2017

Enterprise Risk Management in Responsible Financial Reporting

Robin B. Ewers
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Robin Ewers

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. John Schmidt, Committee Chairperson, Psychology Faculty
Dr. Donna DiMatteo-Gibson, Committee Member, Psychology Faculty
Dr. Thomas Edman, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Enterprise Risk Management in Responsible Financial Reporting

by

Robin B. Ewers, CPA

BS, Stevenson University, 1993

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

College of Social and Behavioral Sciences

Walden University

November 2017

Abstract

Despite regulatory guidelines, unreliable financial reporting exists in organizations, creating undue financial risk-harm for their stakeholders. Normal accident theory (NAT) identifies factors in highly complex integrated systems that can have unexpected, undetected, and uncorrected system failures. High-reliability organization (HRO) theory constructs promote reliability in complex, integrated systems prone to NAT factors. Enterprise risk management (ERM) integrates NAT factors and HRO constructs under a holistic framework to achieve organizational goals and mitigate the potential for stakeholder risk-harm. Literature on how HRO constructs promote ERM in responsible integrated financial systems has been limited. The purpose of this qualitative, grounded theory study was to use HRO constructs to identify and define the psychological factors involved in the effective ERM of responsible organizational financial reporting. Standardized, open-ended interviews were used to collect inductive data from a purposeful sample of 13 reporting agents stratifying different positions in organizations that have maintained consistent operational success while attenuating stakeholder risk-harm. The data were interpreted via transcription, and subsequent iterative open, axial, and narrative coding. Results showed that elements of culture and leadership found in the HRO construct of disaster foresightedness and mitigation fostered an internal environment of successful enterprise reporting risk management to ethically achieve organizational goals and abate third-party stakeholder risk-harm. The findings will contribute to positive social change by suggesting an approach for organizations to optimize strategic objectives while minimizing stakeholders' financial risk-harm.

Enterprise Risk Management in Responsible Financial Reporting

by

Robin B. Ewers, CPA

BS, Stevenson University, 1993

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

College of Social and Behavioral Sciences

Walden University

November 2017

Dedication

I dedicate this work to God, who through Jesus Christ gives me peace that surpasses all understanding. To my best friend and husband, Craig, who may not always understand or agree with my crazy decisions, but has always supported me and kept me grounded. To my two sons, Kristopher and Kurtis, thank you for sharing me with my graduate work for the last 5 and a half years: Your office entertainment brightened my evenings more than once! I hope that I inspired you to know that you truly can do whatever you set your mind to; trust me, if I can, you can. Thank you to my amazing mother for exampling incredible strength, unwavering faith, and never-ending love, even when life throws massive curve balls. Thank you to my late father, whose core values of faith, love, and strong work ethic continue to inspire me years after his premature death.

Finally, I dedicate this work to my brother, Chris, whose terminal life decision was the catalyst for me to evaluate my purpose on Earth and pursue a higher education so that I might transform a negative life event into an opportunity to contribute to positive social change.

Acknowledgments

My scholarly gratitude goes to my ever-so-patient committee chair, Dr. John Schmidt. Your steady encouragement and commitment to my purpose were truly appreciated. Thanks also to Dr. Donna DiMatteo-Gibson, my committee member, and Dr. Tom Edman, my university research reviewer, who waited as I plodded along but were there to review and provide feedback at a moment's notice. I also want to give a special acknowledgment to fellow dissertation cohorts, Dr. Leslie Barrett, who endured this journey with me and was there to support me to the end, and Dr. Richard Himmer, who encouraged me from the first day of my first class until I finished.

My professional acknowledgments go to my colleagues and peers, who kindly endured this journey with me, including all the distractions and demands that came with it. Finally, I extend a big thank you to all who gave their valuable time to contribute to science via their participation in this study.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

Organizations possess competing fiscal, legal, ethical, and philanthropic responsibilities to produce their goals (Carroll, 1991). Stakeholders are collective others who have varied interests in the organizations (WebFinance, 2016) and can be affected by organizational leadership decisions (Carroll, 1991). Organizational efforts do not always lead to positive outcomes, causing stakeholders to incur undue risk (Reason, 1997). For example, the Enron scandal (McLean & Elkind, 2004) showed how irresponsible financial reporting adversely affected innocent third parties, despite the existence of measures to detect and mitigate risk.

The Challenger and Columbia space shuttle mishaps and the Exxon Valdez and British Petroleum oil spills are widely studied cases of high-performing organizations experiencing exceptionally negative outcomes because of improper risk identification and mitigation (Gill, Picou, & Ritchie, 2011; Graham et al., 2011; Harrald, Marcus, & Wallace, 1990; Vaughan, 1990, 2009). Catastrophic failures are events causing immediate physical, environmental, and fiscal harm, and they can have devastating long-term effects on organizations, their workforces, and even industry as a whole (Reason, 1997). Perrow (1999) studied what he termed *normal accidents* in high-risk industries like aerospace and petrochemical, and he deduced that the intensity of catastrophic failure is dependent upon the structural interactions of organizations' human and technical systems. Perrow added that applying the concept of normal accidents to financial systems was obvious.

Background

The Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2004) created the enterprise risk management (ERM) framework as a response to the increasing frequency of business failures in an attempt to reduce the harm from undue risk experienced by stakeholders. In this study, reduction of third-party risk-harm through responsible financial reporting was viewed through the lens of high-reliability organizations (HROs; K. H. Roberts, 1990), which are businesses defined by highly integrated technical operating systems described in normal accident theory (NAT; Perrow, 1999). Furthermore, the incubation of system failure events was examined through man-made disaster (MMD) theory (Turner & Pidgeon, 1997). Each theory is unique, yet the literature often has referred to the relationship of one or more of them when discussing risk management (LaPorte & Consolini, 1991; Leveson, Dulac, Marais, & Carroll, 2009; Müssig, 2009; Pidgeon & O'Leary, 2000; Ramanujam & Goodman, 2003; Scheytt, Soin, Sahlin-Andersson, & Power, 2006; Taylor-Gooby & Zinn, 2006; Weick, Sutcliffe, & Obstfeld, 2008).

