conceptual basis, rather than on representative grounds. Further, multiple variations are made possible given the diversity of the cases.

Primary data was collected through semi-structured interviews with experienced risk management professionals under full-time employment with each firm. These professionals have intimate historical knowledge of their firms' adoption and implementation of ERM, as well ongoing involvement in the execution of ERM strategies. Data gathering consistency was guided by a series of pre-determined interview questions. Audio recordings were conducted, and transcriptions made for each interview session where consent was granted, and by the "pen and paper approach" (Trochim & Donnelly, 2008, p.117) in the remaining cases. NVIVO 10 was utilized to manage the data analysis process for the complete data set.

Triangulation was accomplished through the development of multiple data sources (Yin, 1994). Secondary data, including internal presentations, archival records, publicly available information from company websites and industry practitioner surveys were reviewed. The study employs the qualitative data analysis methods presented by Miles & Huberman (2014) for guidance in data reduction, creating data displays and drawing and verifying conclusions.

I.3 Contributions

ERM is acclaimed as a significant evolutionary step in management processes, with the promise of creating value that is accretive to firm performance. However, risk professionals are faced with a myriad of guidelines, definitions, frameworks and standards as they evaluate the potential effectiveness of an ERM program. Moreover, the downside-upside duality expected of ERM calls for reassessments of how risk management resources and capabilities are deployed, adding complexity to ERM adoption and implementation. This study seeks to equip practitioners to

more effectively in their firms manage the fit, form and function of the advanced risk management activities resident in ERM. It is intended to provide insight into how firms configure to achieve the control and value propositions of ERM simultaneously, to inform early-stage ERM adopters of the possible solutions available to them, and to assist executives in considering appropriate approaches and expectations for ERM implementation. Lastly, the findings of this research may lead to a further explication of the relationship of ERM to firm performance, enabling new avenues to quantification efforts.

Theories of collective action have seldom been applied to the study of risk management in organizations, despite the ubiquitous impact of risk on operations, strategy, and decision-making. This study may make several contributions to ambidexterity theory. The first is by extending ambidexterity to the downside-upside duality in ERM, utilizing this construct as a proxy for exploitation and exploration (Junni et al., 2013). Second, observing how the internal process of ambidexterity is achieved, by means that are sequential, structural or contextual (O'Reilly & Tushman, 2013), or leadership based (Raisch & Birkinshaw, 2008), or as a combination thereof (O'Reilly & Tushman, 2013) will bring further clarity to the effectuation of its modes. Lastly, evidence of how ERM ambidexterity is operationalized through various resource allocation activities will respond to calls in the literature for a more transparent understanding of the process (Birkinshaw & Gupta, 2013).

I.4 Dissertation Structure

This remainder of this study is organized into the following chapters:

I.4.1 Literature review.

Commencing with an exploration of the conceptual origins of *risk*, I then trace the emergence and development of the two primary managerial responses to organizational risk: *traditional risk management* (TRM) and *enterprise risk management* (ERM).

I.4.2 Theoretical perspectives.

Two theories of collective action, *ambidexterity*, and *dynamic capabilities*, will also be reviewed to establish their application to the downside-upside duality brought forth by the adoption of ERM. The section concludes with an examination of practitioner surveys and case studies for initial evidence of ambidexterity in ERM.

I.4.3 Analytical framing.

Based on the literature review, a definition of ERM described as an emerging consensus of three dimensions has taken shape: a holistic dimension that specifies the importance of risk integration, a horizon dimension encompassing emerging and existing risks, and a harmonization dimension in which the downside control of risk is maintained in simultaneity with the pursuit of upside value. In this chapter, I introduce a three-phase adoption process of ERM, adapted from a practitioner capability maturity model designed specifically for ERM applications. These three phases, *motivation, advancement, and assimilation*, describe a developmental process during which firms decide to engage in, allocate resources to and facilitate embedment of ERM into the organization. It is with the assimilation phase that we are concerned, as it encompasses companies that have extensive experience with implementing ERM. Through the lens of ambidexterity as a dynamic capability, this study explores how firms that have committed to ERM practices over the long term, assimilation, configure resources to address the downside-upside duality of harmonization.

I.4.4 Research methods.

Undertaken in this chapter are a description of the case study design, data sources, data collection, and data analysis. First, the research design is a qualitative, interpretive study conducted at the firm level of analysis. Second, the primary data source is a sample of four non-financial institutions that have demonstrated multiyear commitments to ERM. Representing each organization were two senior risk management professionals with direct knowledge of their firms' conduct of ERM. Publicly available and internal archival information for these institutions was accessed as well. Third, data collection was accomplished through semi-structured interviews with each of the eight risk management professionals, utilizing an interview protocol to promote consistency. Lastly, the Miles and Huberman (2014) method of coding cycles guided the data analysis.

I.4.5 Results.

In this chapter are the findings from the empirical evidence gathered directly through the interviews and informed by the review of the secondary information, arising from the data analysis process. Beginning with a summary of the demographics of the sample, I explore how each company has moved through the motivation and advancement stages of ERM adoption to arrive at its current resource configuration in the assimilation phase. Implicit in this examination is the emerging consensus model of ERM, the ways in which these firms recognize and understand the nature of downside and upside risk, and how value is conceptualized. At the locus of the assimilation phase of the ERM implementation process and the harmonization dimension of the consensus model as it applies to the companies in the sample are major patterns and themes that reveal the workings of ambidexterity. Further, the core competencies and path

dependencies resident in downside TRM activities are contrasted with the generation of dynamic capabilities as ERM is implemented.

I.4.6 Discussion and contributions.

In this section I synthesize and discuss the findings in light of the literature review, the theoretical framework, and the research question: *How do firms reconfigure assets, resources and capabilities in the operationalization of ERM to consider both the downside and upside of risk?* The discussion includes a summary of theoretical and practice-based contributions.

I.4.7 Concluding remarks and limitations.

I offer observations on the implications of this research, discuss the limitations of the study and the potential applicability of the findings to other populations and propose future pathways for ERM research.

II CHAPTER II: LITERATURE REVIEW

II.1 Positioning of Research

This study does not seek to follow the dominant flow of ERM research. Instead, it is motivated by a decision to step back from the attempts to quantify the relationship of ERM to firm performance (Kraus & Lehner, 2012), particularly in the financial services sector, which have received relatively extensive attention from ERM researchers. Although numerous studies attempt to establish a causal relationship between ERM and the multidimensional concept of firm performance (He & Wong, 2004), there is not yet a consensus about how the relationship works despite the intuitive sensibility imputed to engaging in ERM (Mikes, 2014). Disentangling the complexity of ERM embedment in companies to determine the significance of its influence on firm performance has become a challenging goal. Market level measurements of the relationship have yielded some positive findings. However, ERM performance metrics based on return on investment (ROI), return on equity (ROE), return on assets (ROA) and risk adjusted return on capital (RAROC) are difficult to apply to non-financial firms engaging in ERM (RIMS, 2014). In comparison, these calculative hurdles are less apparent in banks and insurance carriers, for which capital-based ERM models are available (Segal, 2011, p. 83).

Empirical evidence describing the apparatus that links the conduct of ERM activities to improvements in firm performance has been slow to emerge (Mikes & Kaplan, 2014). Since the ERM knowledge base itself is arguably in a pre-paradigmatic state, quantitative approaches to measuring the relationship may be premature (Kraus & Lehner, 2012). Difficulties in defining meaningful variables and determining relevant proxies (Kraus & Lehner, 2012), the lack of ERM measurement standards (Mikes & Kaplan, 2014), the potential biasing influence of endogeneity (Bromiley, McShane, Nair & Rustambekov, 2014), the impact of firm- and industry-specific

characteristics (Woon, Azizan, & Samad, 2010), and the presence of potentially significant moderating and mediating variables situated between ERM and firm performance (Baron & Kenny, 1986, Edmonson & McManus, 2007; Gordon, Loeb & Tseng, 2009) have led to mixed empirical results. Failures to find significant linkage are represented in the literature (Kraus & Lehner, 2012; Mikes & Kaplan, 2014), as are claims of the successful demonstration of positive relationships. For example, Hoyt and Libenberg (2011) in a study of U.S. insurers using Tobin's Q as a proxy for firm value find evidence of enhanced shareholder value as a result of ERM adoption. Farrell and Gallagher (2014) explore the relationship between firm value and advanced states of ERM maturity in a mixed industry sample of public companies. Again utilizing Tobin's Q, they argue that a significant value premium is associated with higher levels of ERM maturity. Grace, Leverty, Phillips and Shrimpi (2014) in an insurance industry study identify three specific ERM initiatives that produce the greatest increase in firm value: ERM that is simple in approach; the employment of a dedicated risk manager; and the risk management function reporting directly to the CEO or to the board.

Impacting the issue of value quantification are two additional data conceptualization quandaries that could potentially uncover deeper insight into the contribution of ERM: first, the counterfactual problem (Baron, 1999; Epstude & Roese, 2008) inherent to measuring the "but for" impact of preventative management control processes such as are inherent in ERM (RIMS, 2011), and second, the alignment and tracking of ERM-specific contributions to strategic decision outcomes, which as a data collection activity in non-ERM terms has eluded management researchers (Schrage, 2003; Segal, 2011, p. 226).

ERM literature is evolving and broad. It spans risk management, insurance, economics, accounting, law, psychology and human resources journals, as well as numerous practitioner

publications and industry white papers. Nonetheless, there are relatively few qualitative, empirical studies of ERM from the perspective of collective action theories. The instant research is the first to explore the downside-upside duality of ERM as an expression of ambidexterity, in which exploitative and exploratory forces compete for organizational resources. Management theory-based research into ERM adoption has the potential to make a meaningful contribution by deepening our understanding how ERM works in situ (Bromiley et al., 2014; Denenberg & Ferrari, 1966). Applying ambidexterity to frame the evolving nature of ERM will lead to an atypical understanding of how ERM is effectuated. In so doing, value components, and in turn, relational measurements on the impact on firm performance can hopefully be assessed with increased clarity, as the formative components of ERM are unveiled more thoroughly.

Management effects, then, rather than in-depth coverage of contemporary risk treatments are prioritized hereunder. In the mix of the technical and managerial factors that compose ERM, the emphasis will be on "e-r-M" rather than "e-R-m". Included within this management domain are matters of basic economic intuition, which have also seldom been addressed in ERM studies (C. Ciccotello, personal communication, October 24, 2014). Risk ownership and corresponding financial incentives (Lam, 2003; Nocco & Stulz, 2006), cost-benefit analyses of ERM sustainment, and the systemic economic friction generated from the change management activities to adopt ERM are factors that may impact its efficacy.

The choice to follow this line of management principle-oriented research complements the more extensive coverage of various aspects of risk quantification that are examined in the literature. Calculations of risk appetite, risk tolerance, risk bearing capacity and risk correlation, for example, circumscribe the boundaries of the consolidated risk exposure profile of the organization (Segal, 2011). Against these measures do management act to align its resources and

execute its risk strategies. Thus, the author will endeavor to answer the question: *How do firms reconfigure assets, resources and capabilities in the operationalization of ERM to consider both the downside and upside of risk?*

Represented by the literature streams reviewed are five particular studies that motivate the goals of this research. First, Mikes & Kaplan (2014) offer skepticism of the repeated attempts to quantify the linkage between ERM and firm performance. Their criticism points to the use of weak variables to measure complex organizational behavior, and an insufficient understanding of how risk management industry frameworks are adopted and implemented. The authors cite the need to further "unpack the ERM mix" as a means to clarify the relationship among the execution of ERM processes and any measurable impact on outcomes. They propose a contingency theory framework that links contingent variables and ERM practices.

Second, in their 2014 study, Bromiley et al. posit an "emerging consensus", distilling three core elements of the literature and practice to define the essence of ERM: the efficiency of managing risks as a corporate portfolio, widening the scope of risk to encompass those that are non-traditional, and pursuing competitive advantage from the management of risk. The authors also cite the significant opportunity for management theory to contribute to the evolving ERM corpus.

Third, Raisch & Birkinshaw (2008), in their review of the research, develop a comprehensive framework that links the building blocks of organizational ambidexterity. Structural, contextual and leadership antecedents enable ambidexterity to situate in firms through organizational learning, technological innovation, adaptation, strategic management and organizational design. Impacting the expected performance outcomes resulting from the engagement in ambidexterity are environmental factors and other moderating variables.

Fourth, to address the question of how firms survive as they encounter change, O'Reilly and Tushman (2008) draw from the separate research streams on strategy and organizational design. The strategic perspective suggests that dynamic capabilities, which are the capacity of a firm to reconfigure assets and capabilities, offer an explanation of competitive advantage over time. Alternatively, based on organizational design research, ambidexterity, the ability of a firm to synchronously explore and exploit, is proposed to facilitate longitudinal adaptation. The authors integrate the research streams to suggest how ambidexterity takes the form of a dynamic capability.

Lastly, in one of few studies to introduce management theory to ERM research, Nair et al. (2013) propose ERM as a dynamic capability in crisis environments. The authors argue that the ERM and dynamic capabilities share certain characteristics, especially in respect to sensing opportunities and threats in the environment. In combination, these five articles comprise a new approach to examining the initiation and practice of ERM.

II.2 Traditional Risk Management

From its origins as *risque* in 17th century France ("Risk," 2010), the evolution of the term "risk" has been marked by differing approaches to its nature among scholars in insurance, finance, and economics. Most definitions of risk share in common a future temporal dimension and expectations of unfavorable outcomes (Athearn, 1971). However, theoretical complications arise as elements of loss, chance, probability, possibility, and in particular, uncertainty, are considered in defining risk (Athearn, 1971; Crowe & Horn, 1967; Wood, 1964). Conceptualizations of risk as the chance of damage or loss (Haynes, 1895), the chance of loss, as uncertainty, or the chance or the uncertainty of loss (Wood, 1964), a combination of hazards, a variance concept or the possibility of an unfortunate occurrence (Crowe & Horne, 1967), the possibility that a sentient

entity will incur loss (Crowe & Horn, 1967) and the exposure to a proposition of which one is uncertain (Holton, 2004) illustrate the historical inconsistencies and lack of agreement found in the literature (Crowe & Horn, 1967).

One of the most significant contributions to explicating the concept of risk is that made by Frank H. Knight in his work, *Risk Uncertainty and Profit* (1921):

> *To preserve the distinction…between the measurable uncertainty and an unmeasurable one we may use the term 'risk' to designate the former and the term uncertainty for the latter. (p.233)*

Knight uses both the ability and the inability to quantify the possibility of a phenomenon as a means to associate risk and uncertainty, as well as to distinguish between the terms (Holton, 2004). He further articulates his view in familiar language:

> *We can also employ the terms 'objective' and 'subjective' probability to designate the risk and uncertainty, respectively… . (Wood, 1964)*

While theoretical definitions of risk differ among researchers, there appears to be general agreement on a dichotomy of risk with respect to economic activity. *Pure* risks are those that involve the potential for generating loss only. In contrast, *speculative* risks are those in which a possibility of both loss and gain exists (Denenberg & Ferrari, 1966; Gahin, 1967; Wood, 1964). The importance of this distinction, recognized by economists in the late 19th century in discussions of entrepreneurial profit motives (Gahin, 1967; Wood, 1964), is central to understanding one of the primary attributes proposed through the adoption of ERM.

In a commercial context, risk is a multidimensional construct. In firms, it may be clearly known, or exist below the threshold of institutional perception. Certain risks are represented broadly across industry sectors and others are highly specific to companies of a particular profile.

Organizational risk can be as simple to conceive as the potential for damage to plant, property and equipment, and as complex as the interconnections among global supply chains. Since a riskless environment rarely exists (Crowe & Horn, 1967), managers must act to harness risk to survive and maintain competitiveness in the marketplace. A properly constructed risk management function enables firms to take a programmatic approach to risk-focused activities, to effectively configure risk-oriented resources and to promote formal recognition of the importance of these processes. In the next section begins an examination of how risk is formally addressed in companies.

The roots of traditional risk management (TRM) in the literature extend back to the post-World War II era (Dickenson, 2001; Gallagher, 1956; Liebenberg & Hoyt, 2003). From this early period forward, the determinants of TRM have been closely associated with procedures directed at preserving the assets and earning potential of the organization (Gallagher, 1956). In the TRM model, mid-level corporate risk managers are typically charged with controlling insurance buying costs and executing risk abatement activities that are targeted at minimizing the negative consequences of risk. These management processes have, over many decades, become core competencies (O'Reilly & Tushman, 2008) to ensure efficient, cost-effective protection.

Management of risk costs in TRM is accomplished through structured financial risk transfer programs, often of annual duration. Various combinations of commercial insurance products and self-insurance mechanisms, including deductibles, retentions and captives are frequently employed (Colquitt, Hoyt & Lee, 1999). As a result, the availability and affordability of insurance products tend to set the pace of the TRM agenda. These cyclical insurance buying patterns create path dependencies that have become well established in industry, characterized by rising, or "hard market", and falling, or "soft market" price levels. Importantly, such contractual

risk transfer mechanisms are designed to indemnify the firm for losses incurred from pure, or hazard-based risks exclusively (Colquitt et al., 1999; Gahin, 1967; Haller, 1978; McShane, Nair & Rustambekov, 2011; Scherzer & Mackay, 1998; Verbano & Venturini, 2011) where the possibility of incurring loss is the sole outcome. Speculative risk taking that has a potential for gain (Colquitt et al., 1999; Crockford, 2005; Haller, 1978; Verbano & Venturini, 2011; Wood, 1964), such as that occurring in strategic planning and decision making and company operations, dwell outside of the philosophical underpinnings of insurance to solely make whole.

Several systematic routines are associated with TRM, often operating on parallel tracks, and serve to focus management attention on the efficient handling of known risks. First, supporting the insurance purchasing decision are various loss forecasting and actuarial tools that are utilized to quantify the potential financial impact of risk and to optimize the balance of risk retained and transferred by firms. Second, activities that engage the firm in the identification, assessment, mitigation and monitoring of insurable risk are conducted on a regular basis. These preventative and protective measures are designed to encompass pure risks, ultimately to reduce exposures *ex-ante* by way of tactical schemes. For example, insurers of commercial properties periodically inspect high-risk and high-value locations, making formal recommendations for statutory code compliance and exposure improvement purposes. Failure to comply with the recommendations promptly can negatively affect future insurability. Lastly, minimization of the amount of actual losses incurred is administered *ex-post* in the claims adjudication process through the adjustment of losses and settlement negotiations.

One well-documented characteristic of TRM is that the risks of a firm inhabit organizational compartments, commonly referred to as “silos”. A silo is an organizational subdivision, such as a discrete business unit or functional area. Silo may also refer to a risk

classification such as treasury (Scherzer & Mackay, 1998), market, credit, liquidity risk (Miccolis & Shah, 2000), hazard, financial, operational and strategic risk (Lam, 2001), foreign exchange and commodity risk (Aabo, Fraser & Simkins, 2005), insurance, technological and environmental risk (Rao & Marie, 2007) and human resources and supply chain risks (Mikes & Kaplan, 2014). Silos are managed independently and to the best judgment of the individual silo managers (Beasley et al, 2012; McShane et al., 2011; Meulbroek, 2002; Mikes, 2011; Simkins, 2008).

Within the silos resides the specialized, detailed knowledge of the risks inherent to that particular subdivision, including responsibilities for measurement and mitigation (Mikes, 2005). Consequently, the resource structures and expertise necessary to maintain adequate risk controls in the silos are matters of localized consideration. In large part, they are unconnected from similar determinations being made in other areas of the organization. For firms operating in a TRM context, there are few incentives or a convenient forum for the individual silos to reach past their boundaries to collaborate on upside facing activities to benefit the greater good of value generation and enhanced firm performance.

Apart from the manner in which hazard-based TRM is conducted, corporate finance and treasury departments also commonly engage in certain narrowly defined aspects of risk management. For example, treasury departments often utilize derivative products to hedge balance sheet exposures, interest rate, foreign exchange, and market and credit risks. (McShane et al., 2011). Other functional management units, such as internal audit, human resources, and information technology also have responsibility for managing the indigenous risks they face (Banham, 2004). In particular, strategic and operational categories of risk are contemplated outside of the TRM domain (McShane et al., 2011). When TRM is the prevailing system, these

risk-related activities are not linked across the entirety of the business, to the point of different departments often speaking in different tongues about risk (Scherzer & Mackay, 1998).

Notwithstanding its historical dominance of the corporate risk management landscape, TRM functions as a management control process of limited organizational scope (Rao & Marie, 2007). It is focused on a company's insurable hazard exposures that generate downside loss potential from known risks (Dionne, 2013). From this TRM setting emerge core competencies, those distinct processes that are essential to the efficient conduct of business (O'Reilly & Tushman, 2008). In its relevance to the hierarchy of organizational processes, TRM is subordinated to higher-level strategic planning and decision-making, and its relationship to them is mainly through task structuring (Brodbeck, Kerschreiter, Mojzisch & Schulz-Harris, 2003). This effective decoupling often results in TRM becoming the "…department that says no, brought in at the end of a decision process to validate a course of action" (Teach, 2013), or alternatively, "maturity in risk management is when the company does its risk assessment when it's about to kick off a project, rather than doing it at the end" (HBR Analytical, 2011). Significant institutional barriers exist to the consolidation of risks in TRM.

When companies consider how to derive additional benefits from their risk management activities, a possible way forward is toward a post-TRM, pre-ERM stage. This incremental progress can be facilitated by the employment of certain advanced risk financing techniques, which provide avenues for value creation beyond the scope of TRM. For example, special-purpose vehicles known as *captives* have been used for decades across industries to formalize the self-insurance of risk by firms (Westover, 2002, p. 34). These entities, which could be interpreted as pre-ERM evidence of structural ambidexterity, are established to enable companies to pursue certain particular aspects of financial upside, such as tax arbitrage gains, increased cash

flow and profit recapture (Westover, 2002, p. 60). Further, an alternative insurance market of specialized integrated risk financing products exists, albeit highly selective in its capacity to underwrite risk. By supporting the combination of traditional and non-traditional exposures, they effectively work as an external integration mechanism across silos in a manner that TRM in isolation does not promote. As I will later show, on occasion these types of financial mechanisms can directly contribute to the initial organizational motivation to pursue ERM.

In summary, a robust loss control mindset and cost minimization of the financial impact of known risks is evident in TRM, with a structure and resources compelled to produce such outcomes. Cost savings, variance minimization (Bromiley et al., 2014), and "the reduction or elimination of costly lower-tail outcomes" (Pagach & Warr, 2007) are among the primary management goals of TRM. This defensive, variance reducing and efficiency seeking path dependency of TRM form a downside, exploitative set of characteristics of firms. In contrast, we now turn our attention to ERM, and how to its emergence has added an upward, exploratory dimension to the practice of risk management.