Some organization systems and processes are so highly integrated and tightly coupled that one slight interruption can reverberate throughout the interdependent components (Perrow, 1999). Such interruptions can have catastrophic outcomes (Rijpma, 1997). The catastrophic impact of failures is dependent upon the degree of functional interaction and coupling within operating systems (Leveson et al., 2009). Perrow (1999) developed NAT for framing the complexities of organizational systems related to integrated risk. Perrow contended that industries with technological complexities and

high-risk operations create the potential for inevitable, or normal, accidents. As defined by NAT, an accident is a failure in one component of the system that causes disruption in the interaction with another component, resulting in a disruption or a discontinuation of organizational output (Perrow, 1999).

Perrow did not assert that failures occur frequently in such organizations; rather, he declared that they are likely to occur because of the high-risk nature of the technical systems in given industries, such as nuclear power, air transportation, and petrochemical plants. To achieve and maintain a high level of performance, organizations in these industries depend upon their tightly coupled and highly integrated technical systems working without interruption. Perrow suggested that although they are not predisposed to producing catastrophic physical outcomes, the highly integrated and tightly coupled nature of financial systems can provide a platform for disasters that result in significant financial harm or disaster.

Perrow (1999) developed an interaction/coupling chart to frame the potential for catastrophic events based upon variable levels of interaction ranging from complex to linear and coupling ranging from tight to loose (see Figure 1). It is widely used to interpret, analyze, and diagnose potential and actual risk (Weick, 2004). Organizations with highly complex, interactive, and tightly coupled integrated operations have no room or slack for trial and error for testing systems, processes, and procedures to ensure uninterrupted operations; therefore, they require a high degree of initial and continual reliability to promote safety and minimize risk (Schulman, 1993).

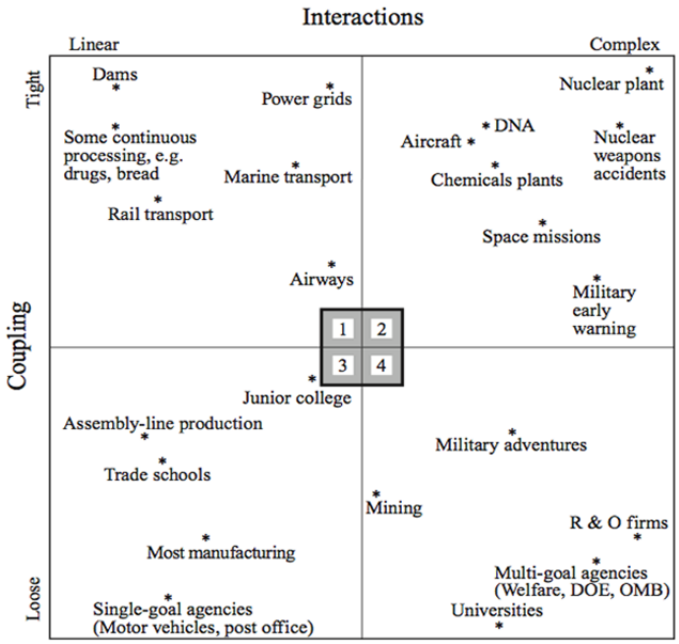


Figure 1. Interaction/Coupling chart. Reprinted from *Normal Accidents: Living with High Risk Technologies* (3rd ed., p. 97), by C. Perrow, 1999, Princeton, NJ: Princeton University Press. Copyright 1999 by Princeton University Press. Reprinted with permission.

Because unexpected, unrecognized, and uncorrected interruptions in highly integrated systems can produce catastrophic outcomes, the HRO theory was developed to define the need for "attempting to attain near failure free performance" (LaPorte & Consolini, 1991, p. 20). Organizations in industries subject to normal accidents are required to maintain a high level of operating reliability (Weick, 2004). Defined as HROs, these businesses attempt to attenuate and mitigate accidents by implementing stringent processes and practices to minimize the risk and maximize the reliability of their integrated systems (LaPorte & Consolini, 1991; Rijpma, 1997). Organizational financial systems also contain processes and procedures intended to minimize financial

risk and maximize reliable financial reporting (Nobles, Mattison, & Matsumura, 2014; Wild, 2013).

Despite the implementation of risk management measures intended to achieve the overarching goal of high levels of system-integrated reliability, human beings can contribute to the degradation of highly integrated systems, resulting in occasional MMDs (Pidgeon & O'Leary, 2000; Turner & Pidgeon, 1997). Turner and Pidgeon (1997) emphasized that despite disasters appearing to be sudden and acute, they often are the result of human and sociotechnical breakdowns developing during incubation periods, the passage of time when production appears to occur normally, yet a series of unnoticed or misunderstood events that conflict with the espoused beliefs of hazard and harm avoidance are latently culminating into potential disasters.

Risk management has been uniquely discussed in NAT, MMD, and HRO theory. However, there have been overlapping and related tenets. Empirical discussion of normal accidents in industries where high-risk technical systems are prevalent has elucidated organizational characteristics that have contributed to nuclear meltdowns, oil spills, and aircraft accidents (Perrow, 1999; Qureshi, 2007; Sagan, 1993; Smith-Crowe, Burke, & Landis, 2003). Risk and crisis management researchers have defined certain HRO characteristics that have allowed organizations operating in environments laden with disastrous systemic threats to achieve consistent and reliable execution of their interdependent systems and processes to run effectively, efficiently, and safely (Flin, Mearns, O'Connor, & Bryden, 2000; Klein, Bigley, & Roberts, 1995; Rijpma, 1997; K. H. Roberts, 1990; Weick, 1987; Weick et al., 2008). Researchers of seminal accident

mitigation have addressed the human factor as applied to human-made physical, tactical, and technical failures related to the design characteristics of integrated systems (LaPorte & Consolini, 1991; Perrow, 1999; Turner & Pidgeon, 1997). The risk and crisis management literature has defined organizational characteristics such as structure, decision making, management, communication, and culture as contributors to effective HROs (Flin et al., 2000; Klein et al., 1995; K. H. Roberts, 1990; Weick et al., 2008). In a meta-analysis of HRO research, Lekka (2011) summarized six overarching human factor characteristics that influence effective HRO operations: containment of unexpected events, problem anticipation, learning orientation, just culture, and mindful leadership.

Although the aforementioned high-reliability tenets were founded in studies of traditional HROs from high-risk industries, such unexpected event management knowledge is valuable and should be transferred to other non-HROs to cope with current volatile business conditions (Waller & Roberts, 2003). The characteristics of reliable system performance described in studies of high-risk industries generated other studies applying HRO characteristics to risk mitigation in a broader set of organizations operating under prosaic conditions (Ramanujam & Goodman, 2003; Vogus & Welbourne, 2003). The health care literature has included several studies applying HRO prevention tenets to risk mitigation in patient care (Bagnara, Parlangeli, & Tartaglia, 2010; Baker, Day, & Salas, 2006; Pronovost et al., 2006).

There also has been research to improve education and increase teaching outcomes through HRO concepts (Bellamy, Crawford, Marshall, & Coulter, 2005; Stringfield, Reynolds, & Schaffer, 2008). In addition, researchers have considered HRO

features to mitigate pecuniary risk resulting from economic, market, and financial uncertainties (Lo, 2009; K. H. Roberts & Libuser, 1993). Regarding the last listed HRO application, Perrow (1999) noted increased of global commerce, market sophistication, and rapid trading have led to greater complexity of interactions and increased dependent tightened coupling in financial systems, making them vulnerable to interruptions and imminent catastrophes.

COSO (2004) engaged PriceWaterhouse Coopers (PwC) to study the causal factors leading to fraudulent financial reporting, which led to the production of the ERM integrated framework. ERM is a comprehensive approach to managing risk in organizations by aligning risk appetite and strategy; enhancing risk response decisions; and reducing operational surprises and losses while integrating communication, teamwork, and leadership (COSO, 2004; Gifun & Karydas, 2010). Beasley, Clune, and Hermanson (2005) investigated the reasons only some organizations adopt ERM, which provided a foundation for further ERM use research. Gifun and Karydas (2010), in their study of integrating ERM with other organizational models, created a variation on HROs called the high-reliability resilient organization, which provided a model for integrating ERM as an attribute of high reliability in complex systems. The ERM framework affects every aspect of a business and requires the full participation and engagement of every person in the organization to ensure successful and effective implementation (COSO, 2004).

As discussed previously, HRO theory outlines various constructs that contribute to reliable and safe operations, such as collective mindfulness, reluctance to simplify,

culture, sensitivity to operations, and resilience (Lekka, 2011). Despite empirical evidence showing that all employees must own responsibility for some aspect of ERM to mitigate accidents (Arena, Arnaboldi, & Azzone, 2011; COSO, 2004), there has been a gap in the organizational literature addressing the psychological constructs required to mitigate financial disasters proactively that can cause significant harm to stakeholders resulting from disruptions in highly integrated financial management and reporting systems.

The literature has contained studies addressing the psychological factors of extant financial crises and disasters but has not offered psychological concepts for mitigating future financial crises and disasters resulting from unreliable financial reporting. For example, Power (2009), in studying the financial crises of 2006 to 2008, addressed the intellectual failure of control-based ERM systems to manage the entrepreneurial and risk-taking characteristics of individuals. Lo (2009) addressed the inattention to the effect of "hardwired" specific neurocognitive human behaviors as a contributing factor to economic failure. Power and Lo offer different lenses regarding the influence of human factors in financial crises, but neither of them offered evidence on ways to integrate human factors with successful ERM in financial reporting systems effectively.

Furthermore, Argote and Miron-Spektor (2011) discussed the importance of learning from rare events, including those that result in financial disasters, but they did not specifically address how said learning could influence financial systems. In her call for practical business communication research to better prepare students for ethical business decision making, Jameson (2009) credited a series of communication failures as

contributing to the financial disasters and the resulting negative global effects of the 2008 era, but she also did not offer a specific human-oriented solution. Ostas (2007) posited that motivation and moral saliency are factors of executive fraud involving embezzlement, financial reporting, insider trading, and larceny, and charged "gatekeepers" (p. 597) for failing to protect investors from negative factors. Although Ostas tied incentive motivation and rewards to the promulgation of financial fraud, he did not offer a methodology for correction.

Current HRO theory literature contains research regarding HRO characteristics such as learning, decision making, communication, and reward incentives, all of which are integral to preventing accidents in nonfinancial, technologically complex, and highly integrated systems (Lekka, 2011; Rijpma, 1997; K. H. Roberts, 1990; Schulman, 1993; Weick et al., 2008). Gifun and Karydas (2010) provided research supporting the integration of ERM in HROs, and the risk management literature has outlined the need for comprehensive human resource engagement to implement the ERM framework successfully (COSO, 2004; Lo, 2009; Power, 2009). More research is necessary to investigate the psychological factors of ERM in HROs to address the failures in financial reporting and management systems so that innocent third-party stakeholders are less likely to suffer from fiscal risk-harm (Finkelstein, 2003).

Problem Statement

Fraudulent financial reporting and fiscal management practices caused risk-harm to thousands of stakeholders and innocent third parties when Enron could not continue its masquerade as a stock market leader (McLean & Elkind, 2004). Thousands of employees

who invested their retirement savings wisely in the future of their company were deceived by the fraudulent reporting of the company's financial state of affairs, resulting in thousands of employees losing their life savings. This case offered compelling evidence that regulatory statutory constraints (i.e. auditing standards, security exchange regulations, internal control mandates) alone failed to mitigate financial disaster. HROs operate reliably and safely, despite the high propensity of accident risk harm (Lekka, 2011; Perrow, 1999; Rijpma, 1997; K. H. Roberts, 1990; Sagan, 1993; Schulman, 1993; Weick et al., 2008), and human resources are integral factors in managing risk exposure (Arena et al., 2011; Christian, Bradley, Wallace, & Burke, 2009; COSO, 2004).

Waller and Roberts (2003) pointed out that despite the specific contexts of their operational environments, "HROs possess valuable transferable knowledge for non-HRO organizations to minimize unexpected events" (p. 814). Although attempts are being made to apply HRO constructs to other prosaic organizations, research is needed regarding the applicability of HRO constructs in other organizations with profit motives; market constraints; and volatile, or "messy," environments (Lekka, 2011). Therefore, it was reasonable to address the gap in the literature by defining the psychological factors contributing to organizational ERM effectiveness in HROs as they apply to organizational financial responsibility in an attempt to reduce negative financial outcomes resulting from damaging disruptions in financial reporting and fiscal management systems (Martinez-Moyano, McCaffrey, & Oliva, 2013).