II.3 Enterprise Risk Management

Influenced by a combination of practitioners and scholars beginning in the mid-1990s, a movement gained traction that reshaped the thinking about what risk management is and how it should operate. Embracing the view that risk management should have a more significant impact on the firm beyond the cost of insurance minimization and hazard control contributions of TRM, ERM in its various forms represents a meaningful evolution of the risk management mission. Its emergence has introduced an era of "enlightened" risk management (Mikes & Kaplan, 2014) to many companies responding to a turbulent global environment. Through the application of ERM methods, senior leaders are empowered to pursue a top-down, integrated approach in

contemplating the full range of risks that they encounter. ERM is conceptualized as a boundary-spanning process impacting operations, strategy, finance, legal, regulatory, compliance and internal audit functional areas. Industry surveys (Appendix 1) document the considerable level of interest in ERM adoption. The Risk & Insurance Management Society (RIMS) argues that ERM has reached critical mass on the adoption curve using Rogers' model of innovation diffusion and market acceptance (Rogers, 1995), a finding which is reinforced by the society's own assessment of the maturation of the practice (RIMS, 2013).

While the advent of ERM is acknowledged to have occurred within the last 20 years, the seeds of what has now become ERM were sown many years earlier. Rennie (1961) argued that corporate risk management should extend its brief to "all business risks", and that the risk manager should directly influence senior management's decisions concerning expansion and innovation. By reducing uncertainty through measurement techniques, "he [the risk manager] can extend the growth horizons of the firm", and must also be forward thinking with respect to risks relating to "assets that are not yet in place, processes that are still in the blueprint stage and to personnel who are not yet employed." The author's untitled conceptualization has proved prescient, as its realization is found among the core principles of modern ERM.

ERM adoption and implementation is expected to encompass a broad risk management utility spectrum, from continuing to execute on the downside control mechanisms of TRM to enabling a broad range of upside performance gains (Gatzert & Martin, 2013; Nair, et al., 2013). The elevated position of ERM in the matrix of institutional processes is proposed to offer a source of competitive advantage (Beasley, Clune & Hermanson, 2005), enable firms to improve performance (Gordon, Loeb & Tseng, 2009), strengthen corporate governance, internal controls and external reporting (Arena et al., 2010; Fraser & Henry, 2007; Hoyt & Liebenberg, 2011;

Mikes, 2009; Nocco & Stolz, 2006;), benefit decision-making (Arena et al., 2010), assume a role in strategic decision-making (Mikes, 2009) and provide a pathway to achieve better operational and strategic decision-making (Hoyt & Libenberg, 2011; Liebenberg & Hoyt, 2003).

ERM introduces a horizontal axis to the management of risk, intersecting vertical structural and functional silos. By embedding ERM principles, a deliberate shift in risk management strategy is made from the compartmentalization of risk to the convergence of risk (Bromiley et al., 2014; Nocco & Stulz, 2006). Conceptual and working interpretations of what constitutes ERM have developed over the past two decades, influenced by academia, industry, consultants, regulators, association groups and higher education. Given the contributions of the diverse constituencies involved in the promotion of ERM, multiple definitions, frameworks, standards and guidelines have been promulgated. Indeed, the attribution of ERM as being fully "enterprise" in nature may itself be an inflationary characterization (H. Weston, personal communication, October 24, 2014). Consequently, that which constitutes ERM is a melting pot of advanced risk management principles and proclamations that fall short of uniform expression.

Three of the most well-known expositions of ERM have been issued by the Casualty Actuarial Society Committee on Enterprise Risk Management (CAS, 2003, p. 8), the 2004 Committee of Sponsoring Organizations of the Treadway Commission (COSO), and the International Organization for Standardization (ISO). First, the CAS value-based definition states that:

> *ERM is the discipline by which an organization in an industry assesses, controls, exploits, finances and monitors risks from all sources for the purpose of increasing the organization's short- and long-term value to its stakeholders.*

Second, and in contrast, COSO articulates a direct linkage to firm strategy:

> *Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives*. (Arena et al., 2010)

The COSO methodology is further developed in *Enterprise Risk Management – Integrated Framework.* This guidance document presents a three-dimensional integrated model that combines a defined set of corporate objectives, multitier compliance considerations, and operational components. Beginning with a review of the internal environment of the firm, recognition of its goals and event identification, the protocol then progresses to an assessment of risks from which to develop management decision options. Four final steps present risk mitigation measures characterized as risk response, control activities, information and communication, and monitoring (COSO, 2004).

Lastly, ISO (2009) has authored a comprehensive set of standards applicable to ERM, codified under ISO 31000:2009 and along with it, a new compendium of terms entitled ISO 73:2009 (Leitch, 2010; Purdy, 2010;). Guidance for ISO 31000 originated with AS/NZS4360:2004, the Australia and New Zealand standard that has itself become widely considered in organizational risk management. The goals of implementing ISO 31000 are numerous, including: improvements in risk assessment, financial reporting, governance, compliance, stakeholder relationships, controls, operational efficiency and effectiveness, loss prevention, learning, resilience and resource allocation; loss minimization; creation of a risk-based decision making process; and contributions to attaining corporate objectives.

Rating agencies, industry association groups, consulting firms, and global insurance brokers have offered statements and commentaries on ERM as well. In the view of Standard & Poor's (2008), the agency:

> *see[s] ERM as an approach to assure the firm is attending to all risks; a set of expectations among management, shareholders, and the board about which risks the firm will and will not take; a set of methods for avoiding situations that might result in losses that would be outside the firm's tolerance; a method to shift focus from "cost/benefit" to "risk/reward"; a way to help fulfill a fundamental responsibility of a company's board and senior management; a toolkit for trimming excess risks and a system for intelligently selecting which risks need trimming; and a language for communicating the firm's efforts to maintain a manageable risk profile.* (Bromiley et al., 2014)

Several meta-analyses of the literature highlight the varying conceptions of ERM. Mikes and Kaplan (2014) segment ERM studies into selection, performance, and variation categories, and call for a contingency approach to the practice beyond standardized frameworks. Kraus and Lehner (2012) review articles in light of the proposition of the relationship between ERM and value creation. Bromiley et al. (2014) compare and contrast definitions and descriptions from academic journals and those found in industry. While recognizing the plethora of opinions, certain themes begin to span the diversity: ERM is an integrated approach (Altuntas, Berry-Stölzle & Hoyt, 2011; Barton, Shenkir & Walker, 2001; Baxter, Bedard, Hoitash & Yezegel, 2013; Dickenson, 2001; Libenberg & Hoyt, 2003; Power, 2009) and is concerned with the recognition and treatment of existing and emerging risks (Farrell & Gallagher, 2014; Fraser & Henry, 2007; Frigo & Anderson, 2011; Gatzert & Martin, 2013; Teach, 2013).

Complications in the ERM taxonomy are evident in the variations that draw attention to certain particular aspects of risk management in post-TRM stages. Many of these "XRM" methodologies tend to point in the direction of ERM. The distinctions may be understood either as predecessor or alternative names for essentially the same processes (Fraser & Simkins, 2007; Rao & Marie, 2007), or reflect boundaries redrawn around what are accepted as ERM concepts to create new typologies for case-specific explicative purposes. Thus, strategic risk management (Gates & Nantes, 2006; RIMS, 2012; Slywotsky & Drzik, 2005; Verbano & Venturini, 2011), financial risk management (Verbano & Venturini, 2011), integrated risk management (Colquitt et al., 1999), risk silo management, holistic ERM, risk-based management, ERM by the numbers (Mikes, 2009), total risk management (Anderson, 2008; Haimes, 1992), risk and value management (Mikes, 2005) and business-wide risk management (Rao & Marie, 2007) appear in the literature alongside of ERM, broadly defined. Other XRM qualifications are particular to certain industries or risk classifications, which include engineering risk management, supply chain management risk, clinical risk management and disaster risk management (Verbano & Venturini, 2011).

II.4 The value proposition

The upside value proposition found in ERM studies also has numerous qualitative and quantitative conceptions, ranging from general references to detailed, formulaic constructions. These propositions can be grouped into three classifications: explicit expressions, inferential references and "risk exploitation-as-value exploration".

II.4.1 Explicit expressions.

These expressions of the value component derived from ERM implementation include maximum sustainable value (AIRMIC, 2010; Andersen, 2008), shareholder value (Ballou, Heitger &

Schultz, 2009; Beasley, Branson & Hancock, 2008; Dickensen, 2001; Farrell & Gallagher, 2014; Frigo & Anderson, 2012; Gordon et al., 2009; Miller, 1998; Scherzer & Mackay, 1998), stakeholder value (Ai, Brockett, Cooper & Golden, 2012; Beasley et al., 2006; Fraser & Simkins, 2007; Frigo & Anderson, 2011; Gupta, Prakash & Rangan, 2011); value-at-risk (Ai et al., 2012; Arena et al., 2011; Mikes, 2009), economic value (Altuntas et al., 2011; Andersen, 2008), corporate value (Andersen, 2008), future value (Barton et al., 2012) value through cost reduction (Baxter et al., 2013), firm value (Baxter et al., 2013; Bromiley et al., 2014; Gatzert & Martin, 2013; McShane et al., 2011; Meulbroek, 2002), strategic value (Beasley & Branson, 2010; Mikes, 2008), perceived value (Beasley et al., 2012), short- and long-term value (CAS, 2003; Farrell & Gallagher, 2014), economic value added (Diers, 2011), practical value (Gates, Nicholas & Walker, 2012), Tobin's Q as a standard proxy for firm value (Hoyt & Libenberg, 2011), synergic value (Kraus & Lehner, 2012) and differential value (Libenberg & Hoyt, 2003).

II.4.2 Inferential references.

In addition to the explicit value-based descriptions are other claims attributed to ERM for upside benefits. In this classification are risk-reward optimization (Farrell & Gallagher, 2014; Merchant, 2012); risk-informed decision-making (Arena et al., 2011; Gates & Nantes, 2006; Purdy, 2010; Rao & Marie, 2007; Teach, 2013); improved capital allocation (Aabo et al., 2005; Ai et al., 2012; Francis & Paladino, 2008; Mikes, 2005; Nocco & Stolz, 2006); reduced cost of capital (Barton et al., 2012; Hoyt & Libenberg, 2011; Kraus & Lehner, 2012); improved strategic decision making (Elliott, 2013, p.1.23); involvement in strategic planning (Farrell & Gallagher, 2014; Simkins, 2008; Viscelli, 2013); lower cost of debt (Aabo et al., 2005); the potential for positive impact on credit ratings (Arena et al., 2010; Fraser & Simkins, 2007) and a proactive response to risk (RIMS, 2014).

II.4.3 Risk exploitation-as-value exploration.

I have created a descriptive term for a category of upside, value-based references in the literature that use the specific term, "exploit". Such a clarification was necessary to preclude equivocating the meaning of exploit with that which is recognized in the context of the ambidexterity literature. For example, Sobel and Reding (2004) link risk exploitation with pursuing strategic opportunities. Arena et al. (2011) recognize research focused on the exploitation of synergies between planning processes and ERM. Libenberg and Hoyt (2003) posit that a benefit of ERM is that it allows firms to exploit the effects of synergy in the risk management process. Anderson (2008, 2009) argues that total risk management, an ERM analog, enables firms to exploit upside potential, opportunities, gains and new possibilities in the execution of business initiatives. McShane et al. (2011) propose that a fundamental concept of ERM is to exploit risks when comparative information advantage exists. Segal (2011, p. 246) refers to risk exploitation as a motivation to assume additional risk when firms have competitive advantage and seek profitable returns.

The beneficial claims of ERM are vast, attributing credit to this management process that establishes exceedingly high expectations. Before further examining empirically this issue of value, we first must build a foundational understanding of ERM adoption. Having differentiated between the basic models of TRM and ERM, we now come to a question of uptake: How does ERM root itself in the organizational soil?

The navigation process from TRM to ERM is a transition that, for the firm deciding to embark on the journey, will require a substantial retooling of its risk management apparatus. Evidence suggests that implementing an ERM program is not costless (Pagach & Warr, 2010b), demands new skills (Blaskovitch & Taylor, 2011; Burton, 2008; Colquitt et al., 1999; Frigo & Anderson, 2011; Mikes & Kaplan, 2014; Verbano & Venturini, 2011), is a consequential

decision with firm-wide impact (Paape & Speklé, 2012), may include the appointment of a chief risk officer (CRO), (Aabo et al., 2005; Gupta et al., 2011; Hoyt & Liebenberg, 2011; Kraus & Lehner, 2012; Pagach & Warr, 2010a); and the length of time required for adoption is a factor (HBR Analytical, 2011).

Material differences are apparent in how risk management is effectuated within organizations before and after the initiation of ERM. ERM represents a progression of risk management from its risk adverse origins to a state of risk-seeking opportunism and moving from primarily control processes toward value creating processes (Barton et al., 2001). Having achieved the transition does not obviate the need to accomplish fundamental TRM tasks, nor suggest that those core competencies mastered over many years be abandoned (Mikes & Kaplan, 2014; RIMS, 2014). Nonetheless, implementing ERM in environments where TRM has been embedded creates forces that countervail between past practices and the demands of the future (He & Wong, 2004). As expressed by an experienced risk professional at a major aerospace research and development center:

> *Innovation, looking forward, is absolutely essential, but innovation needs to be balanced with reflecting backward, learning from experience about what can go wrong.* (Mikes & Kaplan, 2014)

The transition process from TRM to ERM appears to follow a logical, temporal sequence. First, management makes a decision or series of decisions to explore whether an ERM program would be an organizational fit. Second, people and process changes occur to shift from the existing TRM approach to ERM practices. Lastly, organizational embedment gradually occurs when ERM becomes tested and accepted. As individual organizations introduce and situate ERM into their environments, differences in the rate of adoption and the depth of integration emerge.

What is acknowledged to constitute ERM at a point in time may be dissimilar to ERM assessed at another. Maturity models offer guidance for rationalizing these differences. Building upon the design work performed by the Software Engineering Institute (SEI) at Carnegie-Mellon in the mid-1980s, these models encompass business process management maturity models (BPMM) (Röglinger, Pöppelbuß & Becker, 2012; Van Looy, De Backer, Poels & Snoeck, 2013;), capability maturity models (CMM) (Carcary, 2012) and capability maturity model integration (CMMI) (Shang & Lin, 2009). A common denominator among the models is the evaluation of the organizational adoption of processes against scalar frameworks that provide comparative data representing successive degrees of maturity (Van Looy et al., 2013). RIMS has commissioned the development of a capability maturity model specifically for ERM applications, known as the RIMS Risk Maturity Model for ERM, or RMM (RIMS ERM). Within its structure, the RMM has recognized several leading industry frameworks and standards, drawing from COSO:2004, ISO 31000:2009, Solvency II:2009, BS 31100:2011, the FERMA adoption of the United Kingdom Risk Management Standard of 2002, and the OCEG Red Book–GRC Capability Model™ (Farrell & Gallagher, 2014). Multidimensional benchmarking characterizes the RMM, supporting an assessment tool based on "attributes" and "drivers". Results of the RMM are expressed in progressive "risk maturity scores" ranging from a low of "1 - Ad hoc", or low competence; "2 – Initial"; "3 – Repeatable"; "4 – Managed"; to "5 – Leadership", indicating excellent competence. The applicability of such models, however, should be weighed against the still-evolving concept of ERM, and the appropriateness of using broadly conceived external standards to assess efficacy (Mikes & Kaplan, 2014). Further, we must have a clear understanding of any industrial process before studying and classifying its maturity (L. Mathiassen, personal communication, October 24, 2014).

In summary, an abundance of normative ERM, and ERM analog propositions are competing for relevance (Blaskovitch & Taylor, 2011; Mikes & Kaplan, 2014). Farrell and Gallagher (2014) posit that given the complexity of institutional risk profiles and their impact on organizations, it is not possible to characterize ERM with a small number of attributes. In contrast, I argue that while ERM is a far-reaching, complicated management process with multiple extensions defined by a variety of constituent parties, it is in search of a parsimonious explanation. How then, do we arrive at an informed, fundamental expression of what is ERM?

Bromiley et al. (2014) propose an "emerging consensus" of ERM from the literature. This consensus is the locus of three linked dimensions, each of which differentiates ERM from its TRM ancestry. I describe these distinctions as being *holistic*, *horizon* and *harmonization*. First, the *holistic* element is achieved as discrete risk boundaries give way to a broader perspective. Synergistic benefits are predicted to accrue as individual silo-based risks contribute to a firm-wide risk aggregation (Pagach & Warr, 2010b). Integrative efforts afford the opportunity to recognize interdependencies, to manage risk correlation across an institutional portfolio, and to constitute a total risk profile of the organization. Second, *horizon* refers to risks beyond the known or traditionally insured, including those of an operational and strategic nature. As the horizon expands, the tracking of emerging risks arising in the operational theater coalesces with known risks for which effective management routines are in place. ERM adoption affords a new perspective and activities focused on anticipating and recognizing these emerging risks (Elliott, 2013, p. 1.24). Further, the potential impact of new risks, particularly those that are highly complex and global in nature, create issues of resilience that are well beyond the scope of TRM (WEF, 2013) and call for adaptive, innovative thinking and solutions. Lastly, *harmonization* is the value generating, upside potential of the risk management process

functioning in tandem with the maintenance of downside control. It represents the incremental value realized through ERM adoption in excess of that which is attained through TRM or other existing management control plans. The harmonization dimension of ERM risk resolution, and the value associated in addition to that is closely linked to the holistic and horizon dimensions. By engaging in new exploratory activities, a duality of purpose is created for the continued maintenance of the downside and the quest for the upside. These forces demand from firms a reassessment of existing capabilities and a reconfiguration of assets that is central to ambidexterity (O'Reilly and Tushman, 2008), and in particular as ambidexterity is viewed through the lens of dynamic capabilities.

Explicating the nature of each dimension, and the relationships among these three foundational components of the ERM construct, are key to our understanding of what form or forms ambidexterity takes in ERM and how ambidexterity is operationalized. For example, when firms are motivated to pursue ERM, is there an observable sequence of effectuating silo integration and an expanded risk horizon that enables harmonization? Does one dimension appear to have more emphasis on behalf of management or greater organizational impact than the other? Importantly, how are resources configured to achieve holistic, horizon and harmonization changes as experienced practitioners engage in ERM? While measurements of the level of correlation, if any, among the dimensions, are beyond the scope of this research, I have considered the interlacing of these components in the data collection for the study.

III CHAPTER III: THEORETICAL PERSPECTIVES

III.1 Organizational Ambidexterity

When considering the concept of ambidexterity, the most familiar association is that of "using both hands with equal ease" (Merriam-Webster). In companies, research into this systematic multitasking capacity is based in organizational design (O'Reilly & Tushman, 2008). Tensions emanate from the complex task environment of firms, which demands the institutional wherewithal to follow contradictory paths to adapt and survive over the long term. Ambidexterity is recognized as the institutional ability to perform two different things, or paradoxical activities, with equal effectiveness (Birkinshaw & Gupta, 2013) and to resolve the tension that arises from executing on those activities. It has found application in describing a range of dualities that include alignment-adaptability, strong ties-bridging ties, and explorative-exploitative knowledge sharing. However, it is the construct of exploration-exploitation, and specifically the ability of a firm to do both simultaneously, around which ambidexterity empirical research appears to have centered (Birkinshaw & Gupta, 2013).

The pairing of exploitation and exploration as distinct, yet interrelated organizational learning constructs (March, 1991) has found application in many areas of research, including technological innovation (He & Wong, 2004), new product development (Holmqvist, 2004; Rothaermel & Deeds, 2004), process management (Benner and Tushman, 2003) and strategic management (Winter & Szulanski, 2001). Duncan (1976), in recognizing previous studies on the tradeoff between flexibility and administration (Thompson, 1967), first used the term "organizational ambidexterity" to describe the demand for firms to consider structural shifting in order to originate and to pursue innovation. March (1991) described the core adaptive challenge to firms as the requirement to continue to exploit extant assets and to also explore new

capabilities to guard against market and technological changes. Exploitation is demonstrated by activities which reflect refinement, choice, production, efficiency, selection, implementation and execution (March, 1991), productivity improvements and cost reductions (Benner & Tushman, 2003), "the use and development of things already known" (Levinthal & March, 1993), implementation (He & Wong, 2004), alignment (Birkinshaw & Gibson, 2004), processes by which organizations create focused attention (Levinthal & March, 1993), convergent thinking (Smith & Tushman, 2005) and control, certainty and variance reduction (O'Reilly & Tushman, 2008). In contrast, exploration is evidenced by activities which reflect search, variation, risk taking, experimentation, play, flexibility, discovery and innovation (Benner & Tushman, 2003; He & Wong, 2004; March, 1991), invention and building new capabilities (Rothaermel & Deeds, 2004), "the pursuit of knowledge, of things that might come to be known (Levinthal & March, 1993), divergent thinking (Smith & Tushman, 2005), adaptability (Birkinshaw & Gibson, 2004), processes by which organizations create variety in experience through experimentation, trialing and free association (Marengo, 1993), and autonomy and embracing variation (O'Reilly & Tushman, 2008).

The routines, processes, skills required for exploration different than those for exploitation. Consequently, the differences between exploitation and exploration activities create opposing forces that produce tension in firms (He & Wong, 2004). They compete for short supplies of time, talent and treasure that can result in difficult allocation decisions. The manner in which the forces are reconciled is unclear in the literature. Birkinshaw & Gupta (2013) envision an ambidexterity efficiency frontier to clarify the operationalization choices facing organizations to manage the interaction of exploitation and exploration. There are potential perils in overemphasizing one course over the other. Mono-directional exploration and exploitation

activities can become the root cause of negative results, including failure traps, success traps (Gupta, Smith & Shalley, 2006) and competency traps, core rigidities and myopic vision (He & Wong, 2004). Since the resolution of the exploitation-exploration conflict weighs heavily on the success and perpetuation of the firm, achieving a resolution of the two is a priority of the highest order (March, 1991). The work of optimizing this interplay between exploitation and exploration, of performing both simultaneously, characterizes the ambidextrous organization (O'Reilly & Tushman, 2007).

In a review of the ambidexterity literature, Raisch and Birkinshaw (2008) propose a comprehensive framework that describes the relationships among the antecedents, outcomes and moderators identified in the ambidexterity literature streams. Their model posits three organizational antecedents of structure, context and leadership, which are effectuated through organizational learning, technological innovation, organizational adaptation, strategic management or organizational design and lead to accounting, market or growth outcomes. Moderating variables in this relationship include environmental dynamics, competitive dynamics, market orientation, resource endowment and firm scope. Simsek, Heavey, Velga and Souder (2009) develop a typology of ambidexterity focused on temporal and structural dimensions, the combination of which manifests in four types: harmonic, partitional, cyclical and reciprocal ambidexterity.

Firms, then, in a variety of ways can pursue ambidexterity. The literature seems to focus principally on describing ambidexterity occurring as a migration over time or *sequential* ambidexterity; through alignment of people, processes and culture or *structural* ambidexterity; by behavioral means or *contextual* ambidexterity (O'Reilly & Tushman, 2013); or as a function of senior *leadership* (Raisch & Birkinshaw, 2008).

III.1.1 Sequential.

In the sequential view of ambidexterity, firms adjust their structures to respond to changes in environmental conditions, often over extended periods of time (O'Reilly & Tushman, 2013). Early studies described punctuated equilibrium (Romanelli & Tushman, 1994) as a sequential process of adaptation. Later research has identified temporal shifting using "rhythmic switching" between exploitation and exploration (Brown & Eisenhardt, 1997) as a proposed source of sequential ambidexterity.

III.1.2 Structural.

Ambidexterity that is considered structural emanates from a bifurcated organizational architecture, where different work units are centered on alignment of the business, and others on adaptation to changes in the environment (Duncan, 1976; O'Reilly & Tushman, 2008). Numerous conceptualizations of structural separation have been proposed, including spatial separation at either the corporate or business unit level to engage in exploration or exploration (Duncan, 1976); numerous tightly coupled subunits that are loosely coupled with one another (Raisch & Birkinshaw, 2008); parallel structures, which enable switching between different structures (Bushe & Shani, 1991); and primary/secondary structures to balance routine and non-routine tasks (Goldstein, 1985).

III.1.3 Contextual.

A different way in which ambidexterity is proposed does not depend on structural means, but is instead behaviorally based. Gibson & Birkinshaw (2004) define contextual ambidexterity as "the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit" (p. 209). It is grounded in the allowance of individual determination of the time and effort allocated toward both alignment and adaptability within business units, facilitated

by stretch, discipline, support and trust (Gibson & Birkinshaw, 2004). Ghoshal & Bartlett (1994) associate context with the beliefs, processes and systems that guide the behaviors of individuals in the organization.

III.1.4 Leadership.

Involvement of senior leaders in promoting ambidexterity, and their importance in the process, is acknowledged in several studies of structural and contextual ambidexterity (Tushman & O'Reilly, 1996; Gibson & Birkinshaw, 2004). However, other researchers (Lubatkin, Simsek, Ling & Veiga, 2006) identify leadership contributions separately as an antecedent of organizational ambidexterity (Raisch & Birkinshaw, 2008).

O'Reilly and Tushman (2013) also refer to the possibility of combinations of the structural and contextual forms over time in a switching cadence, which I refer to as *hybridized* ambidexterity. Birkinshaw and Gupta (2013) suggest that a significant corollary for ambidexterity research is the perspective of ambidexterity as a *nested* property, occurring at different organizational levels concurrently. Additionally, the authors point to the lack of operationalization clarity in ambidexterity studies, and whether exploitation and exploration "should be balanced, traded off against one another, reconciled or simply managed."

III.2 Dynamic Capabilities

Sustaining organizational survival in the face of changing environmental conditions is a crucial challenge, to which extensive conceptual and empirical research has been committed from a wide span of academia. In the development of diverse theories to address the challenges arise two fundamental questions (O'Reilly & Tushman, 2008): Are organizations able to adapt to shifting conditions and indeed change? If so, how then is this adaptation accomplished? From the

perspective of strategic choice has emerged the view of *dynamic capabilities* (Teece, Pisano & Shuen, 1997), which is a management response to maintaining long-term competitive advantage.

Extending the resource-based view of the firm (Barney, 1986, 1991), the seminal work of Teece et al. (1997) define dynamic capabilities as "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments." Dynamic capabilities are differentiated from those that are static, existing or ordinary. In the resource-based view of the firm, capabilities are defined as "a firm's capacity to deploy resources, usually in combination, using organizational processes, to effect a desired end" (Amit & Schoemaker, 1993). These existing capabilities, also referred to as core competencies (O'Reilly & Tushman, 2008) operational capabilities (Zollo & Winter, 2002) or zero-level capabilities (Winter, 2003), are tactical level routines, structures, processes, skills and systems that enable the firm to compete in its contemporaneous environment (Leonard-Barton, 1992). While essential for operational continuity, such core competencies do not position the firm to respond to change and to engage in new challenges (O'Reilly & Tushman, 2008).

In contrast, dynamic capabilities are exemplified by organizational structures, processes and skill sets that equip firms to detect changes in the environment, define opportunities and configure in new ways (Teece, 2007). Dynamic capabilities are processes or routines conducted at a high organizational level (Winter, 2003; Zott, 2003) and are ways of learning new routines (Eisenhardt & Martin, 2000). These changes are brought about through the actions of strategic leadership (Eisenhardt & Martin, 2000; Lavie & Rosenkopf, 2006; Teece, Pisano & Shuen, 1997) in reconfiguring the firm to address changing environmental conditions. Central to the importance of dynamic capabilities is the capacity of senior managers to seize opportunities, reconfigure the organization, and neutralize path dependencies (O'Reilly & Tushman, 2008).

Teece (2007) identifies a triad construct of dynamic capabilities that are of central importance in enabling firms to become ambidextrous: sensing, seizing and reconfiguring. First, *sensing* capabilities to discern opportunities and threats in the environment demands resources, routines and communication directed at searching, scanning, and exploration. Second, *seizing* are the timely management actions subsequent to sensing that involve decision-making and execution. Lastly, reconfiguration, or "asset orchestration" (O'Reilly & Tushman, 2008) is the commitment by senior leaders to design and implement structures and systems that shift organizational structures to capture new value.

III.2.1 Ambidexterity as a dynamic capability.

O'Reilly & Tushman (2008) extend both the ambidexterity and dynamic capabilities research streams by integrating the two concepts. They propose that the ability of senior leaders to adapt and reconfigure assets to overcome path dependencies, a dynamic capability, is central to the enablement of a firm to both explore and exploit simultaneously, that is, to be ambidextrous. In so doing, the authors ingrain the concept of ambidexterity into the dynamic capabilities framework. Jansen et al. (2009) conceptualize organizational ambidexterity as a dynamic capability, proposing that this linkage "refers to the routines and processes by which ambidextrous organizations mobilize, coordinate, and integrate dispersed contradictory efforts, and allocate, reallocate, combine and recombine resources and assets across differentiated exploratory and exploitative units" (p. 797). Their argument is founded upon structural differentiation, extending the work of Lawrence and Lorsch (1967) on specialized organizational subsystems.

III.2.2 ERM as a dynamic capability.

Nair et al. (2013) propose that for firms engaged in crisis environments, ERM itself constitutes a dynamic capability. The instant study is the first to associate the processes and activities of ERM with the conceptualization of dynamic capabilities, by referring to a series of similarities between the nature of and characteristics shared by both. For example, the sensing and scanning activities of dynamic capabilities (Teece, 2007) are analogous to the scanning for emerging risks in horizon dimension of ERM, as is consideration of the upside and downside risks found in harmonization. The authors present several hypotheses to test whether a sample of publicly traded insurance industry organizations that possess superior ERM capabilities, as indicated by S&P ERM ratings, perform better during and after crisis situations than organizations with inferior capacities. Mixed or partial support for the hypotheses based on measures of swings in share price and profitability were indicated in the results. However, in proposing a tentative link between ERM and dynamic capabilities, the study has created an avenue for further explication of the relationship, which is incorporated into this research.

In the final section of the literature review, I examine two sources of secondary data for evidence of ambidexterity in ERM: risk management surveys conducted by companies having practitioner interest in ERM, and case studies published in academic journals.

III.2.3 Evidence of ambidexterity.

*Risk management practitioner surveys***.** A data source receiving little attention from academic ERM researchers is that which is produced with a fair amount of regularity in the practitioner domain. Through the use of periodic surveys, the practitioner community examines the state of the post-TRM function, ERM specifically and topics closely related to ERM. For example, in one of few studies identified that draw directly upon this secondary data, Cooper, Fazeruk and

Khan (2013) attempt to measure the perceived relationship between organizational culture and ERM by developing testable hypotheses from the aggregation of certain questions posed in a group of practitioner studies. Risk management professionals, C-suite officers and business executives in a variety of sectors are contacted for their views and opinions on various risk management issues, both specific to their organizations and to the industry in general. Consultants, association groups, global insurance brokers, and insurance carriers conduct the studies for an assortment of purposes. Business development, brand enhancement, client retention, and demonstration of thought leadership are among the motivating factors behind this consumer-oriented research. The level of rigor to which the conduct of these surveys is held is not always determinable, since the intended audience has not historically insisted upon a minimum set of standards for ERM research methods, data collection and analysis. Nonetheless, these data uncover useful perspectives into the actual operation of ERM in firms, and as such, some of their findings are considered to inform this research.

I identified fourteen surveys (Appendix A) published over a five-year period from 2008 – 2013, which can be segmented into five categories of origination: global insurance brokers, insurance carriers, industry associations, consulting firms and industry periodicals. Sample sizes in the surveys range from approximately 100 to 1,400 respondents, representing both financial and non-financial companies. Commitments to the practice of ERM spanned the motivation, advancement and assimilation phases. Not all of the projects were sole-source research, as evidenced by numerous collaborative efforts among organizations. Some of the surveys were produced one-time only, and others, such as those authored by PwC and RIMS, are repeated at regular intervals. While the question sets differ from instrument to instrument based on the data

collection aspirations of the sponsors, several of the surveys probe into areas that this study addresses and provide additional perspective on ERM adoption.

For instance, one of the main findings from the KPMG International Global Risk Survey is that a lack of capabilities is the primary barrier to risk integration in companies. 42 percent of the survey respondents cited this gap, ahead of the 36 percent of respondents that rated process complexity as the major obstacle. This finding may be evidence, at least within the KPMG population, of the relative importance of resource reconfiguration as companies attempt to transition to ERM. Further, these two findings taken together may illustrate how the alignment of capabilities and process through contextual ambidexterity (Gibson & Birkinshaw, 2004) should operate, or in this case, fails to do so, in the risk management domain. This challenge to achieving ambidexterity is reinforced by the 35 percent of the respondents to the 2011 Harvard Business Review survey that cited the "failure of key staff to acquire new skills or accept new roles", and the 40 percent of participants in the Forbes Insights survey that expressed the need to "revamp the in-house risk management team." Accenture, in its 2013 Global Risk Management Study, found a 20-percentage point gap between the current disposition of its respondents' risk capabilities and a desired level of high development. Competency gaps regarding the efficacy of risk management structure and processes were also uncovered in the PwC Risk in Review Survey samples during 2013 and 2014. In the words of one executive respondent in the PwC study, "we need to have the right army to fight the next war–not the last one", elucidating the expanded horizon sought in the adoption of ERM.

Respondents to the Marsh 2013 Excellence in Risk Management study pointed toward training and education and strengthening ERM capabilities as top priorities, but left open the issue of how to achieve these goals. In contrast to the overall themes of this collection of

findings, the 2013 Lloyds Risk Index results compared to the London-based insurance market's previous survey in 2011 indicates a positive trend in risk management resource reconfiguration in certain geographic regions, accomplished primarily through additional training and the filling in of talent gaps.

Deloitte, in its Global Risk Management Survey, Eighth Edition, presents historical data on the ERM adoption rates of participants in the company's surveys from 2006, 2008, 2010 and 2012. The consultant segregates their respondents into three categories of "yes, program in place", "yes, currently implementing one" and "no, but plan to create one", which corresponds to the simplified assimilation – advancement – motivation model developed for this study. Of the respondents to their 2012 survey, 46% indicated expansions of their ERM programs through increases in headcount, which may indicate evidence of structural ambidexterity being exercised. The Accenture 2013 Global Risk Management Study poses its question of whether the respondents' organization have adopted ERM in a slightly different fashion, with choices of "yes", "no, but we are planning to implement one in the next 1 – 2 years" or "no, but it is in discussion". In comparison to the Deloitte research, these answers are somewhat more fine-grained in the motivation phase, but less so in drawing a distinction between the ERM advancement and assimilation phases. Conversely, a decline in the number of firms with formal risk management functions declined during according to the 2012 Aon Global Risk Management Survey (2012), but this finding may be explained by demographic changes in the survey sample.

The 2012 Milliman Risk Institute Survey discusses the structural linkage of risk management to other parts of the organization. This survey indicates a strong association of ERM to risk-transfer strategies, which I earlier identified as a potential mechanism to enable a post-TRM state. While no interpretation is offered, this finding may indicate a resource

reconfiguration more reflective of contextual ambidexterity than structural in the sample. The 2013 Association for Financial Professionals Risk Survey incorporates a section on "Risk Management Structure and Culture, with a question regarding the extent of centralization or decentralization of the risk management function. Their findings indicate that 60 percent of the companies surveyed favor centralized risk management processes with decentralized execution. Such a response may indicate the execution of structural changes to control or monitor the processes through new organizational subunits.

Lastly, RIMS has conducted and published ERM surveys in 2008, 2009, 2011 and 2013. Of the questions posed in the 2013 survey, two, in particular, provide insight into how ambidexterity is operationalized in the sample population. First, to the question of which functional department is primarily responsible for managing ERM activities, 56 percent answered that the [traditional] risk management department takes the lead role. This finding may be indicative of widespread contextual ambidexterity among the respondents, whereby the existing TRM resources are reconfiguring to maintain downside control as well as direct upside value delivery. Second, when asked to comment on the value gained through ERM, 78 percent of the respondents chose factors other than the avoidance and/or mitigation of risk, which is the domain of TRM. This incremental upside potential that is apparently being directed by the TRM departments includes, among other value determinants, increased risk awareness and the elimination of risk silos. We should note that RIMS' targeted population for the survey is its membership base, that is, traditional risk managers, insurance buyers, and other risk professionals. It does not necessarily include dedicated ERM practitioners such as chief risk officers, who may have different perspectives on resource configuration and value.

Evidence of ambidexterity: ERM case studies. One of the more underrepresented research areas in the ERM literature is that of non-financial institution case studies that provide rich detail focused on the management effects of adopting and implementing the practice. While practitioner surveys document the interest and active engagement in ERM on the part of industry segments beyond insurers and banks, these non-financial firms have garnered less interest from researchers (Arena et al., 2010). Nonetheless, several studies have been conducted which offer some useful insights for the purposes of this research.

Two of the earliest non-financial industry risk management case studies were carried out by Tufano (1996) on the North American gold mining industry, and Harrington, Niehaus and Risko (2002), who explored United Grain Growers (UGG) in Canada. In both cases, the research was primarily oriented toward the application of ERM as a financial solution mechanism, either by hedging gold prices in the mining industry or by managing weather risk at UGG. Subsequent to these studies was the research into Hydro One (Aabo et al., 2005), the largest electricity transmission and distribution utility in Canada. The authors, one of whom became the chief risk officer (CRO) of the firm (Fraser), present a detailed review of the impact of ERM adoption and implementation. Hydro One is an important example of an organization progressing through the three phases of the transition model developed for this research. The firm was motivated internally by a desire to become a best-practices led company, and externally by the deregulation of the Canadian electricity markets. The motivation process continued through a pilot feasibility study to determine whether or not to move forward. Hydro One, as a consequence of the choice to implement ERM, evidences structural ambidexterity in reconfiguring its resources to establish the CRO position, and to institute a new corporate risk management group. The company continued its advancement in ERM from 1999 – 2005 with increasing sophistication exercised in

its risk treatment applications, and the detailed enumeration of expected upside benefits that were included in the company's 2003 annual report. At the date of publication of the Hydro One article, the firm had substantially achieved a high level of ERM assimilation:

> *Finally, we note that ERM has become such an integral part of the workplace that the corporate Chief Risk Officer is now becoming a low-maintenance position (the evolution of the CRO) within the company.*

Although the Hydro One case is comparatively richer in detail regarding the management effects of ERM adoption than the earlier studies, there still exists a gap in the before-and-after narration of how the then-existing TRM function was structured and deployed in the company. This additional slice of knowledge would enable us to articulate better the working and operationalization of ambidexterity, particularly as the firm progressed through its advancement and assimilation phases.

Arena et al. (2010) examined the organizational dynamics of ERM at three Italian firms representing the telecommunication services, petrochemical and automation and information industries in a longitudinal study. As a part of the empirical evidence developed, the authors provide detailed narrations of "pre-existing practices and ERM assembling." This evolving overlap of new and established management control processes, described as a "mutual entanglement", highlights the potential institutional messiness that occurs as resources are reconfigured toward the goal of achieving ERM ambidexterity. The attitudes toward ERM adoption were different in each case study and offer important descriptions of how exploitation and exploration began to coexist at these firms through attempted changes in people and processes. The ultimate extent of ERM advancement was not uniform across the sample. In one of the cases, structural ambidexterity is evident in the separation between the company's TRM-

oriented management control unit (MCU) and the newly imposed conduct of ERM. In the words of the MCU head:

> *ERM? What is ERM? …it is indeed crucial to be compliant with these rules now,…but their work [ERM] is totally separate from ours and does not enter into the budgeting.*

In contrast, another of the cases reveals openness to exploring ERM through sequential ambidexterity, as articulated by the firm's controller:

> *This is my dream: one day I'd like to be able to read back from every actual event and see that our CRO was able to provide me with the data for detecting it. We are rowing in the same direction.*

Having established the literature foundations for risk management in the traditional and enterprise modes, and for ambidexterity and dynamic capabilities, we now turn to the theoretical framework that supports the approach to the data collection and analysis to which this research is directed.

III.3 Analytical Framing

III.3.1 Process of ERM adoption.

From the literature review I have identified an emerging consensus of ERM (Bromiley et al., 2014) that instills clarity in a complex research domain, and conceptualizes a standard form of ERM against which the companies in the sample may be compared. Thus, the holistic, horizon and harmonization dimensions of the model specify the factors necessary and sufficient to differentiate the ERM model from the TRM mode.

Given an informed definition of what ERM is, a process orientation in this research is needed in order to explicate how the changes in configuration occurred in the sample to achieve the resultant ERM dimensions, focused on firms that have achieved reputations of being highly

experienced practitioners. The RIMS RMM maturity levels are useful for delineating certain stepwise end-state characteristics of ERM implementation. However, for the purpose of this study I have adapted the RMM as presented by Farrell and Gallagher (2014), drawing upon both the literature and experiential knowledge to render this interpretation. The five RMM maturity score levels have been grouped into a simplified framework to form a sequential model of ERM adoption occurring in three successive phases: *motivation, advancement and assimilation*.

Motivation encompasses the first two levels, *Ad hoc,* and *Initial*, of the RMM. This phase captures the initial decision-making considerations preceding ERM adoption and offers insight into the question of why to engage in what may be a significant change management effort. It corresponds to the "ERM Program Drivers" section of the 2013 RIMS Enterprise Risk

Table 1 ERM: Progression toward organizational assimilation

RIMS RMM maturity level	Dominant approach	Transition phase	Primary competency	Organizational capacity
1 - Ad hoc	TRM	Motivation	Core competency	Downside
2 – Initial	TRM	Motivation	Core competency	Downside
3 - Repeatable	TRM – ERM	Advancement	Core competency	Downside, and upside emerging
4 - Managed	ERM	Advancement	Dynamic capability developing	Ambidexterity
5 - Leadership	ERM	Assimilation	Dynamic capability	Ambidexterity

Management Survey. Motivation in this research is indicative of a pre-decision state in which the fit and purpose of ERM is under active consideration, but management commitment to move forward has not yet been made. At this stage of evaluation, a due diligence effort of some nature will commence, and external consultants may be engaged to conduct feasibility studies. The demands, intentions, expectations, and emphases brought to bear on the ERM go- or no-go decision may have important downstream ramifications (Mikes & Kaplan, 2014). These factors will influence how resources are initially configured to address the downside-upside duality, and

may illustrate how endogeneity enters into the adoption process. Major events (Paté-Cornell, 2012; Weitzner & Darroch, 2010), boards of directors (Desender, 2007), audit committees (Burton, 2008), senior management (Meulbroek, 2002), in-position risk managers (RIMS, 2013), regulatory bodies (Gupta et al., 2011), rating agency requirements (RIMS, 2013), directors' and officers' concerns about liability (Viscelli, 2013), poor company performance (Arena et al., 2010), industry-specific considerations (Tufano, 1996), owners or investors (RIMS 2013), banks or creditors (RIMS, 2013) and the desire to identify emerging risks (Viscelli, 2013) are among the internal and external forces that can impact firm motivation toward ERM. External advisors may also play a leading role in whether or how the firm moves forward, but the ultimate benefit of such involvements on ERM effectiveness have been questioned (Aabo et al., 2005). Time and cost investments are likely for exploratory purposes only at this juncture. It may take months or even years for management to study the possibility of embracing ERM and decide on a particular course of action. Thus, expenses incurred would be for obtaining information and advice, rather than be reflective of changes in organizational design. For firms in the motivation phase, we anticipate the downside TRM configuration to be exclusive or dominant, albeit combined with an initial outlook on future expectations of upside potential and how the firm plans to achieve such positive outcomes.

The *advancement* phase aligns with level 3, *Repeatable* and level 4, *Managed*, of the RMM. This phase would commence subsequent to an affirmative decision to move forward, as the organization begins to change, and the breadth of the commitment to ERM takes shape. Communication of the decision through internal and external channels to document the firm's intentions will become a consideration. Management execution of the plan to implement ERM, whether by the imposition of a recognized industry framework or some other means, begins.

Time spent in the advancement phase will vary considerably, as the firm adjusts to the implementation of new risk management protocols. In determining a temporal standard for when advancement ends and assimilation begins, we should allow for sufficient time for advancement to enable adequate institutional stress testing of the commitment to change. This stipulation would ensure that, apart from management intentions to proceed, the ERM adoption plan has been subjected to established strategy and budget challenges that regularly occur across the business. Additional costs may become a more significant factor in the advancement phase as resources are reconfigured, and skill gaps are uncovered. Examples of incremental expense categories include the continued use of consultants, internal training, additions to staff and new information systems to collect, monitor and measure ERM related-data. The pace and nature of the adoption and the extent of the implementation process over time in advancement should begin to reveal how downside exploitation and upside exploration are coexisting. In the advancement phase, we would expect to observe with increased clarity how ambidexterity is being expressed. Changes evident in the reconfiguration will also provide clues as to how ambidexterity is being operationalized, and whether the downside and upside are being "…balanced, traded off against one another, reconciled or simply managed" (Birkinshaw & Gupta, 2013). An additional consideration is if ERM ambidexterity is becoming distinguishable as a dynamic capability, apart from the core competencies developed in TRM.