Purpose of the Study

Some industries not traditionally defined as HROs have found it useful to apply high-reliability tenets to enhance the effectiveness of their operations (Bagnara et al., 2010; Baker et al., 2006; Bellamy et al., 2005; Pronovost et al., 2006; Ramanujam & Goodman, 2003; Stringfield et al., 2008; Vogus & Welbourne, 2003); however, to date, researchers of organizational psychology have paid little attention to learning about the ways in which the HRO constructs of ERM can promote organizational financial responsibility (Libuser, 1994; Müssig, 2009; K. H. Roberts & Libuser, 1993). The purpose of this qualitative, grounded theory study was to use HRO constructs as a frame to identify and define the psychological factors of ERM effectiveness in organizational financial reporting responsibility. The intention of this study was to establish a foundation that could provide the leadership of organizations not traditionally defined as HROs with the information necessary to promote effective financial risk-harm management through ERM.

Research Questions

Three research questions (RQs) were designed to address the gap in the literature:

1. What HRO constructs applied in ERM are present in reliable financial reporting?
2. How can HRO constructs applied in ERM minimize organizational stakeholder financial risk-harm?

3. How can HRO constructs applied in ERM inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility while maximizing profitability?

Theoretical Framework

Studies of financial crises have used variants of NAT, HRO, MMDs, and enterprise management theoretical constructs to frame the research (Calandro, 2012; J. Cohen, Krishnamoorthy, & Wright, 2017; Jameson, 2009; Lo, 2009; Martinez-Moyano et al., 2013; Müssig, 2009; Perrow, 2010; Power, 2005, 2009; Webel, 2010); therefore, it was appropriate to ground a study defining the psychological constructs of organizational financial responsibility with the same theories. As stated previously, an accident, as defined by NAT, is a failure in one component of the system that causes disruption in the interaction with another component, resulting in a disruption, or discontinuation, of organizational output (Perrow, 1999).

Perrow (1999) discussed the inevitability of normal or systematic accidents in organizations whose systems are interactively complex and tightly coupled. The interaction can be linear (expected or planned) or complex (unexpected or unplanned), the nature of which dictates the remedy and reaction to a disruption in order to avert a catastrophic accident. Whereas other safety literature has been notably concerned with the safety of first- or second-party victims such as operators and other personnel subject to the system, NAT is primarily concerned with the safety of third- and fourth-party victims such as innocent bystanders and future generations (Perrow, 1999). NAT approaches ERM from an almost pessimistic perspective that accidents in high-risk,

complexly interactive, and tightly coupled organizations are inevitable (Perrow, 1999). With no slack for trial and error, these types of organizations implement ERM by understanding the factors that influence their systemic interactions and anticipate, plan, and account for any disruptions as a coping mechanism to reduce accidents (K. H. Roberts, 1990; Weick, 1987).

HRO theory (LaPorte & Consolini, 1991) outlines the characteristics for coping with the NAT factors inherent in complex organizations to promote reliability in effective system interaction. HROs possess the potential for hazard, risk, or error that could affect others egregiously, yet they implement and operate within an HRO theory framework of nearly no failure (LaPorte & Consolini, 1991; Rijpma, 1997; K. H. Roberts, 1990). Because HROs operate within a normal accident nontolerant environment, a robust ERM framework is required to minimize risk, error, and hazard (K. H. Roberts, 1990). Whereas NAT focuses on the inevitability of accident occurrence due to system operationalization (Perrow, 1999), HRO theory focuses on the system operationalization of HROs to promote ERM (Lekka, 2011).

Some characteristics of HROs are redundancy, operational procedure and policy adherence, safety protocol culture, and unique hierarchal decision-making strategies (K. H. Roberts, 1990). HROs often implement a comprehensive approach to manage risk such as ERM in an effort to optimize system operation while promoting reliability (Beasley et al., 2005; COSO, 2004). Literature on risk and crisis management has identified the leading indicators of reliability as culture, communication, leadership, and processes and activities that are integral in managing accidents (Flin et al., 2000).

Although ERM is integral in promoting reliability, a robust risk management system, if not monitored and adjusted regularly, can contribute to a culture of complacency by personnel believing that the rules, processes, and compliance measures in place will anticipate and manage every contingency (LaPorte & Consolini, 1991). HRO theory and ERM as related to normal accidents align with the concept of defining the organizational psychology factors of HRO effectiveness to minimize financial risk-harm to others while maximizing organizational effectiveness and consequential success.

Nature of the Study

The aim of this grounded theory, qualitative study was to identify and define the psychological factors of ERM effectiveness in organizational financial reporting responsibility, using HRO and NAT factors as a frame. Because the study wanted to generate or expand rather than simply test extant theory, a grounded theory methodology was deemed appropriate for this study (Patton, 2002). Data were collected by interviewing participants identified using a maximum variation purposeful sampling strategy (Patton, 2002). This sampling strategy was appropriate to understand a phenomenon within a certain type of job responsibility (homogeneity) in organizations with different business purposes (heterogeneity). The sample stratified individuals involved in the financial environment and the ERM framework of organizations from different business sectors.

A semistructured interviewing method of inquiry was used to gather information from the participants, transcribe the interviews, and perform the iterative process of validating the transcriptions by using member checking and text modifications based on

participant feedback. To triangulate the data from a deviant case perspective, data were reviewed and analyzed from the Enron (McLean & Elkind, 2004) financial disaster case reports to explore possible HRO psychology factors found in the reputable company cases of this study yet missing in the fiscal systemic interruptions of this failed organization. Using different strategies of inquiry facilitated triangulation of the data, which lent support to the emergent themes and phenomenon (Trochim, 2006a). After completing the transcription process, MS Excel and CAQAS such as NVivo v.11 were used to elucidate and triangulate the emergent data through coding. Open coding was used to expose commonalities in the data, axial coding to assemble the commonalities into categories or groupings as they related to each other, and selective coding to tell the story of the data and how the data contributed to or expanded extant theory (Creswell, 2013).

Definitions of Terms

The following terms and associated operational definitions were used in this study:

Enterprise risk management (ERM): A comprehensive framework involving organization-wide strategic, compliance, reporting, and operational components to minimize risk while maximizing the opportunity to achieve an entity's objectives (COSO, 2004).

High-reliability organizations (HROs): Enterprises that continuously and effectively manage unpredictable factors in risk-laden environments defined by the integrated technical nature of their operations (K. H. Roberts, 1990; Weick et al., 2008).

Man-made disasters (MMDs): The prohibition of disaster foresight and an increase in vulnerability that occur when there is a discordant existence between espoused organizational safety measures and the reality of precautionary norms, assumptions, beliefs, and values of the organizational actors (Pidgeon, 1997; Pidgeon & O'Leary, 2000; Turner & Pidgeon, 1997).

Normal accident theory (NAT): The belief that organizations defined by highly integrated and deeply interdependent systems are vulnerable to disasters caused by active system failures exacerbated by discreet social organizational interactions (Perrow, 1999). Perrow (1999) further defined the following ordinary terms in the context of organizational accidents:

Accident: Involves a reasonably substantial and serious failure of a subsystem that damages more than one unit and, in doing so, disrupts the ongoing or future output of an entire defined system.

Catastrophe: Large-scale systemic accident that can cause extensive damage to unwitting bystanders not involved in the system.

Coupling: The connective reaction of what happens in one organizational system affects what happens in another.

Disruption: An occasion that causes the output in a subsystem or system to cease, causing a correction or repair to the system.

Incident: Involves a failure of a subsystem or system that causes limited damage to related parts or a unit, but does not damage the entire system.

Interaction: The relationship of interdependent systems in relationship to linear or complex functionality.

Subsystem: Integration of the various units of organizations that create the third level of a system.

System: Interactive functioning of subsystems to produce the desired output.

Unit: The functional compilation of parts of the second level of a system.

Organizational culture: The learned norms, values, assumptions, and beliefs of organizational actors that shape the paradigm in which organizations operate (Schein, 1984).

Risk appetite: The assessed risk allowed to be taken by an organization within the purview of specific reporting and compliance measurements to promote its strategic and operation position (COSO, 2004).

Risk harm: The notion in contrast to risk appetite that exposure to risk can cause a setback to an individual's welfare, thus causing them harm (Finkelstein, 2003).

Assumptions

The ontological assumption of this study was that HRO psychological constructs exist and are identifiable and definable. I assumed that I could locate and secure an adequate sample of qualified participants to interview and that they would be forthcoming, truthful, and honest about their observations, experiences, and activities. I also assumed that the participants chosen via purposeful sampling of the homogeneous population of organizations that were fiscally responsible and sustainable actually sought and promoted reliability. Considering the epistemological concerns with generalizing

qualitative findings (Patton, 2002), the overarching assumption was that HRO psychological constructs were transferrable to financial reporting risk management systems.

Scope and Delimitations

Researchers have used the efficient, safe, and dependable operations exhibited by HROs as a foundation to investigate the applicability of HRO factors to other reliability-seeking organizations (K. H. Roberts, 1990; Sammarco, 2005; Vogus & Welbourne, 2003). The scope of this study was to use NAT factors and HRO constructs in an ERM framework to understand organizational financial responsibility and reporting. A delimiting factor was the choice of participants.

Grounded theorists seek a homogeneous sample (Creswell, 2013) because the credibility of qualitative inquiry relies upon data elucidated from information-rich cases (Patton, 2002). Yet, Patton (2002) asserted that the lack of heterogeneity also might limit the transferability of the findings across groups. To address this concern, the target population included individuals involved in the financial and fiscal risk management systems in organizations with varied business purposes.

Limitations

The key instrument for capturing the data in qualitative inquiry is the researcher; therefore, the credibility of qualitative findings can be negated if the researcher's biases and variety of reactivity and reflexivity are not effectively managed (Creswell, 2013; Patton, 2002; Trochim, 2006a, 2006b). My experience as a Maryland certified public accountant (CPA) lent credibility to my ability to mine and analyze the data from a

financial perspective. However, this professional status also might have created limitations such as the presumption that the individuals involved in financial reporting are subject to and abide by the overarching professional standards. This presumption might not have allowed me to be open to emerging trends and themes involving HRO psychological constructs in actors responsible for the overall financial health of their respective organizations. Furthermore, any possible professional association or relationship that I might have had with any of the participants could have led to the halo effect (Patton, 2002), meaning that the participants might not have provided truthful information in order to present them and their organizations in a more positive light.

Outside of the halo effect, some participants simply might not have been forthcoming by nature and that despite the assurances of confidentiality and participant protection, they might not have been willing to disclose actions performed that were in conflict with responsible financial reporting. A limitation also existed because of the possible inability to obtain sample organizations within the industry specifications outlined in the sampling strategy. I tried to stratify the sample within the organizations by obtaining employees from various levels of the corporate hierarchy (i.e. a member of the C-suite, manager, and staff), so the data came from various perspectives. Limitations are discussed in more depth in Chapter 3 and Chapter 5.

Significance of the Study

Reducing the disruptive financial occurrences decreases negative environmental and situational impacts on human beings and on the future profits of local and global organizations. To achieve this goal, not all businesses warrant the robust ERM

requirements evident in traditionally defined HROs, such as redundancy, safety protocols, and hierarchal decision-making structures (K. H. Roberts, 1990) because they have different purposes, processes, and operations. However, all businesses require employee commitment to operationalize reliable systems and processes. Employee engagement embodies the involvement, commitment, and passion by which employees work (Macey & Schneider, 2008) and is meaningful to system outcomes (Harter, Schmidt, & Hayes, 2002), regardless of the organizational purpose. Classifying, categorizing, and defining HRO psychological factors with respect to reducing return on investment losses as applied to financial reporting and fiscal responsibility will contribute to the global good by providing a framework that organizations can use to optimize human capital investment and organizational effectiveness while minimizing risk harm to stakeholders' physical, financial, and emotional security, and to the larger social economy.

Summary and Transition

When a system disruption or failure occurs in the integrated and synchronized system of an organization, disaster can happen, and stakeholders and innocent third parties can suffer. The level of negative effect is dependent upon the degree of integrated system interaction and coupling; human interaction with the systems; existence and implementation of an effective ERM framework; and ability to operate at a high level of reliability, despite the chance of normal accidents occurring from disruptions in their technically integrated systems (COSO, 2004; Perrow, 1999; K. H. Roberts, 1990; Sagan, 1993; Turner & Pidgeon, 1997). The quest for high reliability as a contributor to positive

outcomes with minimal risk harm has been the basis for application of HRO characteristics in other less technical, nonnormal accident, prosaic business settings (Bagnara et al., 2010; Baker et al., 2006; Bellamy et al., 2005; Pronovost et al., 2006; Stringfield et al., 2008).