Lastly, *assimilation* represents a depth of embedment of ERM in what the RMM would characterize as a fully mature, level 5 *Leadership* RMM state. During this final phase, ERM has become vital to the way business is done in the firm. It is evidenced by significant changes in process and behaviors in the subject organization, with a downside-upside duality and resource deployment that differ from that found in the motivation and advancement phases. Firms

reaching the assimilation phase of ERM after many years will likely evidence significant changes in the conduct of their overall management processes. ERM at this juncture will have progressed to a position that directly impacts organizational strategy, planning and decision-making, performance measurements and governance. The discrete functional identity from which ERM was initiated may have given way to an effective operational absorption, where its independence as a program is less meaningful than the influence it exerts across the organization. Recognition of this level of embedment of ERM should be well documented internally, and further confirmed in the public domain. When the ERM maturity level increases and organizational assimilation of the process deepens, the stability and permanency of the configuration become considerations. At this point, different motivations may arise, perhaps newly emerging risks or other internal or external influences, which cause the firm to consider a subsequent reconfiguration cycle.

Table 1 illustrates the various relationships among RMM levels and the corresponding TRM or ERM approach, the transition phase, the nature of competency reflected in the phase, and whether exploitation or ambidexterity is expressed. Within each of the transition phases exist a deployment of assets that reflects the currency of management thinking toward its risk management approach. The focus of the data collection effort for this study is on the assimilation phase, and how the experienced firms in the sample have configured their resources over time to address the downside-upside duality.

III.3.2 Summary of framing.

Summarizing the theoretical framing, the practice of risk management in firms can be viewed as an evolving process in which choices may be made to pursue a higher level of sophistication from engaging in risk management activities, and to enable a broader range of organizational

influence from those activities and to capture additional resultant value. As a consequence of building core competencies in the traditional mode of managing risk (TRM), firms become adept at commercial insurance purchasing and minimizing downside loss exposures, with little to no interactivity linking risk management efforts either cross functionally or to other, higher-level management control processes. In contrast, contemporary conceptualizations of risk management are founded on an enterprise-wide (ERM) view of the firm. This concept is effectuated through a phased process that validates the initial motivation to change risk management modes, advances the changes throughout the organization, and eventually assimilates ERM into the inner workings of the firm with increasing durability. While the construct of ERM is not uniform in theory or practice, a set of dimensions has been identified that posits necessary and sufficient conditions for qualifying risk management activities as ERM. First, a holistic dimension must overcome the tensions and path dependencies extant in non-integrated organizational silos. Second, the risk horizon dimension enlarges the scope of management attention to address both emerging and existing risks. Lastly, risk averse, control and mitigation measures become harmonized with risk seeking, value additive activities. Viewed through a theoretical lens of ambidexterity, this downside-upside duality is a proxy for exploitation-exploration. Firms committing to a path of ERM adoption must preserve core competencies while developing new skills. Further, the reconfiguration of resources, assets, and processes to achieve ambidexterity differs from the maintenance of core competencies and is proposed as a dynamic capability. Becoming ambidextrous in managing risk through the dynamic capability that emerges is central to the long-term value expected of ERM. Those firms that are able to optimize the interplay of exploitation and exploration are better able to sense, seize and reconfigure within their

organizations to respond to changing risk environments, and lessen the impact of path dependencies generated by its core competencies in TRM.

The following chapter commences my empirical research journey into finding evidence of how firms achieve ERM ambidexterity to address the downside and upside of risk.

IV CHAPTER IV: RESEARCH METHODS

This study examines the question: *How do firms reconfigure assets, resources and capabilities in the process of ERM operationalization to consider both the downside and upside of risk?* In the course of the research, I have endeavored to understand the context within which experienced risk management professionals make choices, take actions and guide processes. This approach aligns with the selection of a qualitative methodology for the study (Myers, 2009, pp. 5-6). Further, in addressing the "how" question, the research is designed as a process analysis. As described by Van de Ven (2007, pp. 196-197), process studies are primarily focused on progressions, that is, the nature, sequence and order of events that take place in organizations. Thus the primary concern of this study is on the meaning of process as a developmental sequence and not as a category of concepts related to variables, antecedents or consequences of change (Van de Ven, pp. 197-199).

IV.1 Case Study Design

The method of this research is a qualitative, interpretive case study at the firm level of analysis. Qualitative studies are directed toward gaining rich insight into the details of the phenomenon of interest through the collection of data in the form of meanings and descriptions, framed by the contextual setting of the phenomenon (Simon, 2011). Researchers have utilized qualitative methods to explore the complexities of ERM (Aabo et al,, 2005; Arena et al., 2011; Mikes, 2011; Viscelli, 2013), developing empirical data about how it is operationalized in different organizational settings and environments. Studies conducted in this manner provide a deeper understanding of the adoption, implementation, and maturation of ERM and offer findings that may be used to inform quantitative research seeking to explain relationships among ERM-related variables.

Participating in this study were eight individuals representing four different organizations, two from each firm. The ideal candidate profile was a senior risk professional with personal experience of their organization's journey from TRM to ERM, as well as having ongoing operational responsibilities for ERM. Titles of the proposed subjects included risk manager, enterprise risk manager, director of risk management or enterprise risk management, vice president or senior vice president of risk management or enterprise risk management, chief risk officer, treasurer or chief financial officer. I was successful in recruiting individuals who fit these criteria through my professional network.

Each subject possessed direct experience with ERM adoption at his/her respective firm and was in a position to offer observations across the motivation, advancement and assimilation phases. This approach served as an alternative to conducting longitudinal case studies in the field, which was not possible given time constraints. As such, the data collected was real-time for questions probing the current state of ERM and retrospective for the earlier phases of the progression. Both of these sources of qualitative data have potential advantages and disadvantages. Real-time observations may be less likely to reflect biases and filtering that may influence memories, but will not have the benefit of the full revelation of how events ultimately develop. Conversely, the retrospective observations may reflect more thoughtful interpretations of the unfolding progression, but lack the richer, in-the-moment detail that fades over time. While the recollections of the paired subjects did not reveal material conflicts, biases in their perspectives were expected given the differences in background and responsibilities.

Parameterization of the research sample was guided by multiple criteria (Simon, 2011). First, each firm was among the earliest wave of companies to explore ERM, and subsequently made a multiyear, commitment to the conduct of a formal ERM program. These commitments

have been confirmed externally, through disclosure statements or in other documents available in the public domain. As such, they have progressed through the motivation and advancement stages and have assimilated ERM into the fabric of the organization. Second, the sample represents the non-financial sector, which includes manufacturing, retail, service organizations and higher education. These industry segments have been less heavily researched than financial institutions, and in particular banks and insurance companies, which have historically been more extensive adopters of ERM (Beasely et al., 2005). Third, the conduct of ERM in the financial institution sector emphasizes sophisticated quantitative techniques in the management of income statement and balance sheet exposures, which Mikes (2009) interprets as a "calculative culture". Such practices can be found outside of financial institutions, but they are nonetheless more focused on the risk quantifications, e.g., "e-R-m", which are outside of the scope of this study. Fourth, public companies were chosen to afford access to additional background data and regulatory disclosures. The university, while not a shareholder-owned organization, nonetheless meets the standard of financial disclosure. Fifth, each firm in the sample has a history of a sophisticated approach to TRM, which provides a consistent baseline for comparisons of structural and contextual change. Lastly, to control for variations based purely on organizational size, large institutions were selected for the sample. The public companies are all classified as S&P 500 firms, and the university has an annual operating budget that would otherwise qualify it for an S&P 500 categorization. Effects that may have originated from differences based on solely on industry sector if any, were probed through the interview questioning targeted at the motivation phase. To preserve confidentiality, I have used four pseudonyms place of the actual names of the organizations: PrimoU, SecondoCo, TerzoCo, and QuartoCo.

The first organization, *PrimoU*, is a leading teaching and research institution and health care system. As of its 2014 financial statements, PrimoU reported annual operating revenues in excess of $2 billion and total assets of over $8 billion. Student enrollment totaled approximately 15,000, with nearly 30,000 employees. I interviewed the chief risk officer and SVP and general counsel, both of whom have responsibility across the breadth of the university.

The second organization, *SecondoCo*, is an electric utility holding company (EUHC), classified under SIC code 49 – electric, gas and sanitary services. SecondoCo was founded over 60 years ago, and owns generation, transmission and distribution facilities in four states, and is admitted to do business in an additional four states. As of fiscal year end 2013, annual total operating revenues exceeded $14 billion, total assets $9 billion and employee headcount 20,000. The interviewees for this case were the manager, enterprise risk and the director, risk management, both of whom have responsibility across the entire footprint of the organization. Additionally, a published interview appearing in a peer-reviewed journal with the director of enterprise risk has been incorporated as secondary data.

The third organization, *TerzoCo*, is a U.S. based, package delivery and logistical services provider classified under SIC code 42 – motor freight transportation and warehousing. TerzoCo was founded over 100 years ago and operates in over 200 countries through nine primary business segments. As of fiscal year end 2013, annual total operating revenues exceeded US$45 billion, total assets US$30 billion and employee headcount 300,000. My interviews took place with the corporate ERM manager and the senior director, risk management, both of whom have oversight globally.

The fourth organization, *QuartoCo*, is a U.S. based manufacturer classified under SIC code 20 – food and kindred products. Founded over 100 years ago, QuartoCo markets its

products using multiple consumer brands and manages sales through an owned global distribution network. The company is organized primarily into geographic operating segments. As of fiscal year end 2013, annual total operating revenues exceeded US$40 billion, total assets US$75 billion and total employee headcount 110,000. I conducted interviews with the director, enterprise risk management and the director, risk management, both of whom have global responsibilities for their functional areas.

To improve the validity of the study by means of triangulation (Yin, 1994), I gathered data from multiple sources: annual reports and 10-K documents of each firm in the sample, reviews of websites, and internet searches for publications and statements regarding ERM. Additionally, archival data was made available from each institution, much of which is not available publicly, bringing increased clarity and richness to the data analysis process. Such data included organizational charts, white papers, and management presentations.

IV.2 Data Collection and Analysis

All of the interviews were conducted during the months of January and February 2015. Of the eight subjects interviewed, seven were done in person at the interviewees' primary business location, and one took place via phone. Six interviews were done on a one-to-one basis. One of the institutions requested that I meet with both risk professionals together, which was accommodated. The seven interview sessions lasted a total of 8 hr 38 min resulting in a mean interview length of 1 hr 20 min. Six of the interviewees agreed to be audio recorded, and each digital file was transcribed by a professional transcription service. Two subjects declined to be recorded in advance of the scheduled interview due to legal restrictions, and hand-written notes captured the conversations during those sessions. Direct quotations made by the subjects were specifically marked as such to increase the accuracy of the data captured. A total of 114 pages of

text was produced from the transcribed files and field notes. Each of the interviewees provided a properly signed informed consent form. Confidentiality of the subjects and their organizations has been maintained per IRB guidelines.

Primary data was collected through semi-structured interviews, using a protocol of pre-determined questions to direct the flow of the sessions (Appendix B). However, I was flexible in allowing subjects to expound on areas of their ERM experiences that were particularly meaningful to them. In so doing, I was able to uncover data that added richness to my understanding of how and why resources came to be configured. During the interviews, subjects were encouraged to share their historical insights, present observations, and to reflect in a before-and-after manner about the differences that ERM has made. This comparative perspective was important to capture, as it brings clarity to the demarcation between existing TRM downside and new ERM upside. While the focus of this study is on large organizations in a contemporaneous setting, the questions also probed into their early phase transitions from TRM to ERM in order to understand the specific factors that helped shape these firms' current ERM resource configurations.

Miles & Huberman (2014) offer a systematic process for analyzing qualitative data, which I followed in this study. The process incorporates three synchronous work streams: *data reduction, data display* and *conclusion drawing and verification*. Data reduction is the sorting, sharpening and summarizing of the collected inputs to facilitate understanding and analysis. Data displays are graphical formats, matrices and various types of charts and tables that illustrate and make readily accessible organized information. Conclusion drawing and verification is the process of drawing out of observations, explanations and propositions contained in the data.

While common in qualitative, interpretive studies (Cousins & Robey, 2005), single-person coding may encounter issues of clarity and reliability. To improve reliability, an experienced qualitative researcher and I separately reviewed each audio transcript and independently coded the interview data. NVIVO 10 qualitative data analysis software was utilized by both coders to retain and organize the primary and secondary data flows, to execute the coding process and to maintain a chain of evidence to further increase the reliability of the information.

Codes were created in two ways. First, codes were developed *deductively*, using the research question, models and frameworks that form this research. For example, motivation, advancement, assimilation, holistic, horizon, harmonization, capability, structural, and contextual are critical constructs in this study that translated directly into the coding process. This initial list was subject to revision in the coding process to better fit the data collected. Second, codes were also generated *inductively*, as significant insights were shared that had not been accounted for in the a priori listing. An example of this inductive coding was the addition of culture, to which several of the respondents ascribed importance in assimilating ERM.

During the first coding cycle, we utilized a descriptive coding method (Miles & Huberman, 2014) with prescribed codes to classify the data into the essential phenomena on which this research is based. Data coding was an iterative process, in which we resolved inconsistencies through discussion and debate upon further review of the data. In the second coding cycle, we looked for patterns and themes in the coded data to capture explanations of what was occurring in the sample. A high degree of data consistency was revealed in the triangulation across the different sources of primary and archival data.

As the coding process continued, certain themes began to emerge. These themes underscored similarities and differences between the organizations with respect to views on upside value, how ambidexterity is achieved and the extent of the development of dynamic capabilities. In the next chapter, I turn to a detailed analysis of the results of data collection and analysis processes.

V CHAPTER V: RESULTS

This chapter is organized into three sections to report the study's findings in light of the research question, *how do firms reconfigure assets, resources and capabilities in the operationalization of ERM to consider both the downside and upside of risk*? First, I provide demographic information for the sample population to profile the experience and roles of the subjects in relationship to the conduct of ERM in their respective organizations. Second, drawing upon the motivation, advancement and assimilation phases of ERM adoption developed in the theoretical framework, I explore the risk management foundations from which the companies migrated into an ERM mode and configured resources to operationalize its practice. Lastly, I present data that illustrates the alignment of the firms in their states of assimilation with the holistic, horizon and harmonization consensus model of ERM. From these results, the configuration of people and processes necessary to sustain the ERM commitment and to address the downside-upside duality can be observed. Informed by these two perspectives, those of a temporal change process and congruence with a unity model, I will examine the findings through the lens of ambidexterity as a dynamic capability in the final chapter.

V.1 Demographic Information

Table 2 presents a summary of the demographic information. Primary data was collected through semi-structured interviews with eight senior risk professionals representing four large organizations. Also, and as previously noted, I have included a published interview with the director of enterprise risk (DEM) of SecondoCo as secondary data. These organizations have earned reputations of long-term commitments to the practice of ERM. In assembling the sample, I sought to satisfy several important considerations that would positively impact the credibility of the data. First, the respondents needed adequate tenure with their firms to have gained an

appropriate depth of understanding of the overall business model and strategies of the firm. Ranging from 14 to 36 years, the actual length of the interviewees' experience is sufficient for the purposes of this study. Further, with two exceptions, all of the interviewees have been with their respective firms for the majority of their professional careers. CRO has been at PrimoU for slightly less than half, and DRMs' entire career has been with SecondoCo. Second, each of the professionals should preferably have occupied a risk management role at the initiation of the ERM adoption process in order to have the benefit of observations made at the point of origination. In all but one instance, that of MERBA at SecondoCo, the condition was met, although this subject did have an indirect association with ERM activities prior to moving into a full-time ERM role. Additionally, potential gaps in knowledge were filled in by DRM and the inclusion of the secondary interview data for DEM. Third, the subjects had to be actively engaged in the ERM process at the time of the interview to capture contemporaneous perspectives from active practitioners. This qualification was true for all subjects. Fourth, the respondents should be at or above the director or director-equivalent level in the organizational hierarchy to assure exposure to senior-level risk management issues, particularly those involving strategy and operations. This condition was also met. Lastly, given the risk downside-upside duality construct central to this study, both the legacy TRM and evolving ERM perspectives must be represented in each organization. Including respondents having direct responsibilities in each area satisfied this qualification. CRO, DRM, SDRM, and DRMQ have direct management roles for the TRM functions at PrimoU, SecondoCo, TerzoCo and QuartoCo, respectively and also actively participate on ERM committees of these firms. The remaining subjects are almost exclusively focused on ERM activities, with minimal to no day-to-day involvement in the TRM domain.

Table 2 Demographic Information

	Respondent	Scope of risk management responsibility	Years of risk management experience	Length of service with institution
PrimoU	R1 – Chief Risk Officer (CRO)	TRM, ERM	35 years	15 years
	R2 – SVP & General Counsel (SVP)	ERM	10 years	14 years
SecondoCo	R3 – Director, Enterprise Risk (DEM)	ERM	17 years	17 years
	R4 – Manager, Enterprise Risk & Business Assurance (MERBA)	ERM	4 years	21 years
	R5 – Director, Risk Management (DRM)	TRM, ERM	36 years	36 years
TerzoCo	R6 – Corporate ERM Manager (CEM)	ERM	10 years	33 years
	R7 – Senior Director, Risk Management (SDRM)	TRM, ERM	29 years	22 years
QuartoCo	R8 – Director, Enterprise Risk Management (DERM)	ERM	9 years	18 years
	R9 – Director, Risk Management (DRMQ)	TRM, ERM	30 years	20 years

V.2 Foundations of ERM

In this section, I explore the foundational elements of ERM adoption for PrimoU, SecondoCo, TerzoCo and QuartoCo, which are summarized in Table 3.

V.2.1 PrimoU.

From a loss exposure standpoint, a large U.S. university with an international presence generates a diverse risk profile that yields complex risk management challenges to risk professionals. This complexity is increased when a sizeable healthcare research and delivery system is fully integrated into the university's operational environment. Such was the case at PrimoU in 2005 when a new executive team arrived and began to develop strategic plans that required a rethinking of the institution's conduct of risk management.

In place at the time was a highly advanced clinical risk management program shaped by patient safety and mandatory regulatory reporting requirements, and a less evolved TRM approach to the non-healthcare side of the university. Several motivating factors then coalesced to begin the journey to ERM:

> *A couple of different forces drove us to start ERM. First was the chair of our audit committee, who was from the banking industry. The banking industry in say, 2005, was deep into ERM; it was on everyone's lips. He pushed it. We have a president who is an engineer and likes this kind of thing. So that was one force. Another force was looking at one of the highest profile risk issues of that decade, which was the Duke University lacrosse team incident.* (CRO)

A leadership team at PrimoU was assembled to conduct a due diligence exercise to establish the objectives of the nascent ERM program, with the goals of breaking through operational silos, identifying key exposures, assessing the institutional appetite for risk, identifying best practices, planning proactively and prioritizing resources. Success in these ERM activities was hoped to result in an environment in which negative surprises are minimized. Progress was slow in coming, as the task failed to gain traction until the chief risk officer and the general counsel "put our heads together and thought, 'well, why don't we try to figure something

out?" (SVP). While no additional resources were allocated to positioning ERM in the organization, the higher state of sophistication of the clinical risk management program acted as an internal catalyst for the adoption effort:

> *And so whether they call it ERM or not, the reality is that they've [clinical risk management at PrimoU] been thinking in those ways and with those concepts for many years. They just didn't call it enterprise risk management. And so when we introduced enterprise risk management at PrimoU about eight years ago, folks on the healthcare side were kind of scratching their heads because they're saying, 'that's what we do.'* (CRO)

External practitioners had little influence on the formation of ERM at PrimoU, given the lack of higher education-specific industry models or protocols to follow. "They were using an approach and language and theory that was understandable to those already in the field" (SVP), but not to those who were less engaged or had little risk management experience. Thus, the CRO and the general counsel characterize the transition to ERM as "home grown", utilizing existing resources and declining assistance from consultants.

An important structural change at PrimoU involved the creation of several new groups, drawing staffing from across the institution for the purpose of advancing ERM (Figure 1). First, an ERM executive committee, chaired by the university president, was instituted to establish policy and to oversee the full breadth of risks to the university. Its members "viewed ERM as the tool for educating themselves" (CRO) about risk in a systematic way. Second, an ERM steering committee consisting of senior operational leaders and administrators became the process champions of ERM development. The chief risk officer, who also has continuing responsibility for clinical risk management and TRM, which are functions that maintained separate corporate

identities, chairs this committee. Lastly, ERM subcommittees were formed to incorporate the subject matter expertise of individuals in the areas of finance, healthcare, research, information technology, safety, physical plant, corporate affairs, student affairs and human resources. These

Table 3 Foundation of ERM

	Earliest organizational exploration of ERM	State of risk management function	Motivation to adopt ERM	Primary leaders of ERM adoption	Initial investment in ERM	External influences
PrimoU	c. 2005	Bifurcated between clinical risk management and TRM for general university functions	Experiences from financial services industries; occurrence of major event in higher education sector	Chair of audit committee and new executive team – president, provost, EVP finance	Minimal; internal resources	Little to no use of consultants; industry frameworks reviewed but not adopted
SecondoCo	c. 2003	Well established TRM; risk financing and claims management	SOX/404 legislation; desire to break through risk silos and coordinate system wide	CFO, and head of financial planning	Minimal; internal resources	Informed by COSO framework and AS/NZS4360:2004 standards
TerzoCo	c. 2004	Well established TRM; global risk financing and claims management	Questions from rating agencies; smaller operational groups unable fund RM activities; cost reduction pressure from recession	Head of TRM function	Minimal; internal resources	Little to no use of consultants; highly informed by COSO framework
QuartoCo	c. 2000	Well established TRM; global risk financing and claims management	Integrated risk financing program; interest in aggregating key organizational risks	Corporate controller, corporate security, TRM director, ERM professional through acquisition	Minimal; internal resources	Moderate use of consultants; informed by AS/NZS4360:2004 standards

risk management process owners (RMPOs) are assigned to develop individual risk management plans for key risks uncovered in the course of risk identification and risk vetting activities. The plans are presented directly to the Executive Committee by the RMPOs during annual "risk hearings", and are supportive of the goals originally proposed of ERM adoption. This bottom-up and top-down communication formed new pathways for risk information to flow that had not previously existed. As a result, the quality of the conversations about risk within PrimoU became more robust and collaborative across the institution.