Scientific literature has been thin regarding the application of HRO constructs to define the psychological factors of reliable financial reporting and fiscal management. I conducted this qualitative, grounded theory study using NAT factors and HRO constructs to identify and define the psychological factors of ERM effectiveness in responsible organizational financial reporting. The results of the study will assist organizations and their leaders to operationalize the human psychological factors that encourage and promote financial reporting reliability to minimize stakeholder financial risk harm while maximizing the triple bottom line (Aguinis & Glavas, 2012) of organizational performance.

Chapter 2 provides an overview of integrated financial reporting and management systems. It then provides an in-depth literature review focused on disaster factors, risk management, and HRO research related to the applicable psychological factors of responsible financial reporting. NAT and supporting socio-organizational tenets regarding how disruption in one component of highly integrated financial accounting and management subsystems can affect other systems, resulting in catastrophic financial outcomes. The ERM concept is then presented and tied into managing the financial risk harm of unsuspecting third parties. Then HRO theory and supporting tenets are explained

in relation to their use as a frame to define the psychological factors applicable to effective ERM in promoting reliable financial reporting.

Chapter 3 presents the research methodology. Outlined are the research design and rationale, my role as the researcher, instrumentation, data collection, and qualitative analyses. Also discussed are participant matters such as selection, recruitment, and ethical treatment. Chapter 3 also includes a discussion of the importance of trustworthiness and the protection of human research subjects.

Chapter 4 provides a summary of the data gathered from the participants in reputable responsible financial reporting systems. The influencing human factors of responsible financial reporting systems are revealed by showing how the data were organized and analyzed from the initial core category to subcategories, and how the data within the subcategories were applied to the RQs. I present the data in tables, figures, and narratives using quotations from the participants and juxtaposed examples from the discrepant Enron (McLean & Elkind, 2004) case to support the thematic trends.

In Chapter 5, I explain how the data relate to HRO and ERM theory, and I provide a human-related theoretical model for organizations to promote the accurate and reliable reporting of entity financial activity in ways that mitigate risk-harm to third-party stakeholders. Chapter 5 also contains information about the delimitations, limitations, opportunities for further research, and the social implications of the findings.

Chapter 2: Literature Review

Introduction

Professional accounting regulatory standards and statutes exist to protect the individuals who rely on organizational financial statements (American Institute of Certified Public Accountants [AICPA], 2013), yet the occurrence of large-scale financial fraud cases (Beasley, Carcello, Hermanson, & Neal, 2010) has indicated that rules and regulations alone are not sufficient to mitigate fraudulent financial reporting and irresponsible fiscal management (Ball, 2009). The literature on risk and crisis management has defined certain characteristics of operations, leadership, risk management, and culture as contributors to effective HROs (Flin et al., 2000; Klein et al., 1995; K. H. Roberts, 1990; Weick et al., 2008). Other ordinary industries outside the purview of large physical disasters have applied HRO tenets to promote reliable operations (Bagnara et al., 2010; Baker et al., 2006; Bellamy et al., 2005; Pronovost et al., 2006; Ramanujam & Goodman, 2003; Stringfield et al., 2008; Vogus & Welbourne, 2003), yet to date, literature on organizational psychology pertaining to the HRO constructs of ERM in organizational financial responsibility has been minimal (Libuser, 1994; Müssig, 2009; K. H. Roberts & Libuser, 1993). The purpose of this grounded theory study was to use NAT factors and HRO constructs as a frame to identify the psychological factors of ERM in responsible organizational financial reporting.

This chapter first provides an overview of financial system integration and then continues with a synthesis of relevant accident, risk, and HRO literature pertaining to disaster factors of financial catastrophes, management of risk to mitigate stakeholder risk-

harm, and HRO constructs to frame this study of psychological factors in responsible financial reporting. Perrow's NAT (1999), the focus for discussing disaster factors, was supported by related discussions in human and latent errors, MMDs, near misses, and production pressures. The literature on ERM (COSO, 2004) has supported the theoretical basis for financial risk-harm mitigation, and the literature on HRO (Rijpma, 1997) has provided the theoretical support for the study's inductive inquiry into the psychological factors of responsible organizational financial reporting.

Literature Search Strategy

I located peer-reviewed journal articles using Google Scholar and expanded my resources by contemporaneously searching Walden University's research database subscription via the library link in Google Scholar. I also used the private source databases with free access available through Google Scholar and professional websites. The literature came from databases such as EBSCOhost, ERIC, ProQuest, PsycARTICLES, PsycBOOKS, PsycINFO, SAGEjournals, ScienceDirect, AMLStores, CRPIT, and InformsPubsOnLine. Bibliographies of particularly informative articles or meta-analyses provided further reference sources. In addition, clicking the "Related articles" link in Google Scholar located the title of salient theoretical articles that provided an alternative stream of literature.

I used combinations and derivations of the following search terms: *high reliability*, *high-reliability organization*, *HRO*, *financial*, *finance*, *fiscal*, *accounting*, *systems*, *normal accident*, *risk*, *risk management*, *enterprise risk management*, *catastrophe*, *debacle*, and *disaster*. Initially, to ensure the capture of seminal research on

the topic of this study, I did not use date limiters. However, to locate current literature, I used the "Since 2011" time parameter located in Google Scholar.

The search strategy returned substantive literature on HRO theory and organizations, NAT, and ERM. The largest return came from the term *high reliability*, with 3,240,000 results. The search for *normal accident* resulted in 2,100,000 hits. There was an overlap in the literature on HROs and NAT because of the relative nature of the constructs (Klein et al., 1995; Lekka, 2011; Leveson et al., 2009; K. H. Roberts, 1990; K. H. Roberts & Bea, 2001; Vogus & Welbourne, 2003; Weick, 2004). A search using *enterprise risk management* as the search term produced 1,810,000 results. I used quotation marks as Boolean phrase search limiters, "*enterprise risk management*," which narrowed the results to 21,600. Because ERM has many industry applications, I used the Boolean nesting search parameters *(high reliability),* and *(WebFinance)* to narrow the results to fit the scope of this study. The search produced a substantial amount of scholarly information to ground this study in theory.