In budgetary terms, from the point of view of the chief risk officer "there's no additional expense associated with ERM. I have the staff necessary to do anything in connection with ERM, so we just absorbed it". The general counsel reinforces this observation:

> *So was it resourced? No, it wasn't. And I think that was part of the reason it's been successful. If it was resourced and we said 'here's $250,000 to hire somebody', then it would have been a risk management thing sitting outside everything else. There would have been incentive to justify that. By not resourcing it, several of us saw that it would help us do our job better to have this in place*. (SVP)

Undergirding the staffing, structure and processes operationalizing ERM at PrimoU are several statements that articulate the university's policy, strategic and tactical positions. First, the policy of ERM adoption is presented as a "liberating attitude" to its various stakeholders:

> *Risk, in one form or another, is present in virtually all worthwhile endeavors. We recognize that not all risk is bad and our goal is not to eliminate risk for by doing so we would cease all productive activity. Rather, our goal is to assume risk judiciously, mitigate it when possible, and prepare ourselves to respond effectively when necessary*.

Second, defining it on the institution's terms, without reference to external definitions or standards, shapes the strategic direction for ERM at PrimoU:

> [ERM] *is a holistic approach to risk management that provides a framework for entity-wide risk identification, prioritization of key exposures and development of operational responses to adverse events, based upon a foundation of ownership, accountability and transparency*.

Lastly, PrimoU adheres to a set of tactical "guiding principles" in the conduct of its ERM program. These principles encompass proactivity through an early-warning system, prompt reporting of adverse occurrences, remedial actions guided by the judicious assumption of risk, effective communication and a culture of process improvement.

One of the keys to the longevity of the program has been the ability "to blend and respond to the culture of the institution" (CRO). The introduction of ERM into PrimoU sparked "an awakening at the leadership level and senior management level, particularly on the university side about what it means…to think about risk in a way that the healthcare side has been doing for many years" (CRO). Support from these executives is a critical success factor in the opinion of the chief risk officer, since for change management of this nature, "ideal is top-down, always." This organic transition was initiated at and supported from the top of the organization, albeit without the injection of new resources and with little contribution from ERM industry practitioners. Changes in structure and process occurred to situate ERM into the existing management control environment through the introduction of two new committees, an expansion of roles and responsibilities took place with the line level managers that assumed risk ownership duties, and lines of risk communication were formalized across the institution.

At PrimoU, ERM has "graduated from being an initiative, something that has an end date" (CRO). In the words of the general counsel, "I think ERM is now built into the fabric. The question becomes, when this president leaves, will the next president be enthused about it? Because without presidential leadership, it would whither and die." (SVP)

V.2.2 SecondoCo.

A dedicated effort to create an ERM program at SecondoCo began in 2003.

It evolved out of the development of risk assessments and risk profiles for the utility's smaller, non-core businesses, and the formulation of broader risk policies and oversight of the company's sizeable energy trading and marketing operations. These activities took place outside of the firm's well-established, technically sophisticated TRM department that focused on risk financing and mitigation solutions for property and casualty exposures. Pushing for changes in risk management were "a few individuals who really had the foresight to start thinking about how one dimensional our approach to risk management was…it was always very siloed" (MERBA). Among these forward-thinking executives, the "fathers of our enterprise risk management program" (MERBA), were the incumbent CFO, who assumed the role of chief risk officer, and the head of the corporate financial planning organization. As part of the early ERM adoption process, investments in additional staffing were considered. However, SecondoCo went in a different direction:

> *They [CFO and other SecondoCo executives] proposed some larger organizations. They even considered the concept of a VP of enterprise risk. Officially, that was never created. They said, let's leverage existing people. Let's leverage existing processes. Let's not create a whole bunch of new committees*. (MERBA)

The director, risk management, echoed this sentiment:

But some companies early on, they built pretty big organizations around enterprise risk. And I think our philosophy has been look, let's keep this lean. Let's not build some big bureaucratic process. Let's keep it lean and let's keep it fresh. And so I think we've been very successful in doing that. It's not building an empire around enterprise risk.

SecondoCo, given its critical infrastructure categorization and the regulatory environment in which it operates, had a culture built around an acute awareness of risk, which is core to its organizational design:

When you think about SecondoCo's business model, we really are a low risk business model proposition. That's what we sell. Those are the shareholders and bondholders we attract. We're very much a low risk business model. (MERBA)

Consequently, the expectation regarding ERM as it moved forward was that it "is going to become not a program, but part of the company's culture. I think it has to be viewed that way to be successful" (DEM). One of the biggest cultural challenges the firm faced in the early days of implementing ERM was the "natural reluctance of people to share a lot of information about the risks they face" (DEM). Risk information had not always been effectively communicated within the organization, particularly to upper management. This failure was due in part to the lack of a systematic way to do so, and also out of fear, real or imagined, that it could be used in some way against those responsible for managing it.

Structurally, the new ERM group reported through the finance organization (Figure 2). Three subunits emerged from the reallocation of existing assets, which provided shared services to multiple functional areas across the SecondoCo system. These internal consulting capabilities included quantitative risk financing analytics, enterprise risk oversight, and trading and hedging transactions. While the ERM group maintained a strong connection with the firm's strategic

planning group and with the corporate governance organization, the direct reporting line through finance reflected strong opinions on how the organizational alignment of ERM should be executed:

> *I don't think that the internal audit organization ought to be primarily responsible for enterprise risk. I don't think that's a good strategy. Auditors are still viewed as corporate policemen. They're more about management control and accounting controls, and they've got a different role to play. The enterprise risk effort has to dovetail with it – internal audit – because you actually need internal audit to go out and test and validate and ensure that you've got certain controls in place, that you've got enterprise risk processes in place and it's working and effective*. (DRM)

As the ERM adoption effort progressed, TRM continued to operate as a separate functional area, also reporting into finance, focused as it had been in the past primarily on risk mitigation tools and techniques including loss prevention, risk financing, and contractual risk management. However, as risks outside of the traditional domain came into the ERM scope, the TRM unit was called upon for its expertise in exploring potential market-based insurance solutions. Similarly, "the treasury organization, when it comes to managing interest rate risks or foreign exchange risks, [is] on a more granular level" (DRM), and retained a distinct risk management identity.

External consultants were not a significant factor in the adoption of ERM at SecondoCo. However, industry ERM frameworks played a prominent role in the development of the practice. Elements drawn from COSO:2004, ISO31000:2009 and AS/NZS4360:2004 each provided influence, but without overemphasis on a particular standard:

> *I don't think we're any one, but if you were to line up our program with those, you could see how we align. At the end of the day, we still geared it to what we think was best for SecondoCo, but the standards certainly gave some initial structural ideas*. (MERBA)

The ERM group handled higher-level risk identification and assessment, introducing a new risk profile process to determine critical exposure areas. Reaching out to functional individual risk contacts horizontally and risk executives in all subsidiaries and business units vertically. To the goal of leveraging existing resources, this central ERM staffing

> *was very small. We believe in leaning on lots of dotted line relationships, so those groups that we lean on have what we would call a risk contact, which would be the equivalent of a line manager who has their day job, but also takes on this role*. (MERBA)

While the budget for the internally reconfigured ERM group is identifiable, the broader ERM effort is "just embedded in the organization, acknowledging that ERM in its purest sense is a part of everybody's job so it's a component of everybody's budget by default" (MERBA).

In its assimilation state, the goal of ERM at SecondoCo is to support the firm's low risk value proposition by "optimiz[ing] the relationship between risk and return by establishing a culture and risk oversight structure that encourages sound risk-taking balanced by effective risk management practices." Three pillars support this proposition: first, a risk culture that promotes a high degree of risk awareness and open communication; second, risk governance that ensures proper oversight and transparency; and lastly, risk management controls, procedures and practices to mitigate risk.

In summary, a few key executives having the desire to address risk across organizational subdivisions and to improve the flow of risk information up and down the firm led the existing risk-aware culture at SecondoCo into the direction of ERM. In response to the guidance of these

risk champions, a dedicated ERM group was created, staffed utilizing existing resources. To accommodate the ERM push into the organization, managers in line level roles took on responsibility to become part of a firm-wide network of risk contacts. TRM continues to operate as a separate function but participates in the broader ERM conversation through its parallel reporting relationship into the finance organization. These activities have resulted in ERM becoming "an established system of processes and structures" (MERBA), a program that is

> *rather deeply embedded. It gets a lot of attention from the executive management team and the board of directors. There are regular discussions around it, robust discussions. It's not just an exercise we go through. It's important. And it's conveyed as important. It's flowing up from the bottom. It's coming down from the top. And that's part of a formalized process where we are thinking about risk on a regular basis. It's planned, not ad hoc or informal. Our formal enterprise risk process is that every year and periodically during the year, we are looking at those risks and thinking about them, putting them on paper.* (DRM)

V.2.3 TerzoCo.

"Risk management existed as a part of the culture" (SDRM) of TerzoCo in 2004, when it was conducted independently in multiple areas across the organization. It was during this period when "a variety of forces came together, a perfect storm of events" (CEM) both externally and internally occurred that oriented the firm toward consideration of ERM. First, insurance carriers, including those that provided coverage to TerzoCo, in the post-9/11 era had gained a heightened awareness of the concentration risks of large organizations. This led to the carriers' reassessment of not just the profitability results of individual product lines, but also the aggregate risk profiles of their customers for underwriting acceptability. Second, rating agencies, Standard & Poor's

and Moody's in particular, began to take note of ERM programs in their ratings methodologies. Third, directors serving on the TerzoCo board were becoming influenced by their involvement in other organizations adopting ERM, and supportive of considering an ERM approach at TerzoCo. Fourth, the company committed to having an "equality of true concerns" (CEM) in risk management. This phrase captures the institutional desire to break through the risk silos within TerzoCo that enabled large operating groups to manage risk on their own, to the detriment of smaller groups that had less budget, little input on risk management issues and yet potentially high-risk profiles. Fifth, the U.S. economic recession "squeezed the fluff out of the information technology and engineering budgets" (CEM) at TerzoCo, forcing even these large, well-funded business units to shed cost and rethink risk management. Lastly, the senior director of TRM, who became the main conceptual proponent of ERM, began to think about risk holistically. "There was nothing to join the pieces, and we need a process to knit together the different types of risks in functional areas. Some risks are easier to assign to risk owners, others are cross-functional and need coordination" (SDRM). Given its responsibility for all insurance risk transfer plans globally, including the firm's two captive insurance facilities, TRM reported into the treasury department. However, the TRM director, in seeking to build collaboration across organizational lines, reached out to the head of audit and compliance and the general counsel with initial thoughts about whether ERM would be a fit for the company.

From these discussions a critical initiative was launched out of the TRM department to explore ERM adoption, with joint reporting through finance and global procurement and in close association with the crisis management and business continuity departments, both of which were under the firm's security group. To guide the initiative a steering committee was formed, consisting of representatives from TRM, legal, audit and compliance, security, public relations

and human resources. Functional diversification enabled the committee to "take a whole process view to understand the importance of each link in the chain" (CEM) of risk management. This core unit did not include representatives from operations, engineering, and strategy at the outset, although these major functional areas and with them, information technology, were eventually added. Among the primary tasks of the committee was to undertake a key risk identification process to consider the changing and emerging risks that TerzoCo faced, especially to uncover where management gaps existed in the management of catastrophe risk and strategic risk exposures.

In 2008 the risk management function at TerzoCo underwent a restructuring, one in which the ERM process and its leader were spun out of the direct responsibility of the TRM team and aligned with two "sister groups" (CEM), compliance and ethics and internal audit, all of which reported up to the TerzoCo audit committee (Figure 3). TRM continued as a separate unit reporting into finance, albeit with "dramatically enhanced visibility and value - the group is a key player in the room" (SDRM) given its central role in initiating the ERM concept. Additionally, an enterprise risk council was formed, co-chaired by the chief legal officer and the vice president of audit and compliance, reporting to the management committee and including representation from TRM and the company's primary functional areas.

External consultants were not of material importance to the ERM effort, as they proved unable to "take [our] ideas, and implement process" (CEM). In contrast, the COSO framework provided substantial guidance to shaping TerzoCo's approach to structuring ERM and its operationalization. TerzoCo places particular emphasis upon weaving the quality of the dialog concerning risk into the COSO definition and in the conceptualization of ERM for the company:

The central value of an ERM program is found in its ability to provide an organization with a systemic awareness of potential risk events. It does not generate intelligence, it is a consumer of information provided by all parts of the organization and it all begins with a conversation. (CEM)

Little incremental cost was incurred to adopt ERM at TerzoCo, with incidental expenses limited to additional meetings and administrative headcount. Internal leverage of existing capabilities was an importance factor, as was the formalization of activities that were already running. The objective for the ERM leadership team was to facilitate formerly implicit processes explicitly, and not to create new infrastructure.

From the outset, the intention of TerzoCo was not to have ERM function in a stand-alone capacity or to be unconnected with the mainstream processes of the firm. Rather, ERM was recognized as a missing element from management routines, and it has become culturally embedded in the organization as its "circulatory system" (CEM). In the opinion of the corporate ERM manager, "we couldn't take ERM out even if we wanted to." Adoption has enabled the firm to overcome the risk management "secret organization, where risks are known only to a few and a 'wall of worry' is created. There is now a formal process of risk recognition, identification and mitigation" (CEM). ERM is more than a program in the company, "it is a big process, ongoing, living and breathing. We are doing well, but we'll never be done" (SDRM). The TerzoCo board of directors is fully supportive of ERM, and is engaged in pulling the process throughout the firm. This board support is reflected in the inclusion of ERM in the proxy statement, audit committee reports and the company policy handbook, the latter of which has been published for over 75 years. In short, ERM is "just part of doing business the right way" (SDRM).

Nonetheless, one of the original prime movers behind ERM at TerzoCo, the TRM manager, expresses a measure of dissatisfaction with the quality of the assimilation:

> *I'm not happy with where we are. There are some major weaknesses we need to deal with. First, we are depending too much on expert judgment to assess the likelihood and impact of risk without having great ability to quantify that risk. Second, I don't think we still do a great job of understanding the correlations on our risk map. We need to do the obvious and be more objective about quantification. And third, we're still managing silo-by-silo, not understanding interplay and correlation. The biggest barrier to overcoming these weaknesses is that we're not a bank…we don't have big data and internal financial risks that can be more readily quantified. A lot of our big risks are external and less controllable, which gets us back to relying on expert judgment rather than quantification. So the Holy Grail, then, is quantification*.

V.2.4 QuartoCo.

While the initial consideration of ERM at QuartoCo began years earlier, a clear line of demarcation establishing a "modern day view" (DRMQ) occurred in 2010 when a major acquisition set the stage for a significant advancement of the practice of ERM in the company.

V.2.4.1 Pre-2010.

Concurrent tracks of advanced risk management exploration were taking place during the early 2000s in two separate areas of QuartoCo: the strategic security function and the TRM department. First, the **s**trategic security group undertook an officially sanctioned yet informal effort to start a comprehensive corporate risk identification process. This task, led by an individual in the security group "with the most passion and the most foresight to do something in ERM" (DERM) attempted to build a programmatic approach to assembling input from the field

level of the firm, and rolling this data up to a summary level of key risks. An ad-hoc risk committee with risk owners from across the organization participated in surveys and elementary risk ranking exercises, but this data collection exercise was executed on discrete paths

> *without the mindset of trying to think through how does the risk that I manage in my group actually correlate and correspond with what I'm learning from other risk owners…it was a lot of flurry of activity, but I don't think we had a lot of gelling at that time.* (DRMQ)

Consequently, little progress was made as the work involved "a lot of two steps forward and one step back trying to get a grassroots group of people together to give some input to this process" (DRMQ). At the senior management level of the firm, conceptual debates over ERM adoption were taking place, also resulting in a lack of forward progress:

> *They were trying to build a risk universe to embed in the business. There was some discussion on how can you integrate enterprise risk management within the corporate audit department and the way they're planning resources. So there were activities, but it wasn't quite well thought out*. (DERM)

For a substantial investment, the security group commissioned a consulting project to develop a risk assessment graphical analysis product, and subsequently, an additional expenditure into an early version of ERM information system software. Neither of these proved to be of consequence in the ERM adoption process.

Second, and beginning prior to the security group led ERM initiative, the TRM department had been independently pursuing an integrated approach to risk financing, stretching the boundaries of how such programs were typically effectuated in the commercial insurance marketplace. This cross-product line program design blended self-insurance and risk transfer

mechanisms on a multi-year basis, combining traditionally insurable risks with several other risk categories that were outside of traditional scope. The motivation behind taking such a different strategy in the TRM domain was, in the words of the director of risk management, to

> *explore what we can do because right now, it's just year after year, renewal after renewal, separate lines of coverage, individual transactions, no connectivity. And it just seemed like there should be a leverage factor that we were not getting.* (DRMQ)

Managing risks on a structured financial portfolio basis represented a step towards ERM, conceptually, and was a leading-edge management process in the company. Nonetheless, "without having vision to operational risks, IT risks, business consumer issue risks or marketing risks" (DRMQ), many organizational risk silos remained in place.

V.2.4.2 Post-2010.

After the closing of an acquisition of a sizeable global distribution network, the fledgling efforts toward ERM adoption at QuartoCo were catalyzed by two individuals: an executive from the legacy organization who took on a prominent role and the other, an experienced ERM practitioner from the acquired firm. First, the former head of audit from QuartoCo became the newly appointed controller of the combined organization, bringing support and credibility to the ERM adoption effort. This executive

> *basically decided she wanted the function* [ERM] *and she wanted to go do that. She said, 'We need this. We need to do it for lots of reasons. We need to be much more proactive.' I would say her introduction to this concept was certainly from a Sarbanes-Oxley traditional audit background. I do think she can be somewhat visionary as well though. And I don't know that her view at all was limited to that component – elements of*

managing risk. But I think having had that background; she certainly was in the chatter already of Sarbanes-Oxley, COSO. These were familiar terminologies for her. (DERM)

Second, from the acquired organization came its manager of ERM. This risk professional possessed a background in strategic logistics, and in 2006 had become the lone resource dedicated to implementing ERM in the distribution company, working in this role up to the time of the sale of the company to QuartoCo.

In the process of integrating the businesses, QuartoCo committed two internal resources to ERM: the ERM manager from the acquisition and an existing QuartoCo employee with experience in operations, global finance, organizational transformation and information technology. This two-person group was then moved from under strategic security and began reporting to the controller, and in turn to the CFO. As ERM advanced through the firm a virtual, voluntary team of interested participants emerged, extending the reach of the small, central ERM unit into the geographic business units and functional areas of the company. This team was composed of "four or five people who were really the brain trust…of what 'good' looks like in risk management" (DERM), defined in large part by the standard set by the TRM director's integrative risk financing work.

As the virtual team progressed its efforts, it found willingness on the part of the managers in the field "to do the right thing, but they didn't have the language skills across the functions and there was not any kind of collection of focus of mitigation activities in the company" (DRMQ). To meet this challenge, and to bring coherence to the overall adoption exercise, ERM within QuartoCo evolved into multitier structure (Figure 4). At the base of this organizational model are four diversified sub-units drawing members from across the company on a virtual, matrix-reporting basis: a corporate level risk council, which succeeded the virtual ERM team; a

combined corporate and field-level ERM working group; a field level collection of ERM process leaders embedded in the business units; and an ERM best practices network dedicated to the distribution system. The two-person ERM team that reported into the corporate controller coordinated the overall activities of these four groups. In turn, this entire assemblage of ERM resources is accountable to the ERM executive sponsors of the firm, the CFO, and chief administrative officer, and the to the audit committee that has ultimate ERM program oversight.

The major difference between the pre-2010 era and the adoption and implementation of ERM at QuartoCo post-2010 is two-fold. First, when considered from an executive management standpoint,

> *we understand we have a corporate risk management governance responsibility that we take very seriously. And part of that is to hold strategic risk assessment processes to understand the profile from the top, taking all these risks from the field and from the business and the corporate functions and coming together, and doing this in a robust manner. Part of that is to ensure that we actually have proper governance routines and oversight routines with the board of directors, and that certain board committees should oversee certain buckets of risk*. (DERM)

Along with the acknowledgment of this governance responsibility, the second difference is establishing the practice of ERM as an accepted and perpetuated management process in the firm:

> *We find ourselves really focusing on how you establish risk management as a capability. People want to do risk management and they want to do it well. They want it in very simple terms and they want to have a strong foundation and use that foundation to figure out how to do it well. We had five risk treatment programs in place. How do they*

correlate? How do they connect? What do they mean? Who is the contact person? And how do we pull all this together? We pull this all together by including them within the basket of what we're doing to manage our enterprise risk. (DERM)

In summary, the board of directors have fully committed to the practice of ERM at QuartoCo, based upon its recurring position on the agenda:

Every April quarterly board meeting will be the ERM meeting, and this will be the sixth year in a row. It's pretty well ingrained in the culture. I assume it's going to occur this year and it's going to occur next year. It's a big change. I mean 25 percent of the board meetings are 100 percent dedicated to ERM. (DRMQ)

V.3 Assimilation of ERM

In the previous section, I presented a process view of how large, committed organizations are motivated to advance and assimilate ERM into their operating environments. I now turn to a different perspective, which is how PrimoU, SecondoCo, TerzoCo and QuartoCo in the assimilation phase align with the three dimensions of the emerging consensus model: holistic integration of silos, horizon expanded to emerging and existing risks, and harmonization of downside control and upside value. Combining a process view of ERM adoption-led resource configuration with an explication of the key dimensional factors upon which that configuration is based provides an informed understanding of ERM, upon which the lens of ambidexterity as a dynamic capability can be focused.

V.3.1 Holistic

V.3.1.1 PrimoU.