Financial Systems Overview

The theoretical framework grounding this study centered on error-free-related system integration and effective risk management to produce reliable and sustained organizational operations. Because the study was an attempt to define these theoretical constructs as they applied to organizational financial responsibility, following is a rudimentary overview of the systemic nature of financial reporting and fiscal management.

Accounting System

An accounting system is predicated on the need to identify, record, and culminate the transactions of businesses and communicate their effects to organizational stakeholders (Wild, 2013). Bookkeepers in the transaction processing system document the minutiae of the transactions of businesses in monetary units using a double-entry method of accounting (Nobles et al., 2014; Wild, 2013). Every transaction is balanced between at least two accounts by debiting one account and crediting another. The choice of accounts and the decision to debit or credit is determined by the nature of the transaction and the natural balance of the account according to its position in the financial statements (Nobles et al., 2014). The listing of the accounts available for use is referred to as the chart of accounts. When operationalized with entries specific to a unit of business, the list of accounts becomes the general ledger (GL), which is an organization's main transactional recording system. Generally, small business owners or their accountants post company transactions directly to the GL. However, because this study was concerned with mitigating failures in a financial reporting and management system, this discussion includes a simplified explanation of how large public organizations matriculate transactions to the GL using a more complex subsidiary ledger system.

Subsidiary Account System

Organizations with voluminous, complex, or multistep transactions use subsidiary reporting systems called subledgers to record voluminous amounts of related transactions. Examples of common subledgers are cash, accounts receivable (AR), accounts payable (AP), inventory, job costs, and payroll ledgers. Examples of subledgers

containing fewer day-to-day operational items are those that record capital expenditures for property, plant, and equipment (fixed assets), or financing transactions such as funds borrowed and loaned. The depth and structural sophistication of the subsidiary system depends on the volume and type or nature of the transactions.

For this overview, the following is a simplistic example of how subsidiary ledger systems integrate with the overarching GL reporting system. Transactions in the AR subsidiary ledger of a large retailer with stores all over the United States might include the combined results of several regional AR subledgers. The regional AR ledgers reflect the AR activity of the various stores located in the region. The individual stores in the region populate their AR ledgers with the subsidiary ledger data from the various departmental AR systems. Each department's subsidiary ledger reflects the minutiae of customer transaction data relating to sales, order fulfillment, payments, returns, credits, and write-offs (Nobles et al., 2014). The transactional entries in each subsystem are periodically reconciled and summarized, and the results are posted to the preceding organizational level's subsidiary. The culmination of the subledger entries is posted to the GL control account with the same name (i.e. AR, AP, Fixed Assets, etc.).

Offering a comprehensive education regarding the effects of the detailed interactions among the separate subledgers on the various GL accounts was beyond the scope of this overview. The previous example was used only to demonstrate the interaction and coupling (Perrow, 1999) nature of financial reporting systems. Accurate management and recordation of voluminous segmented transactional minutiae within each subsidiary affects the interactive integrity of subsidiary ledger systems, which has a

direct effect on the integrity of the GL and the validity of the compiled financial information. A failure in one component of the financial reporting system can affect the entire system.

Financial Reporting System

The accountants prepare a periodic comprehensive report called a trial balance, which lists the initial ending balances of all the GL accounts. This report is the first pass at making certain that the books balance, that is, the aggregate debit entries equal the aggregate credit entries. The accountants analyze the accounts and, if necessary, make appropriate adjustments, such as accruals. When the accountants are satisfied with the account balances, they compile the data into informational reports called financial statements (Wild, 2013).

The financial statements, which generally include a balance sheet, income statement, statement of cash flows, and statement of owner's equity, are used to inform internal users such as management and leadership, and external users such as banks and investors about the economic viability of the company (Nobles et al., 2014; Wild, 2013). Management reviews the statements and determines whether the information accurately represents the financial condition of the company. If deemed necessary, further adjustments to the journal entries are made, and the books are closed. When the books are closed, no changes can be made without approval. Management disseminates the financial statements to interested stakeholders as required by loan covenants, reporting standards, or investor relation needs. The financial reporting system provides a means of communicating information regarding the financial condition of the company to internal

and external users. The accuracy of these statements is imperative because ratios such as debt equity, earnings per share, and net leverage are used to make integral business decisions.

Quality and Risk Control Systems

Users depend upon the integrity of an organization's financial reporting system to portray the financial condition of the business accurately. An organization's financial quality and risk control systems contain internal and external control mechanisms designed to protect users from risk-harm resulting from misrepresentation of an organization's financial position (Nobles et al., 2014). Individuals and processes within the organization execute internal control systems. COSO (2013) developed the internal control-integrated framework to assist organizations in developing applicable internal control principles to ensure stakeholder confidence in the entity's ability to achieve operational, reporting, and compliance goals within the business's economic and operating environment. Internal control principles provide a guideline by which organizations "establish responsibilities, maintain accurate records, insure assets and bond key employees, separate record keeping responsibilities from asset custody, divide responsibility and related transactions, apply technological controls, and perform regular and independent reviews" (Wild, 2013, p. 259).

Individuals outside of the organization perform the functions and processes of an external control system. External control systems were designed to protect users of the organization's financial information by engaging qualified auditors who are independent from the company to evaluate and opine on the company's internal controls, reporting

processes, and financial condition. If the auditors conclude that there are breaches in the internal controls or that the financial statements do not fairly represent the financial condition of the company, professional ethical and regulatory standards require them to disclose this opinion to the public in an auditor's report (AICPA, 2014). When the internal and external control systems are compromised, the risk of financial disaster increases.

Failures in the internal and external control systems in the Enron (McLean & Elkind, 2004), and other renowned financial reporting scandals of the time, prodded the U.S. Congress to enact the Sarbanes-Oxley Act of 2002 (SOX; Civic Impulse, 2015), which established statutes holding the management of publicly traded companies responsible for maintaining, documenting, and certifying a robust system of internal controls (Nobles et al., 2014; Wild, 2013). SOX addressed external control breaches stemming from the lack of independence by restricting the types of consulting services that an audit firm can provide to a company while performing its independent audit and by limiting the number of years that an accountant can lead an audit to no more than 7 years without a 2-year break (Wild, 2013). Furthermore, SOX provisions outlined harsh penalties on individuals and committees responsible for audit and financial reporting activities for not adhering to strict independence, disclosure, governance, and transparency requirements (Ernst & Young LLP, 2012). Congress also established the Public Company Accounting Oversight Board (2015) to oversee the work of independent auditors (Cullinan, 2004; Nobles et al., 2014; Wild, 2013).