ERM is acknowledged as "a facilitation mechanism for crossing departmental silos" (CRO) at PrimoU. In actual practice, this interlacing property is effectuated in several distinct, yet related

ways. First, common interests to exposures to loss are connected *ex-ante* through the transfer of knowledge:

> *Our ERM structure forces us to think about it in terms of one exposure, not two. And so from there, you have kind of a domino effect. That means you have people with shared interests coming to the table to figure out solutions. You have people learning from one another if one has figured out a solution. It helps to provide some kind of bond in a system that is incredibly huge*. (CRO)

Second, the aperture through which potential loss impact is viewed is widened to considerations beyond the instant event:

> *What we're worried about is a series of losses which taken in the aggregate creates a reputational problem or a financial exposure telling us that there's a deeper systemic problem. And the problem is the systemic problem as opposed to just the loss number*. (SVP)

Third, three horizontal structural components were created at PrimoU in the process of adopting ERM that directly integrate people and process: the RMPOs, the ERM steering committee and the ERM executive sponsors committee. The RMPOs are in day-to-day functional management roles spanning the university and healthcare domains. At the ERM steering committee level are the college deans, directors, assistant vice presidents and vice presidents. Assembled within the ERM executive committee are the direct reports to the university president, which includes senior vice presidents and the c-suite officers. This group is also specifically responsible for reputational and strategic risk oversight. Lastly, the integrated horizontal structures are aligned in a vertical hierarchy that enables bottom-up and top-down communication. "The risk silos are managed by the RMPOs, and then aggregated at the next level up in the organization" (CRO).

V.3.1.2 SecondoCo.

A consistent thread in the ERM adoption experience of SecondoCo is a coordinated view of risk, since "early on with ERM, the idea was instead of looking at these risks in isolation, let's look at the interplay between them and how they affect the overall risk profile. There are some risks that we have joint ownership of" (DRM). Senior management support at SecondoCo supplies the necessary organizational energy to move from observation to action: "If you've got commitment at the top level of the organization and you've got your ERM process set up right, it facilitates dialogue across what were silos before" (DRM). A key activity employed by SecondoCo to enable such conversations is the risk profile process, a systematic method of risk assessment and mitigation companywide,

> *for all of our subsidiaries, business units and functions. ERM has actually been pushed down within the organization to the point now where we do risk assessments and profiles in our power plants. Ultimately, what comes out of this risk profile process feeds up into our consolidated view*. (DEM)

As the participating organizational entities for the risk profile process are identified, namely those that exceed a risk materiality threshold, risk officers are appointed and assume management responsibility for process coordination. In the course of the process, significant risk areas are analyzed, and the officers develop individual risk profiles. Collaboration takes place in executive risk discussion meetings with the ERM group, the senior vice president of finance, the CFO/chief risk officer and each business subunit's senior executives. Classification of aggregated risks is done at a moderate level of abstraction:

> *We have resisted efforts to force things into really broad buckets like operational risk. We do look at each individual risk and we categorize to bring those together into buckets*

> *such as governance risk or environmental items. We have not tried to for the categorization of risks into buckets as large as operational*. (DEM)

The preexisting structural pathway for communicating risk information and insight upward from the risk profile process is through the executive management committee, and in turn to the risk oversight committee, the CEO and the board of directors. Additionally, the company

> *has integrated and created links among the various risk-related functions as part of ERM. This includes the ERM group, internal auditing, legal and regulatory compliance, Sarbanes-Oxley, and business assurance*. (DEM)

V.3.1.3 TerzoCo.

Maintaining the position that "no risk is independent" (CEM), ERM at TerzoCo takes "an intelligent view of risk complexity" (CEM). The company is focused on the connectivity and systemic impact of risk, both downstream from the point of origin and cross-stream among its business units. Risk silos are overcome by having "everyone in the conversation about risk" (CEM), not just a small group of senior managers or through informal discussions.

Structurally, risk and compliance committees at the district and regional level perform initial assessments. At one level up is a critical element in the process of risk integration, which is the firm's enterprise risk council. Co-chaired by the chief legal officer and the vice president of audit and compliance, with members from domestic operations, engineering, finance, accounting, human resources, information technology, international operations, legal and public affairs, public relations, TRM, sales, marketing, security and strategy, this group develops assessments and profiles of risks that require corporate level monitoring and makes status determinations on a tiered basis. Overlaying the ERM structure at TerzoCo is a comprehensive enterprise risk and control framework, which rationalizes elements found in the COSO model:

management committee risk sponsorship, risk categories, enterprise risk counsel sponsors and detailed risk categories.

As indicated in the previous section, and despite the progress made through a formalized vertical structure, an industry-standard based framework and processes all targeted at risk integration, execution is lagging expectations. More objective quantification of risk interactivity is desired, demanding "real-time, granular access to data, which will require an expanded role for information technology" (SDRM) in ERM.

V.3.1.4 QuartoCo.

The TRM unit achieved a specialized form of bridging risk silos in the pre-2010 era when this team developed an integrated risk financing program. In the post-acquisition period, the newly placed ERM director moved to reestablish "the individual risk owners based on the risks identified in the company, and the quarterly or semi-frequent meetings of these risk owners to even get them in the same room" (DRMQ).

During the evolution of the structure of the ERM program at QuartoCo, three of the four ERM core work groups brought together areas of the company that formerly operated in a silo fashion. In turn, these groups roll up to the two-person controller level ERM unit, which provides an additional platform for integration. An opportunity has been identified for further development:

> *My view would be that the logical next step in the maturity model for our company is to not just sit in a room and have awareness that I manage a risk, and I have colleagues who also manage risk, but the next level to me would be quite a bit more collaboration. This should reflect intentional collaboration between those risk owners to help roll up cumulative risk to the [controller level ERM unit] so that they could present that in a*

more consolidated manner up through to the board, that they could bring big categories of risk and how are they being managed maybe across three or four of our risk owners as opposed to individual ones. For example, maybe ERM can look at a bigger picture analysis of what is the overall risk from a marketing standpoint. I think that there's a lot more of that happening in little pieces across the company. (DRMQ)

V.3.2 Horizon

V.3.2.1 PrimoU.

Adoption of ERM at PrimoU enables the institution to "monitor risks that constantly come in and out of the radar" (CRO). Indeed, one of the motivating factors behind the university's move in the direction of ERM was the highly visible, negative publicity resulting from the allegations against the Duke lacrosse team from a risk exposure that was at the time not being considered. This untoward event demonstrates that the risk horizon of the institution has dynamic properties, requiring constant monitoring:

We periodically re-evaluate the list of risks. Inherent in the ERM framework is the recognition that priorities change over time; therefore, the risks are expected to shift in response to changes in the operating environment. (CRO)

Another aspect of the expansionist nature of the horizon dimension is the inclusion of higher-level risk classifications, particularly strategy and operations, which at PrimoU were not linked to either the legacy TRM or clinical risk management groups. With the advent of ERM, the university went in a direction "primarily focused on operational risks, and did not attempt to replace the valuable strategic planning processes that PrimoU, like most other higher education institutions, engages in regularly" (CRO). Therefore, the impact of ERM on strategic risk

hasn't been much. It's starting to. But it was but it was sort of consciously not involved at that level at the start. Our philosophy was to start with the university functions and work up toward strategic analysis. ERM literature often takes the opposite approach, encouraging an initial engagement at the strategic level. We had concerns that such an approach would be too abstract and we decided to stay with the bottom-up approach. (CRO)

V.3.2.2 SecondoCo.

Scanning the risk horizon is integral to the ERM program at SecondoCo. The embedded nature of ERM in the organization's processes, controls, decision tools, governance and oversight structures extends its reach into strategic risk considerations. As a part of the firm's risk profiling process, there is "a component dedicated to emerging risks and new issues coming out. We're really trying to foster that discussion of what's coming around the curve" (MERBA). A systematic approach to risk classification clarifies the firm's priorities:

We've got a top risks list that's an arbitrary number right now; it's like 13 different risks. Those are our top SecondoCo risks. There is a second tier risk list of those that haven't made it up there, and then there's a list of more emerging risks that we're keeping an eye on. In our industry for example, we're watching distributed generation, which is a big one. (MERBA)

TerzoCo. An expanded risk horizon is implicit in in TerzoCo's ERM value statement, which cites the "ability to provide an organization with a *systemic* [emphasis added] awareness of potential risk events." In the case of TerzoCo, the ERM risk frontier encompasses business objectives, capital allocation, overall strategic goals and all operational and functional areas of the company. The boundaries of this risk scope have been extended beyond those that had been

contemplated in the pre-ERM era, which were first reviewed during the firm's initial key risk identification process. Further, the organization is moving its ERM efforts toward a balance of ground-up and top-down management of risk with the development of "mini ERM on a regional basis, with steering councils that add local flavor and nuance" (SDRM). Among the responsibilities of these councils is assisting in the more rapid identification of emerging risk trends.

V.3.2.3 QuartoCo.

From the perspective of the TRM director, the changing risk horizon to which ERM is oriented demands constant attention:

> *The question that we try to think about every day in our world is: What can I be doing in my capability of managing risk in QuartoCo financially that I haven't thought of or that we're not doing already? Which type of risk – which item of risk should be added into a basket somewhere that I'm not even looking at? And there are some clear 'emergers' that have happened in the course of the last couple of years. Things like employment related issues, employment practices issues, wage and hour issues. These are things in the insurance world that didn't exist before. There was not an answer to those pieces until relatively recent time*. (DRMQ)

Contributing to the emerging risks is the competitive landscape and accelerated pace at which QuartoCo must operate. As the firm adjusts to its new normal environment, it is faced with a broader risk horizon:

> *Look, the world is changing and we may not be dealing with the big firms as much as we used to that have the whole package, that have the insurance program, that get the management risk, that go through the clear vetting process. Things are moving a lot*

faster now, and we've got to get to market a lot faster and we've got to be the first one out there. (DRMQ)

From the point of view of its contribution to strategy, the impact of ERM

is probably evolving. And I think what it looked like a couple of years ago is probably a little bit different than today. At least somebody in a decision-making space is looking at the risks across the company and trying to think strategically about where do they see the company going? This is the leadership of the company, this is the board and our key executives who are part of the board as well. They are setting the strategy for the company on a going forward basis. (DERM)

A concrete example of how ERM has had a direct impact on strategic planning at QuartoCo involves a significant international project:

We have a large-scale productivity initiative going on– very large scale. So we've been involved in actually setting up a government structure because there's a huge potential impact on the business from the standpoints of controls, business continuity and financial risk. So we're involved in that and actually help the businesses understand that we're going to manage the risks. But that's the extent to where we actually influence those decisions. (DERM)

A contrarian opinion associated with the holistic dimension offers a different perspective of the risk horizon:

My opinion is in general, most of the risks have been out there so you're not going to find a lot of new risks per se. You know, some things go up and down. Where I do think the biggest gap is – learning from other people who have actually managed the risk. That is I think the big gap. (DERM)

Having gained insight into the holistic and horizon elements of ERM, in this last section I explore the data for the third dimension of the emerging consensus model, which is harmonization. This dimension, described by the duality of managing risk to minimize its downside impact and at the same time managing risk to maximize its upside value, is at the heart of ambidexterity. Given the historical commitment of resources to and path dependency of risk control and mitigation activities evidenced in the data, spanning both pre- and post-ERM adoption, I have not presented purely downside improvement ERM narratives for PrimoU, SecondoCo, TerzoCo and QuartoCo to further amplify the point. Rather, I will focus on the understanding the complexities of the less visible and somewhat more abstract upside value constructs in the sample companies, including downside-upside comparisons that assist in explicating the upside differential proposed of ERM.

V.3.3 Harmonization.

V.3.3.1 PrimoU.

Conceptually, PrimoU recognizes the two-sided nature of risk, acknowledging that "not all risk is bad and our goal is not to eliminate all risk, for by doing so we would cease all productive activity" (CRO). ERM adoption contributes to converting this proclamation to action as "people get more comfortable assuming risk. You know, some might look at it [ERM] and say, "Oh, well, this identifies the risk, it keeps us from doing risky things" (SVP).

Beyond the conceptual statements, industry classification characteristics play a prominent role in how PrimoU defines value:

> *My view is that the proxy in our world for shareholder value is reputational quality. The purpose according to law of a corporation is to maximize shareholder value. If you think about a university, we don't have shareholder value. But we've got lots of stakeholders –*

> *alumni, people who live in the community, trustees, etc. And what is the common interest that they have that lifts all the other activities? I believe it's the quality of our reputation*. (SVP)

Given the importance of enhancing reputational quality and granted that downside risk control mechanisms are in place to protect it, the search for potential new upside value from ERM with respect to enhanced reputation leads in a direction of gaining competitive advantage, but with limitations:

> *So if you're thinking is there a way to measure the favorable impact of ERM on PrimoU vis-à-vis other universities, I would be interested if you could. I don't know how. That would be hard. If you just picked a measure of performance, a dimension of performance and said, 'has ERM impacted this dimension of performance?' You might be able to do that. It just would be hard to pick one measure of performance or one cluster and say this is the measure*. (SVP)

Actual measures of increased value from ERM then, are at this point for PrimoU, premature:

> *Revenue is important. But we don't have a stock price. We don't have earnings. We're measured by how well we perform our mission. How do you do it when you're not measuring something that has financial performance?* (SVP)

Since quantification of the ERM upside at PrimoU is at this juncture beyond the institution's scope, and no additional investments were made to adopt and implement ERM, cost-benefit analytics are not calculated. Over time, PrimoU envisions a tiered understanding of value upwards into the institution, as "part of the plan going forward to get PrimoU to think more like a business" (CRO). In that regard, a negotiating point made by the university in its insurance transactions is that ERM has improved its overall risk profile. The results are inconclusive,

however: “We certainly talk about it. How much do the [underwriters] factor it in? I don’t know” (SVP).

Nonetheless, the influence of ERM beyond pure risk mitigation is beginning to be associated with the broader interests of the university, as in the case of the strategic application of ERM resources in advance of a recent large acquisition to facilitate the transaction. This involvement is also subject to limitations:

> *But even that is focused on the risks associated with the transaction as opposed to an ERM approach where we want might to allocate resources opportunistically. ERM has not entered into those discussions*. (SVP)

Explicit value qualification is recognized at PrimoU, as in increased “transparency and quality of communication around risk, particularly in ‘risk forums’”(CRO), and job effectiveness: “It was worth the time and energy because it makes my job better. Everybody else is the same way. And so we have the advantage enough people who saw the value in doing it” (SVP). Thus the implementation of ERM has provided a “framework and a structure to have discussions about risk and risk relativities” (SVP) that were not occurring in the past.

In summary, the downside element of the downside-upside duality dominates the thinking at PrimoU:

> *What’s changing now is this year, we’re embarking on a new effort to take the top risks that we see and have a concentrated briefing to the board of trustees or the appropriate committee. And we’re getting closer to answering the classical question, “what keeps you up at night?” But it’s still not thinking of risk strategies as opportunities. It’s still about the risks*. (SVP)

V.3.3.2 SecondoCo.

Expressed as a broad policy statement, ERM at SecondoCo "is an ongoing and evolving effort by which the company attempts to enhance the value of the firm by efficiently and effectively managing risk across the SecondoCo system. Thorough understanding of risk and communication of risk can actually lead to better decisions and better allocation of capital." This attitude toward risk originates at the top of the organization:

> *[The CEO] loves to use the phrase 'value is a function of risk and return'. He says that all the time. It's one of his mantras. And so it was always that mindset. Our company was very good about focusing on return. We understood net income and profits and things like that, but oftentimes you weren't always thinking about the risk side of it. Like making sure that you're getting the appropriate amount of return for the amount of risk that you're taking on. And so I think in the spirit of that, they're saying we need to be much more educated in the projects, tasks, capital expenditures, whatever it may be that the company is taking on and making sure that we're getting the right risk-adjusted return.* (MERBA)

The role of ERM in effectuating the risk value proposition is also directed from the top down:

> *Our CEO is passionate about thinking about disruptors to our industry, and thinking about opportunities as well for our company. And so that's where I think the strategic piece integrates well into ERM so that it's not just about the downside of risk, but the opportunities associated with managing your business as well*. (MERBA)

Further, the value implications of ERM are conceptually linked with the strategic foundation of the organization, as a positive contribution: "Our strategy is predicated on risk management and

our risk profile. So ERM certainly adds value to the degree that it helps us with our risk profile and to maintain that risk profile" (DEM).

The economics of ERM at SecondoCo appear to be at least a background consideration in the overall context of the program. With respect to management incentives and individual commitments to the practice of ERM,

> *certainly from the board to the C-suite, it's clearly communicated that enterprise risk is a high priority. I think in various ways in the organization, there are incentives in the performance plans of the management team and the employees that feed into that. There are subjective rewards for managing those risks prudently and it impacts subjectively the performance plan of individuals and their compensation. I say subjectively because I don't think you would typically see a hard dollar metric or some other kind of metric in a compensation plan that says you'll need to reduce your risk profile by x amount. But I think certainly you would be rewarded or penalized as a manager in this company for not doing your job as well*. (DRM)

Cost-benefit calculations of ERM are judged to be theoretically possible, but are not conducted either regularly or on a widespread basis at SecondoCo:

> *I think you can do that within an organization. You can do it from year to year, but we've never seen folks come up with what I would consider a real valid comparative number across organizations. Within an organization, you can come up with a number and you can compare that year to year. I think the cost-benefits are typically dealt with on more of a risk specific area, for example, cyber risk*. (DRM)

Despite the high degree of acceptance of ERM at SecondoCo, however, the attitude toward a risk seeking position at SecondoCo is not always effectively acted upon throughout the

organization, due to the presence of risk aversion in the environment: "that's one of our challenges even today, trying to remind people that we want to take on the right risks, and we can't make money without taking on risk" (MERBA). Additionally, defining the specific upside value creation produced through ERM adoption is a challenging task for SecondoCo risk professionals. While support of the policy and strategy of ERM is apparent, questions remain about how the creation itself happens:

> *I've always taken the view, 'does your ERM program create value? Can you quantify that value?' It's a bit of a holy grail, and extremely hard to prove how you create value. Enterprise risk management is nebulous to me as far as trying to identify the value associated within it. It's like people know intuitively. You know what's happening here is valuable because communication's valuable, sharing information is valuable. To say it prevented something from happening is very difficult to do. Also, there are services that the ERM group provides that are clear*. (MERBA)

Possible answers to the question of value creation at SecondoCo may come through several avenues. First, a linkage to the holistic dimension of ERM:

> *I think what still remains to be done if you're going to look at the upside of ERM and where it adds value, is ideally you would be looking at the interplay between the various risks that combine your overall risk profile and measure those. ERM practices in one area may mitigate risk in another. But I think where people and companies have struggled is in trying to measure the effect of those risks and the interplay between them*. (DRM)

Second, the increased quality of the organizational conversation around risk prompted by ERM is another source:

The real value is an open discussion that's going on at the board level, the C-suite level, where people are talking about these things. If you're spending too much time trying to develop some metric, you may be losing the real value of ERM, or diluting the real value, which is in the dialogue. (DRM)

Lastly, the functional activities performed by the ERM organization offer a service to the firm whereby incremental value is added through more robust environmental scanning:

The word that keeps coming to mind is that 'support' word. I think the value proposition can be the same, but without the [ERM] program, you are rolling the dice a little bit. If you don't have that support network, you're taking on risk so you're exposed. You're going to have events happening. But you're much more aware and you're doing the best you can to mitigate those where you need to. I think to the extent you didn't have a program, you'd be flying blind a little bit. (MERBA)

A cautionary note is sounded with respect to the role of value quantification, which is interlaced with value creation issues:

I think another area where we differ from some other companies is in the quantification of risks, especially when you're talking about at the parent level because you get to so many strategic type risks that I think are very challenging to try to quantify. You can do it, but you put so many assumptions in there, I think it could be a greater risk that you put reliance on it and what the results of that analysis may have been. (MERBA)

However, the evaluation of the upside benefit of measurement processes do not exclusively determine ERM at SecondoCo: "We'll see development down both of those paths. I think the quantification aspect is critical and that we do move forward on that, but there are the qualitative aspects that have a long way to go" (DEM). Methodologically, there are several options

identified by the company to explore value qualification, especially with respect to developing data streams external to the organization:

> *But you can look across the industry, you can look by analogy, you can look at where other losses have happened and other untoward events and get some sense. It's not a precise value measure, but I'm really seeing that it's not all quantitative.* (MERBA)

V.3.3.3 TerzoCo.

At the corporate policy level, TerzoCo expresses the value derived from ERM in a statement that promotes a culture of communication:

> *The central value of an ERM program is found in its ability to provide an organization with a systematic awareness of potential risk events. It does not generate intelligence, it is a consumer of information provided by all parts of the organization and it all begins with a conversation*.

Prior to the adoption of ERM, the company

> *didn't have the venue for the value to occur. We now have a 'better bus', in Jim Collins' terms, and everyone is expected to get on. It's a more intelligent, connected organization. ERM is not trying to stop progress. We want to inform the group and challenge assumptions. Our motto is, 'it's OK to be defeated, but never to be surprised.'* (CEM)

This new value in risk management is qualified in several different ways. First, at the individual level are changes in behavior driven by the direct risk ownership responsibility in the field. Second, risk identification and assessment processes have been clarified and made consistent. Third, there is increased transparency around the potential impact of the individual risks the company faces. Fourth, the dialog about risk issues has become deeper and more meaningful, yielding fresh insights into the aggregate risk profile of the firm. Lastly,

organizational knowledge and learning outcomes have resulted from the flow of information across formalized communication channels.

TerzoCo as an indicator of value conducts no cost-benefit analyses, as the firm "doesn't know how to go about it" (SDRM). While there is some incremental cost incurred by ERM adoption, theses additional expenses are below organizational thresholds for materiality. Beyond cost-benefit considerations, however, there are

> *definitely positive and negative incentives with ERM that must be managed. For instance, some risk owners may push their risks to the upper right quadrant of the corporate risk map to make the case for resources, gaming the system. Others may seek to keep their risks below the radar. There will always be bias in the system, which we're working to eliminate*. (SDRM)

While the ERM program has prompted TerzoCo to "definitely think about upside and become aware of the downside-upside character of risk, there are not many higher-level examples of the upside. The majority of our effort is still to mitigate bad things" (SDRM). One example is the voice of ERM at the table, directly contributing to strategic growth decisions and the debate on whether to allocate capital to acquisitions or existing sources. Additionally, there are

> *micro examples of areas to take more risk. If we can understand, quantify and charge for risk, we should be able to do it. If you don't have an ERM mentality, you won't go there, but if you do, maybe you can. We have potential high-risk areas in our business universe where risk adverse decision makers may say 'avoid'. It's not about avoiding risk, but we do need to get paid for the exposure*. (SDRM)

QuartoCo. As ERM was introduced into QuartoCo, even during the pre-2010 period the question of value was prominent in the thinking of the firm's risk professionals:

> *We talked about that from the very, very start. We wanted to try to highlight the benefit. Like this is what the 'gimme' part of ERM is, so here's what you're going to get, there is some upside benefit. I still think it's hard. I still think that when you say, "risk management," most people do not see risk as an inherent up or down. They see risk as a down. And when you're talking about managing this down problem, that's all the down side of risk.* (DRMQ)

Consequently, attempts to associate ERM upside value to contributing to the specific growth prospects of the firm is a challenge:

> *Part of me recognizes that the company's been managing risk for a very, very long time. Before ERM was even born. And part of running the business is understanding how do you grow the top line, which is kind of the upside piece. I think at least from my experiences, the more natural conversation managing the downside. The upside is just not as natural to people. As part of the strategic business planning process, they talk about how they're going to launch new products and how they're going to have a new portfolio and this is going to grow the topline. But I just don't think it's quite as explicit. I've only found a few areas where people really talk about the upside. So for example, if you think about macro trends of urbanization, people going from rural to urban.* (DRMQ)

Another of these areas where upside value discussions between the ERM function and the business units have taken shape is the value of ERM to enhance preparedness:

> *The thing that's kind of interesting is, when you talk to the upside value, most people think it's kind of theoretical because they can't quite understand how to do it. They say, 'It sounds great, but what does it look like?' So what I have found is what people understand and resonates with them is the idea of being proactive. So to me that's the whole upside. If you're better positioned to respond better than your competitor, it'll make sense and you'll actually do better. So there's an example of a natural disaster where QuartoCo was [much better prepared than its competitor]. And my point is the proactive piece is where people see the value. So you know when we're talking to the business units or anybody, the idea of being more proactive and prepared makes sense.* (DERM)

A direct contribution of ERM to the upside of the organization is in its engagement with QuartoCo's extensive vendor management system, which enables the business to consider new, innovative partnerships:

> *There's a lot of little projects that we do that they want to be able to go to a little one- or two-person company, maybe working out of their den and get them to help us with creating a look and feel for this brand in this country. And with that, there's going to be some downside risk, but the upside is we got to take a risk on being maybe the early adopters of this new platform, but the upside is quite considerable for us. So I recognize there's risk, both up and down. They come to me as a part of the ERM group and say, 'I'm very interested in the upside benefits of taking this jump, but I want you to help me manage the downside of this very same risk.' So I think what I love about that is that they are being strategic and they are doing something that is new and different for the*

> *company, which inherently is a risk. And they want to do it because of the benefits and they are also aware of managing and mitigating risk.* (DRMQ)

From a strategic perspective at the executive level, the structured flow of information at QuartoCo from ERM "is adding a little bit more rigor behind the process, some consistency. Our role is to help them understand that there's a confidence that we've identified in top risks, and that helps inform their decisions" (DERM). Further,

> *they have a view toward what are the key risks for the company and how the key risk owners bubble up the severity and frequency, the heat maps of these risks. It's for them at their level to put two and two together to say, "I see this bubbling up here. I see this bubbling up here. I know our strategy is to go in this direction. This is something that we're going to have to put a work team against or focus on or think about more carefully before we actually set the strategy in motion.* (DRMQ)

V.4 Summary of Findings

The large organizations in this sample, PrimoU, SecondoCo, TerzoCo, and QuartoCo, have made long-term commitments to the implementation of enterprise risk management (ERM) processes. Their pursuit of ERM has been shown to follow a phased sequence of motivation, advancement, and assimilation adapted from a process maturity model designed specifically for ERM applications. Each firm, beyond the years of effort committed, has recognized ERM as being fully engrained into its organization processes. At PrimoU, "ERM is now built into the fabric" of the university. SecondoCo recognizes ERM to be "an established system of processes and structures", a program that is "rather deeply embedded". TerzoCo characterizes ERM as having become "culturally embedded in the organization as its 'circulatory system'", and that the company "couldn't take ERM out even if [it] wanted to". QuartoCo states that ERM is "pretty

well engrained in the culture", citing that a material change has taken place over time in the company with "25 percent of the board meetings 100 percent dedicated to ERM."

Given the significant diversity of opinions on what ERM is, for the purpose of this study ERM has been specified by an emerging consensus of three dimensions in the literature and not by any single academic or industry framework, definition or set of protocols. With respect to the alignment of ERM in PrimoU, SecondoCo, TerzoCo and QuartoCo to this model, each firm has embraced a holistic, integrated view of risk that spans the breadth and depth of their organizational structures. Risk horizons in these institutions have expanded to encompass the potential impact of both new and emerging risks, enabled by regular survey and profiling processes that demand periodic reassessments of the risks facing the business. Harmonization of the control- and also the value-based prospects conceptualized from the engagement in ERM, where the duality of downside and upside outcomes occurs, evidence the perpetuation and increased sophistication of downside control and mitigation mechanisms, and qualitatively expressed upside value propositions. In the final chapter I will synthesize the research findings and explicate the downside-upside duality through the lens of ambidexterity as a dynamic capability to answer the research question, *how do firms reconfigure assets, resources and capabilities in the operationalization of ERM to consider both the downside and upside of risk?*

VI CHAPTER VI: DISCUSSION AND CONTRIBUTIONS

Two cross-sectional analyses developed in this study provide a basis for understanding what ERM is and how it is operationalized in firms. In process terms, ERM is effectuated in a phased sequence originating with organizational motivation and progressing through advancement toward assimilation. Concomitantly, ERM aligns with a multidimensional model of silo integration and horizon expansion activities, which in turn enable concurrent downside risk mitigation and upside value generation. Having established conceptual and empirical foundations for ERM, I present in this chapter a discussion of three findings that directly address the research question: the nature of the downside-upside duality, specific resource reconfigurations that lead firms to develop ambidexterity, and the generation of dynamic capabilities resulting from ERM adoption. First, the downside risk control functions of the downside-upside duality, or loss mitigation, are widely understood and accepted by scholars and practitioners. In contrast, the upside component of ERM is described in numerous potentially beneficial outcomes, many of which are conceptually reasonable and may well be valid, but are yet empirically untested. I will specify boundaries for this upside, from which a value proposition for ERM can be asserted. In so doing, this aspect of the duality will become more clearly defined on the basis of the evidence developed in the instant research. Second, I identify from the case studies resource reconfigurations in the form of institutional head starts, the perpetuation of TRM core competencies, the economics of adoption, and functional leadership roles that enable ambidexterity in ERM to become operationalized. Lastly, the emergence of dynamic capabilities in the environments of the sample firms indicates a second upside value proposition, resulting from management activities to adopt, implement and sustain ERM. The chapter concludes with a presentation of the theoretical and practice contributions of this research.

VI.1 Downside-Upside Duality

At the heart of this study is a duality, not previously explored in the ERM literature: how firms configure resources in managing risk to control its downside effects while simultaneously pursuing upside value benefits. To examine the duality and attendant reconfiguration activities, however, we must first bring clarity to the upside value construct.

VI.2 Value of ERM

Conceptions of the value of ERM stretch across a wide spectrum of explicit expressions, inferential references, and risk exploitation-as-value-generation categories, touching upon virtually all areas of corporate activity. Improvements in firm performance (Gordon et al., 2009), governance (Nocco & Stolz, 2006), decision making (Arena et al., 2010), strategy (Simkins, 2008), operations (Arena et al., 2011), and capital structure (Hoyt & Libenberg, 2011) are among the many claims made by ERM proponents. For the purpose of this study, it is necessary to establish boundaries around these ERM-created value claims such that the upside becomes meaningful in the context of examining the management processes of large, non-financial institutions in actual settings. I have considered five factors in the course of examining the data for upside value: relativity, direction, industry, culture, range and quantification.

First, the upside contribution derived from ERM adoption should in relative terms be incrementally greater than what is being achieved through TRM means. That is, in the TRM mode such value is not and cannot be delivered in the execution of the firm's contemporaneous risk management activities (Rao & Marie, 2007). Absent this positive differential, ERM would simply become a replication strategy for TRM with a different name. Second, the direction of the value contribution is to the upside of risk. While acknowledging the ability of ERM to improve downside risk mitigation, the emerging consensus proposes that "ERM assumes that firms

should not just look at risk as a problem to mitigate; firms with a capability in managing a particular risk should seek competitive advantage from it" (Bromiley et al., 2014). Third, industry characteristics play a role in determining upside value. For example, banks and insurers have access to data and models that enable value quantification in ways that are not readily available to non-financial institutions. As such, non-financial institutions tend to be less oriented around measurable interpretations of the upside of risk. Fourth, the cultural orientation of management is a factor in the determination of value categorization. Mikes (2009) recognizes differences in managerial attitudes and philosophies that shape "calculative cultures", in which either support or skepticism toward quantitatively directed ERM processes is evident. As a result, divergent upside value profiles will likely be generated. Lastly, both quantitative and qualitative descriptions of upside value are recognized in the literature, ranging from broadly stated contributions to better-informed decision making to detailed measurements of positive movement in share price. Thus, the lack of quantification does not preclude the attribution of value to ERM activities.

Empirical evidence developed in this research indicates that upside value from ERM beyond better downside control is recognized by the four organizations, but elusive: it is difficult for risk professionals to define and measure. Guided by the boundaries set forth, I have identified from the data a nuanced, upside value proposition of ERM that may be expressed as:

> *UVP_1: ERM upside in the assimilation phase manifests as a raised level of risk discourse throughout the firm, effectuated by enhanced management communication networks that were not available prior to the adoption of ERM.*

The currency flowing across these ERM enabled communication networks is risk data, information and intelligence, of frequency, formality, complexity, transparency, and quality not

possible in the pre-ERM state. This new standard of a robust dialog is accomplished as holistic, and horizon adaptations are operationalized and communication paths between horizontal and vertical structures are originated and refined. In each of the instant cases, advancing the socialization aspects of risk management through long-term ERM assimilation of the elements of the consensus model was noted as being significantly value enhancing. Risk professionals at SecondoCo had concerns regarding an organizational reluctance toward risk information sharing and created a risk profile process to overcome this challenge that became the basis for its ERM program. The DRM at SecondoCo links holistic integration to upside value, made possible by a willingness to conduct ERM with wide managerial inclusion and the promotion of a general culture of risk awareness that facilities the speed and effectiveness of risk communications. QuartoCo created a cross-functional, multinational approach to allow risk information to flow freely around the company in multiple directions. These reconfigurations enable the proactivity and preparedness to enhance competitive responses in the market that the DERM acknowledges as being fundamental to upside value. TerzoCo advocates that ERM "begins with a conversation", placing the value of the organizational risk discourse at the center of its ERM activities. The firm's ERM program systematically consumes and distributes information from all parts of the organization in support of an open, detailed risk conversation. PrimoU encourages skip-level reporting of its RMPOs to the ERM executive committee, which fosters a climate of ownership, transparency and accountability. Its ERM program is founded on a statement recognizing the potentially positive attributes of risk, a principle that shaped the evolution of the tone of risk conversations throughout the university.

While a more sophisticated risk discourse is evidentially an upside value proposition, the data also suggests that the relationship between downside and upside is asymmetrical in large

firms with 10 or more years of assimilation history of ERM adoption. That is, in the ERM mode, organizational knowledge of and energy expended toward control and mitigation of risk tends to be greater than that which is directed toward new prospects for value accretion exceeding the improvements in the quality of the risk discourse. There are several potential explanations for this phenomenon.

When firms are initially motivated to consider ERM, they do not seem to begin with defined expectations of possible upside ERM value propositions, although a general awareness of such advantages exits as was the case with SecondoCo and QuartoCo. Neither do companies configure resources to achieve directly particular downside-upside harmonization ends nor do they diminish existing downside control efforts. As the motivation-advancement-assimilation process evolves, evidence indicates that resources are reconfigured to achieve holistic integration and horizon expansion through a hybridized combination of structural, contextual and leadership ambidexterity. Holistic integration of risk silos occurs along horizontal paths to link functional areas, and vertically from the field level upward to executive management and boards of directors. These processes involve the creation of new organizational structural subunits and place risk ownership contextual demands upon risk professionals to manage an emerging downside-upside duality, rather than one that has been established *a priori*. Risk horizons limited by TRM path dependencies focused on existing risk categories in the organizations became increasingly forward-looking through a wider aperture to encompass emerging, typically uninsurable, operational and strategic risks, opening the door for future discussions of upside possibilities.

Harmonization of the downside-upside duality shared several characteristics across the sample. First, the downside control and mitigation features of TRM continued a parallel path to

ERM adoption activities. In the case of SecondoCo, they were allowed to expand in a search for potential risk solutions as the ERM domain became more complex holistically and larger in scope as the risk horizon expanded. Next, despite the length of ERM experience of PrimoU SecondoCo, TerzoCo and QuartoCo, and the structural and contextual changes that have taken place in these firms, the upside value component of ERM is a construct not defined quantitatively. Measures of value ERM value were not being calculated by these institutions and given the lack of recognized incremental costs to implement ERM, nor were cost-benefit analyses of the effectiveness of ERM. Quantification of upside value in non-financial institutions is a challenge, to the point of being characterized as the "holy grail" for SecondoCo and TerzoCo. This research has stepped back from the market-level attempts at quantitative associations of ERM to firm performance, to instead focus on the management effects of ERM. In adopting an e-r-M approach, I have identified several resource deficiencies that may contribute to these quantification difficulties. First, voluntarily imposed constraints in the adoption of ERM were found in each sample firm. Little in the way of investment in external sources of ERM competencies was brought into the ERM effort, which are management decisions with positive and negative consequences. On the plus side, the risk professionals responsible for embedding ERM, as insiders, were culturally sensitized and highly knowledgeable about the firm's operational processes. In a negative frame, the lack of external perspectives on how to envision and articulate the upside, or to challenge conventional thinking or organizational biases around the subject of risk from may be factors in the lagging articulations of value.

Second, ERM practices have the ability to generate large quantities of risk data, far in excess of what is being produced by TRM sources in its support of annual insurance transaction

cycles. Various types of ERM pre-and post-loss risk analyses, including heat maps, profiling, and risk appetite, tolerance and threshold calculations play a crucial role in providing deeper insight into the individual risks and the overall risk profile of the firm. However, the data sources linking these analyses with activities and results are not without gaps. One example is uncollected data. For example, a popular ERM value claim is its contribution to improved strategic decision-making (Elliott, 2013, p. 1.23; Segal, 2011, p. 226). This claim may well be true in part or total. To quantify, or to properly qualify such a contribution, we would need insight into how ERM influences, impacts or directs the decision process, to what extent and to what end. Absent these difficult-to-track data, misleading or false attribution in favor of the value ERM become concerns. Another example is that of uncollectable data, which arises from the counterfactual nature of the effect of management control processes (Baron, 1999; Epstude & Roese, 2008). Conceptually, the imposition of an ERM program could prevent a loss from happening—control the downside—in a way that TRM would not have had the organizational reach to do so. Alternatively, ERM could facilitate entry into a new market —contribute to the upside—without that the expansion would not have moved forward. For example, newly established ERM communication paths can enable the timely and efficient movement of holistic risk information to inform strategic decision makers and reduce uncertainty. In both cases, the credit may indeed be valid, but virtually impossible to prove. The MERBA at SecondoCo expressly recognized this issue.

Despite the years of work and effort extended to embed ERM into PrimoU, SecondoCo, TerzoCo, and QuartoCo, the relationship of holistic and horizon reconfiguration activities to harmonization of the duality appear fairly inelastic. These firms have managed a deep assimilation of ERM into their environments by integrating silos and extending horizons but

without creating equally well developed upside value constructs. Nonetheless, they continue to have aspirations to do so, despite the front-end definitional and back-end tracking deficiencies that create limitations on expressing upside value propositions. Thus, of the three dimensions composing the emerging consensus model (Bromiley et al., 2014), the holistic and horizon elements have been demonstrably actionable, and downside-upside harmonization is an outcome derived from those actions.

I now turn to an examination of several resource reconfigurations in the ERM adoption process that facilitate ambidexterity.

VI.3 Resource Reconfiguration and Ambidexterity

VI.3.1 Head starts.

Several of the motivations for adopting ERM identified in the course of this research are among those generally referenced in the literature, such as major events (Paté-Cornell, 2012), in-position risk managers (RIMS, 2013), rating agency requirements (RIMS, 2013) and senior management influences (Meulbroek, 2002). Upon closer analysis, we find that three of the four companies in this study had developed sophisticated practices outside of the TRM domain that accelerated the initial acceptance of ERM into their firms. Clinical risk managers at PrimoU were, for the most part, conducting ERM without being aware of the industry taxonomy (Fraser & Simkins, 2005; Rao & Marie, 2007). They engaged in sophisticated risk management behaviors and processes, which the non-healthcare divisions of the university were later able to emulate. At SecondoCo, the dedicated, pre-ERM quantitative analysis resources in the energy trading and marketing area became part of the core of the firm's new centralized, corporate ERM group. This shift provided the ERM function with a desirable technical capability and introduced innovative thinking about risk beyond that which was resident in the existing TRM area.

Integrated risk financing competency at QuartoCo contributed greatly to preparing the climate in the company for ERM. It established a replicable model of what "good" looked like in risk management, from which an ERM professional was able to advance the ERM effort and begin to benchmark quality. ERM in TerzoCo and QuartoCo had its origins in their respective corporate security groups, the visibility of which facilitated global reach and operational access with a robust management imprimatur. Leveraging these institutional head starts on ERM adoption illustrates how management capitalizes on reconfiguring existing resources to promote ERM through internal channels and to activate ambidexterity.

VI.3.2 TRM perpetuation.

PrimoU, SecondoCo, TerzoCo, and QuartoCo began their journeys to ERM with well-defined legacy TRM departments in place, each of which retained its identity, staffing and existing roles and responsibilities as ERM moved forward. At PrimoU, the incumbent TRM director was involved with ERM from the start and eventually became the titular CRO, but also continued to maintain a distinct TRM identity as well. ERM at SecondoCo was developed outside of the TRM domain, which continued to operate as usual, through the reassignment of a professional from the treasury department with experience in energy trading risk control. At TerzoCo, the TRM director was a powerful influence in the initiation of the company's ERM efforts, and later spun off the function from TRM to facilitate close alignment with the company's audit and compliance groups. QuartoCo's TRM department had developed in its integrated risk financing program a transactional framework that approximated ERM, but this unit did not assume the responsibility for launching and directing ERM. Instead, ERM moved forward with the introduction of a full-time professional who came with a major acquisition. In each case, a new structural unit or units became necessary to introduce ERM into the organizational mix. Existing

downside control and mitigation focused TRM departments, with their insurance path dependencies and core competencies (Dionne, 2013; O'Reilly & Tushman, 2008; Rao & Marie, 2007) remained intact, but no longer dominated the corporate risk management agenda. ERM configurations assumed the primary risk management leadership position in the eyes of board members and executives.

VI.3.3 Economics of ERM.

During the resource structural reconfiguration process the economics of ERM adoption became apparent, which is a management consideration of ERM research having received little attention. Each company made minimal, if any, direct investments in major expense categories such as additional staffing or external consulting. From an information technology standpoint, early expenditures made by QuartoCo in the pre-2010 period were not supported. The use and cost of risk management software in the assimilation phase of the other firms was not observed. Scale advantages played a role to expand risk management utility, since these large organizations were able to house specialized, potentially fungible risk management resources to respond to changes in demand caused by environmental shifts. Nonetheless, the lack of identifiable incremental cost elements is an unexpected finding and raises questions of clarification in response to research suggesting that implementing an ERM program is not costless (Pagach & Warr, 2010b). This particular study did not explore the economics of ERM issue in its sample of mostly utilities and financial institutions and there may be industry effects differentiating financial and non-financial firms. Decisions to leverage existing assets, which included the serendipitous arrival of an experienced ERM professional at QuartoCo, and the maintenance of overall risk management budget neutrality through resource shifting were deliberately made by senior managers at each of the firms. Indirect costs resulting from the organizational friction of change management,

exemplified by process and systems integration activity, increases in meeting frequency and internal reporting, additional travel to roll out and sustain interest in ERM at the field level, executives' and board members' oversight, and opportunity costs for those that took on new ERM responsibilities part-time are not being tracked, and the materiality of such costs is unknown. This lack of emphasis on financial measurement, however, may have enabled an organic movement toward ERM to take place, unencumbered by demands to justify ERM adoption financially. Nonetheless, either on a gross cost or a direct cost only basis, cost-benefit analyses of ERM are difficult to calculate and were not attempted by the firms in this research. In summary, ERM has indeed been an organic undertaking, evidencing low levels of consultant propulsion and favoring internal asset reassignments over the acquisition of external resources.

VI.3.4 Functional leadership.

A sub-stream of ERM literature (Aabo et al., 2005; Beasley et al., 2008; Libenberg & Hoyt, 2003; Mikes, 2008; Pagach & Warr, 2010a) focuses on the emergence and contributions of chief risk officers (CRO) with the advent of ERM. Functional leadership of ERM programs varied across the sample. Two of the companies in this study appointed CROs: PrimoU granted the title to the incumbent TRM director, although at the same level of the organizational hierarchy, and the CFO at SecondoCo simply assumed the additional title. Neither TerzoCo nor QuartoCo appointed CROs, instead choosing to direct ERM from management positions in which ultimate authority and responsibility for firm-wide risk management activities and performance was not concentrated. The relative lack of status of the CRO position in this group of cases may reflect its non-financial institution composition, as banks and insurers have appeared more likely to invest in new, full-time professionals upon which to focus institutional risk ownership. None of the

firms staffed their ERM leadership roles externally but drew on existing internal resources assigned to revised organizational structures to accomplish this task.

VI.3.5 Ambidexterity.

By progressing from motivation through advancement and then to states of assimilation, the large institutions in this study underwent substantial modifications in their respective environments to situate ERM. Changes in structural boundaries directly affected the risk management domain, creating parallel TRM-ERM functions where full-time risk professionals reside. Further, the operational areas of the companies were impacted, as they were adjusted to include non-exclusively dedicated managers of risk, such as the RMPOs at PrimoU. As a result, ownership of risk shifted from the dispersion characteristic of the TRM mode to a more sharply defined sense of individual accountability. These reconfiguration mechanics introduced new ERM subunits—departments, working groups, committees and councils that did not exist in the pre-ERM era, and were accomplished horizontally by connecting risk ownership across business units, and vertically with hierarchical linkage of progressively larger scopes of management oversight and responsibility. In so doing, ERM became operationalized and positioned to do that which TRM on its own does not accomplish. This alteration of organizational architecture to enable the simultaneous pursuit of downside risk control and upside value propositions points toward the emergence of structural ambidexterity (Duncan, 1976; Bushe & Shani, 1991; Goldstein, 1985; O'Reilly & Tushman, 2008).

Individual capabilities were stretched both within the risk management professional asset base of PrimoU, SecondoCo, TerzoCo, and QuartoCo, as well as in the operational areas of these firms. This stretching from an operational viewpoint occurred as ownership of newly expanded risk management responsibilities migrated to business unit managers. ERM adoption demands

new skills (Blaskovitch & Taylor, 2011), and the skills to effectuate it were drawn from and applied across the length and breadth of the organizations. As the TRM and ERM professionals and operational managers participated in firm-wide ERM implementation efforts, contextual ambidexterity was demonstrated in the processes and systems that guided the risk management activities of these individuals (Ghoshal & Bartlett, 1994; Gibson & Birkinshaw, 2004). Further, support from the highest levels of management, including executive management and the board of directors, is necessary to promote and sustain interest in ambidexterity. Lubatkin et al. (2006) identify these distinct contributions as leadership ambidexterity, a related, yet independent antecedent from structural and contextual ambidexterity. In each of the cases examined hereunder, the boards of directors were regularly engaged in the conduct of ERM in their respective firms, as was executive management.

Based on the empirical data developed in this study, the role of ambidexterity in ERM is multifaceted and the forms, interdependent. Absent either the structural ambidexterity necessary to reconfigure horizontal and vertical organizational units, or the contextual ambidexterity that enables the execution of new risk management principles, activities and ownership, or the leadership ambidexterity committed to sustaining ERM processes from the highest levels of management, there would be a low probability of ERM progressing to a state of duality-based assimilation. This combination of forms, or hybridized ambidexterity, is an adaptation of the temporal switching between structural and contextual ambidexterity noted by O'Reilly and Tushman (2013). In the instant cases, structure, context and leadership ambidexterity elements coexist over time rather than shift back and forth. Further, the hybridization of the forms appears to be a nested property (Birkinshaw & Gupta, 2013). It occurs at multiple organizational levels simultaneously: from field-level operational managers entrusted with risk ownership and

reporting responsibilities and upwards through risk committees and councils, into the C-suite and ultimately the board of directors. To the issue of how this nested, hybridized ambidexterity is operationalized (Birkinshaw & Gupta, 2013), the evidence from an e-r-M point of view indicates that the downside and upside are more likely balanced, with TRM and ERM coexisting, but not competing, rather than traded off, as in the manner of a conceptual contra liability account. For example, each of the firms internally reconfigured resources to adopt ERM and also decided to continue with full TRM capabilities without regard to offsetting one approach against the other. Also, this downside-upside duality appears to be simply managed rather than reconciled, as no efforts to calculate cost-benefit analyses were observed in any of the firms. Leverage of existing resources plays a significant role in the operationalization process, with ERM having a strong organic character independent of proof of value measurements.

VI.4 Dynamic Capabilities

Over the years of building and maintaining sophisticated TRM departments, PrimoU, SecondoCo, TerzoCo and QuartoCo developed strong sets of core competencies (O'Reilly & Tushman, 2008) in the conduct of their legacy risk management functions. These operational (Zollo & Winter, 2002) or zero-level capabilities (Winter, 2003) are routines that enable the firms to compete in contemporaneous environments (Leonard-Barton, 1992). In the case of TRM, core competencies are those that serve to reduce financial uncertainty with respect to insurable loss exposures, through risk financing schemes and risk control activities. Desired outcomes from these capabilities focus on maximizing cost of risk efficiency and minimizing failures to detect, finance and recover from losses. Maintaining such core competencies depends upon routinized processes that become firmly rooted to enhance operational predictability. With this embedment also comes certain path dependencies, most notably the strong association, and,

in fact, the perceived limitation of the corporate risk management function to the administration of commercial insurance programs.

Each of the sample companies demonstrated long-term, ongoing resource commitments to preserving these core competencies. However, such commitments did not preclude them from developing new risk management routines at a higher organizational level (Winter, 2003; Zollo, 2003) that enabled the firms to construct, interlace and reassemble competencies to respond to changing environmental conditions (Teece et al., 1997). These distinct activities, or dynamic capabilities, carried out by PrimoU, SecondoCo, TerzoCo, and QuartoCo are descriptive of the locus of change from TRM to the adoption and implementation of ERM. Recognizing the similarities between the two management processes, Nair et al. (2013) argue that the coinciding properties of ERM and dynamic capabilities establish ERM as a dynamic capability. Utilizing the ambidexterity lens of this research to extend the authors' work, I propose a second ERM upside value proposition:

> *UVP_2: dynamic capabilities are generated through hybridized ambidexterity in the long-term assimilation of ERM as firms encounter a downside-upside duality in their environments.*

One of the most significant attributes of ERM in comparison to TRM is that based on empirical data, even after ten or more years of engagement it is inaccurate to characterize ERM as a core competency. There are several factors supporting the alignment of ERM with dynamic capabilities. First, ERM at PrimoU, SecondoCo, TerzoCo, and QuartoCo would not be sustainable without ongoing high-level support, whereas TRM on its own has been and continues to be managed effectively without such involvement. Second, ERM adoption shifted the cultural perception, and with it, the organizational practice of risk management away from the path

dependencies of insurance purchasing and downside loss mitigation. Lesser importance is not attributed to these two functions but rather the engagement in ERM underscores the difference between risk-based core competencies and dynamic capabilities. Third, as ERM reshapes the firms' risk horizons, they become more able to sense opportunities and threats to resolve concerns over unknown hazards. Fourth, executive managers, with the benefit of new, holistic communication networks carrying more detailed risk information are better equipped to make decisions to quickly seize opportunities and reconfigure assets (O'Reilly & Tushman, 2008) in response to turbulence in competitive environments. Lastly, the relationships among ERM adoption, the downside-upside duality, ambidexterity and dynamic capabilities are unique to the ERM domain and are effectuated when firms seek mobilize assets for gain beyond that which is produced by core competencies.

In summary, large firms having been motivated to adopt ERM and advance its implementation to a state of assimilation address the existence of a downside-upside duality in their operating environments. In this duality, legacy downside risk controls coalesce with upside value benefits. Empirical evidence indicates that firms reconfigure their resources through a hybridization of structural, contextual and leadership ambidexterity that holistically integrates risks and widens the boundaries of the risk horizon. Further, as this ambidexterity takes place, core competencies are preserved but path dependencies based upon legacy risk management limitations are overcome. Upside value propositions emerge in the raising of the level of the risk discourse in organizations, and in the generation of dynamic capabilities that enable firms to sense, seize and reconfigure resources for competitive advantage.

VI.5 Contributions

Despite the breadth of its body of literature, ERM has rarely seen the application of theories of collective action explicate its impact on firms. Stepping back from the variance analyses that seek to quantify the relationship between ERM and firm performance, I have responded to calls in the literature to unpack in greater detail the ERM mix (Mikes & Kaplan, 2014). This is the first study to employ a combination of a phased ERM adoption approach based upon capability maturity models (Van Looy et al., 2013) and the operationalization of an emerging consensus definition of ERM (Bromiley et al., 2014). ERM produces effects that can be characterized as a downside-upside duality of risk management. Substituting this duality as a proxy for exploitation and exploration (Junni et al., 2013), this research, also for the first time, uses ambidexterity as a dynamic capability to explore the operationalization of ERM in firms. Empirical evidence indicates that ambidexterity is achieved through the hybridization of structural, contextual and leadership modes (O'Reilly & Tushman, 2013) as resources are reconfigured and capabilities stretched to establish ERM, which is balanced and managed as opposed to traded off and reconciled. This finding responds to demands for a more transparent understanding of the operationalization of ambidexterity (Birkinshaw & Gupta, 2013). Further, economic leverage of internal resources appears to have a significant role in establishing ambidexterity. Extending the research argument that ERM constitutes a dynamic capability (Nair et al., 2013), I propose that the risk management ambidexterity is effectuated in firms, dynamic capabilities result, enabling organizations to sense, seize and reconfigure resources to respond to changes in their environments.

As firms seek to manage effectively the fit, form and function of ERM, this study offers guidance from the long-term experiences of large, committed organizations and senior risk

practitioners as to how firms configure to achieve the control and value propositions of ERM simultaneously. Early stage adopters will benefit from understanding the complexities of quantifying the upside, and become familiar with several key value-producing activities supported by empirical evidence. This research will inform managers on the challenges to measuring the cost-benefit of ERM adoption, and the importance of leverage, both economic and capability, in the embedment of ERM in organizations.

The findings of this research also assist in clarifying breaks in the value chain of ERM. These discontinuities originate from inadequate definitions and unclear expectations of the upside, unsuccessful attempts to conceptualize and quantify value as firms advance and assimilate ERM, and several missing value-based data streams. The combination of these factors introduce endogeneity into the system, create difficulties in testing and measuring the efficacy of ERM, and negatively impact the validity of attempts to quantify an ERM to firm performance relationship.

VII CHAPTER VII: CONCLUDING REMARKS

The logic of ERM implicit in its acronym that firms should seek to manage risks across the breadth and depth of their enterprises, has rarely been challenged in the literature and finds enthusiastic support in the cottage industry of ERM practitioners and consultants. Below this threshold of near universal conceptual acceptance, however, still exist fundamental questions: What exactly is ERM? How do firms practice it? What is the real organizational value achieved by engaging in it? In this study, I have attempted to deal with the fundamentals from a different direction than the general flow of ERM research, and examined companies whose professionals have spent many years in the trenches of their organizations doing the hard work of changing the people and processes that face risk. Evidence indicates that on one level, the work has paid off. We observe that risk management in firms can be advanced from its traditional, functionally discrete insurance-, loss mitigation- and treasury-based roots to a state where its presence is felt in new ways on the entirety of a business. Variations in how the advancement occurs are considerable. Even given an informed, emerging consensus of ERM, to paraphrase a popular saying, "When you've seen ERM at one organization, you've seen ERM at one organization." I hope that by explicating a consensus view of ERM through ambidexterity and dynamic capabilities that the management processes to embed ERM have become clearer and motivate additional research using other theories of collective action.

On another level, there is still much work to do. ERM may be declared a success from one standpoint, but still fall short of its promise from another. Imbalances in downside-upside duality, and moreover, the general agreement that ERM produces value but the lack of rigor in proving it may be deleterious to the sustainment of ERM. Ongoing investment constraints, organizational fatigue, and diminishing returns are operational risks to any management process

that is ultimately unable to articulate clearly its worth. A somewhat paradoxical situation exists: the formidable quantification tools brought to bear on downside risk assessment have done little to improve measurements of upside value. Perhaps as the field of predictive analytics utilizing big data continues to evolve counterfactual and decision-making modeling can be developed, creating proxies and virtual peers against which the actual ERM experiences of firms can be compared and evaluated. Research into filling in the data gaps, admittedly a difficult task, may be part of the solution to overcoming the "galloping endogeneity" (C. Ciccotello, personal communication, March 12, 2015) that affects the relationship between ERM and firm performance.

VII.1 Limitations

There are several limitations in this study that may provide for future research opportunities. First, though interviews were conducted at multiple firms, the responses from the individual risk professionals at any given firm may be biased in some way that would be mitigated in a single case study with a larger number of subjects having more diverse recollections. Second, the research will involve retrospective data, which again could be subject to bias, filtering or faulty memory. Longitudinal case studies using the same theoretical framework, but having access to real-time observational data from multiple subjects may yield a higher degree of reliability. Third, the heterogeneous sample of non-financial industry public companies chosen may produce findings that differ from other firms due primarily to capital structure, size or specific industry sector. Fourth, the focus of this research is on organizations that have made commitments to ERM adoption and have had a measure of success with the approach. What of firms with negative experiences? Those companies having decided against moving forward with ERM as a result of their due diligence processes, or perhaps have abandoned efforts to sustain the practice

of ERM in the advancement phase because of a lack of perceived value or an inability to reconfigure resources would provide an interesting, contrary perspective for future studies. Fifth, leverage of existing assets played a key role in how ERM moved forward on a staffing and budget neutral basis. Equally large firms choosing to use external consultants or invest in ERM talent may have different outcomes, particularly in dealing with questions of value to justify the added expense. Further, the speed of the adoption process may differ. Between-case comparisons of organic and ERM capability seeking groups will provide a finer grained picture of changes in the economics of ERM affect value realization and if different economics impact the time required for assimilation.

Lastly, while not a subject of this study, the association of culture with ERM has appeared in the literature (Cooper et al., 2013; Kimbrough & Componation, 2009) and was observed in the data. Some of the adoption leaders of ERM felt it important to match the ERM effort to the existing cultural priorities of the organization. Nonetheless, ERM represents a break from traditional notions of risk management and demands cultural change from emphasis on the local to embracing the global. Future research into the cultural dynamics of ERM, particularly in the ways that culture either enhances or impedes assimilation or hybridized ambidexterity would introduce new viewpoints on the upside value proposition of ERM.

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APPENDICES

Appendix A: Practitioner Surveys

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Appendix B: Sample Interview Protocol

Sample Interview Protocol

Study #H15157 | Interview #00X | Day and date, 2015

- Welcome and introductions
  - Signed IC form
  - Record your views, opinions, perspectives, insights, experiences

- General Statement

The subject of this research project is that of risk management in large organizations. This study will examine a small sample of institutions that have transitioned from a traditional approach to managing risk, or TRM, to the more sophisticated approach of enterprise risk management, or ERM. Each of these firms is considered to be experienced practitioners of ERM, having demonstrated multi-year commitments to embedding ERM into their respective operations.

- Purpose Statement

In navigating from TRM to ERM, firms must reconfigure their assets, resources and capabilities to align with the organizational goals that motivate the adoption and sustainment of ERM. The purpose of this study is to explore how these reconfigurations are accomplished in light of specific management theories of collective action.

- Interview topical flow to shape exploration

Demographic information

From TRM to ERM: Motivation, advancement, and assimilation

The emerging consensus: holistic, horizon, harmonization

Duality: Downside control – upside value

Ambidexterity: structural, contextual, leadership

Dynamic capabilities: level of competency

- Interview questions

1. Personal profile – professional level-set
    a. Years of experience in RM
    b. Years with current organization
    c. Role, responsibility, reporting
    d. Size of staff and expense budget
    e. Estimated cost-of-risk for organization

2. Describe the pre-ERM environment at your organization to establish historical context
    a. RM 7-S
        i. Strategy, structure, systems, skills, staff, style, risk philosophy

3. When you reflect back on the initial MOTIVATION for adopting ERM,
    a. When
    b. Who/what drove the decision
    c. Goals and expectations
    d. Vision of RM contributing to broader organizational strategy or performance?
    e. General acceptance or resistance?

4. As ERM began to ADVANCE, how did changes to RM-specific assets, resources and capabilities take place [keep in mind structural/contextual/leadership ambidexterity]?
    a. Roles, responsibilities, reporting
    b. Investment
    c. Training
    d. Hiring
    e. New skill acquisition
    f. Technology

5. In its current state, describe the level of ASSIMILATION of ERM in the organization
    a. Program, initiative, or "way of doing business"
    b. Have expectations, goals and/or vision changed? If so, how?

c. Annual budget/funding for ERM

6. What role, if any, do basic economic considerations play in the ERM process?
    a. Use of incentives
    b. Are they linked to risk ownership?
    c. Is the ERM program subject to cost/benefit analysis?
    d. Rewards/penalties

7. There are many different definitions, frameworks, models and approaches to ERM. Examples include COSO and ISO31000. Did your organization adopt or adapt any of them?
    a. If so, why; if not, why not?
    b. Level of influence or impact

8. The ERM literature is very broad, and addressed in numerous arenas. The evidence suggests that there is an emerging consensus of three foundational elements that are core to ERM. Please asses how each applies (or not) to your organization
    a. 1st - Holistic - integration of risk silos
        i. balance of quantitative and qualitative culture? [Mikes' "calculative culture"]
    b. 2nd - Horizon - existing and emerging risks
        i. sense, seize, reconfigure

9. 3rd element – Harmonization – recognizing the "downside" and "upside" of risk, and by extension, RM
    a. Does this construct resonate with you in concept?
        i. How would you define downside [control and compliance]?
        ii. How would you define upside [value and performance]?
    b. Do these align with your organizational approach to ERM?
        i. If so, how
        ii. if not, was it not a factor or considered and rejected?
    c. How would you assess the organizational effort allocated to downside and upside?
    d. Are there measures of value or contributions to firm performance recognized?
    e. Would contributions to strategy, strategic planning or SDM fit a value definition?

10. Revisit the current mode of operationalization of ERM in your organization, in light of any value contributions, e.g., strategy, strategic planning, SDM, FP beyond risk control/mitigation; are they driven primarily by:
    a. [structural]: committees, departments
    b. [contextual]: leveraged roles and responsibilities
    c. [leadership]: team at the top

11. At the current level of ERM practice, how do risk management routines and processes differ from the pre-ERM era?
    a. Have the previous, core processes been expanded, abandoned, replaced, morphed, e.g., traditional loss control/risk financing/claims administration cycle
    b. Do the new processes better position the organization for competitiveness and survival?
    c. The counterfactual issue: Absent ERM, would the organization less viable/competitive/successful?

12. What are your sustainment plans for the future of ERM?
    a. "doing things better" or "doing better things"?
    b. does ERM become de-identified to the point that assimilation is complete, and it no longer exists as a discrete, identifiable function?

13. Is there any additional information you would like to share about ERM that might provide further insight, or areas that should be addressed?

14. Would it be possible to obtain a current ERM deployment chart, and copies of any relevant internal communications that would provide additional details?

15. Do you have any final comments? Thank you very much for your time and perspectives on ERM.

Figure 1 PrimoU

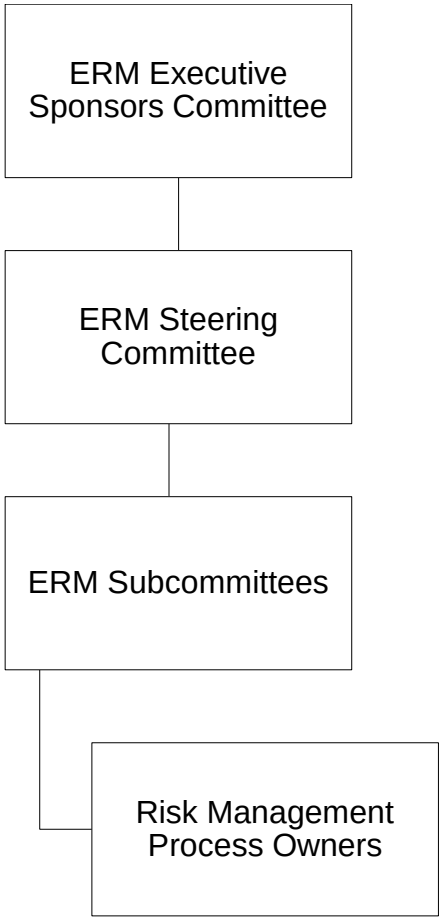

Figure 2 SecondoCo

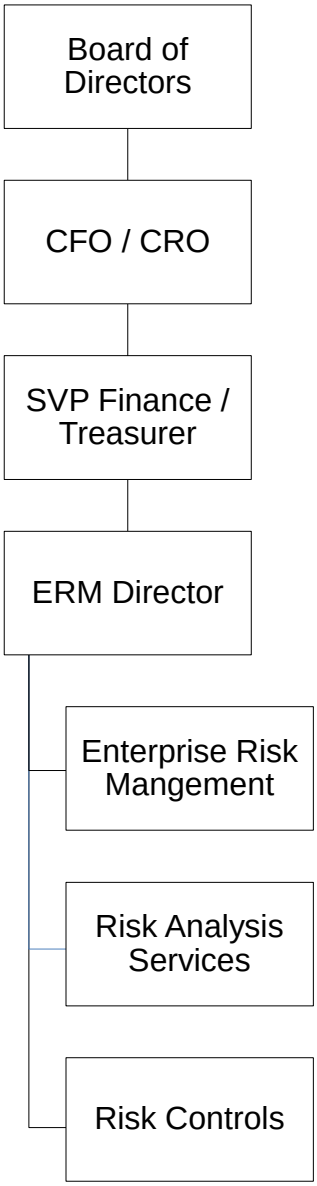

Figure 3 TerzoCo

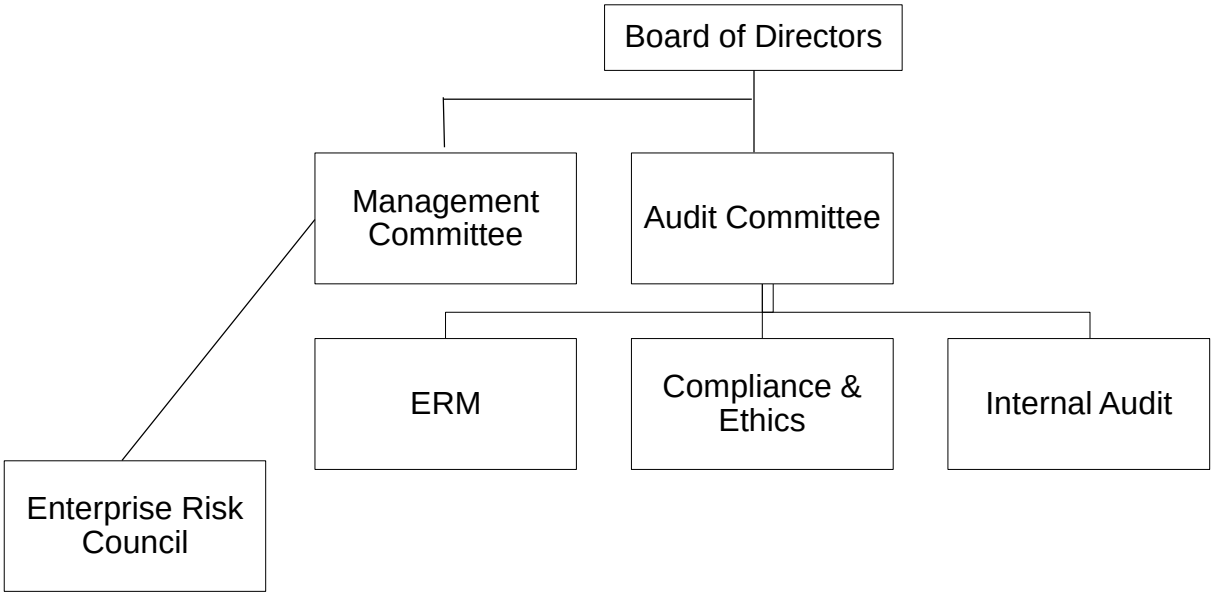

Figure 4 QuartoCo