Summary

The reliable interaction of an organization's accounting, financial reporting, and control systems is key to generating accurate and dependable information regarding the financial condition of a company. Just as disruptions in complex, integrated, tangible systems create the potential for physical catastrophes (Perrow, 1999), interruptions in complex organizational financial systems can result in a distorted view of the company's economic outlook, which provides a platform for fiscal disaster (Calandro, 2012). Internal and external control systems use risk management processes and procedures to expose, correct, and mitigate financial systemic disruptions to protect stakeholders, the public, and the larger economy from the effects of catastrophic financial meltdowns. Just as habitual disregard for harm avoidance measures can incubate and precipitate physical disasters (Turner & Pidgeon, 1997), financial control system failures permit erroneous, negligent, and fraudulent acts to evolve into egregious financial disasters (Calandro, 2012; Perrow, 2010).

Disaster Factors, Management of Risk, and High-Reliability Organizations

The theoretical tenets of this study were distinctly independent yet interrelated. Perrow (1999) stated that although seemingly contradictory, HRO theory and NAT inform one another. Sagan (1993) used both theories to analyze risk management in the context of near misses in the U.S. nuclear weaponry sector. In the analysis of MMDs, Turner and Pidgeon (1997) listed NAT and HRO theory as complementary theoretical frameworks. Finally, because risk is an integral factor in understanding and preventing disasters, the literature on NAT, HRO theory, and MMDs has addressed ERM in some

manner. This theoretical tapestry, coupled with underlying constructs, made organizing and arranging the unique constructs logical and methodical (C. M. Roberts, 2010). Therefore, the theories were addressed as they related to disaster factors, management of risk, and promotion of reliability.

Disaster Factors

Normal accident theory. Perrow (2004, 2010) widened the scope of high-risk technical disaster research from a single-component failure approach and examined discreet failures in social organizational system interactions as the cause of accidents. Perrow (1999) maintained that the nature of the interactions among interdependent organizational systems dictates the propensity for accidents and the inevitability of disasters, which is the premise of NAT. In a normal accident environment, organizational system interactions can range from complex, where heterogeneous, independent systems integrate in no predetermined sequential time or relationship to produce a desired organizational outcome, to linear, sequentially arranged systemic integration, where the outcome of one system is time dependent upon and directly related to the outcome of another (Perrow, 1999). The degree of integration or dependency, whether complex or linear, is coupling (Perrow, 1999). K. H. Roberts (1990) pointed out that coupling is not an indication of the number of interactions, but the brittleness and reactivity of the systemic connection.

A loosely coupled organization has equifinality, which is the idea that integrated systems can possess their own logical functions and interests yet integrate with other systems to achieve the desired collective outcome (Von Bertalanffy, 1972). Room for

trial and error, or slack as Perrow (1999) referred to it, cushions the effect of disruptions in these independent systems, limiting intense negative reverberations throughout the organization. A tightly coupled organization is one in which the systems are so intricately integrated that there is little or no time to react to a system disruption or failure. In the absence of immediate and effective remedial actions, reactions to unanticipated failures in a tightly coupled system can emerge as the source of a critical accident (Perrow, 2010). Perrow (1999) developed the 2 X 2 interaction coupling chart, shown previously in Chapter 1, to classify organizations according to the blend of linear-complex interaction and tight-loose coupling.

Accident investigations tend to begin with operator error as the cause of catastrophic accidents in error-inducing systems (Reason, 1997), but NAT provides a platform for looking beyond the operator to the organizational characteristics that contribute to faulty systemic interactions for the cause (Perrow, 2010; Sagan, 1993). Reason (1997) observed that on-the-job investigative approaches and accident research findings have an inverse relationship. Investigators first look to the person or team members who performed the unsafe act, then to the local workplace setting, and then to the organizational factors to determine accident causes. Conversely, the literature on accident research has shown that organizational factors influence local workplace performance, which allows unsafe acts to occur. Although researchers have found NAT's subjectively plotted interaction/coupling categorization inadequate for detailed accident cause analysis (Leveson et al., 2009; Sagan, 1993; Turner & Pidgeon, 1997), assigning an accident like the Columbia shuttle explosion to a cell in the 2 X 2 interactive coupling

framework initiates a systemic dissection of the accident from a socio-organizational lens rather than from a purely component or active failure perspective (Weick, 2004). Lo (2009) maintained that the intricate credit, legal, accounting, regulatory, and liquidity relationships in financial systems fit the complexity and coupling criterion that defines financial crises as normal accidents. Research has indicated that HRO characteristics such as redundancies and organizational learning (Lekka, 2011; K. H. Roberts & Bea, 2001; Weick et al., 2008) can increase interaction complexity and tighten coupling, both of which are factors of NAT (Perrow, 1999; Sagan, 1993).

Human error. Human beings are integral to successful system integration, so it is only reasonable that individual human error can be blamed as the initial cause of organizational disasters (Turner & Pidgeon, 1997). Perhaps a reason for "blaming individuals is [that] it is emotionally more satisfying than targeting institutions" (Reason, 2000, p. 768). However, Reason (2000) suggested that there are two worldviews of human error, namely, the person approach and the system approach, to address accident prevention. The person approach is a traditional view that accidents are caused by unsafe acts of individuals such as forgetfulness, inattention, poor motivation, carelessness, negligence, and recklessness. The system approach assumes that because human beings make mistakes, organizations account for this assumption during system development and evaluation to ameliorate the effects of human mistakes (Reason, 2000).

Perrow (1999, 2010) addressed the individual effect by cautioning that the agentic factor not be overlooked when individual decisions influence system failure in financial crises. Rochlin (1999) supported the importance of agent actions and judgments at every

level of the safety process in securing a safe climate. In his effort to design control and safety systems for hazardous industrial process plants, Rasmussen (1997) found that an initial investigation of human-machine interaction led to a comprehensive top-down systemic analysis, which included contemplation of decision-making mechanics, the reporting culture, regulation, legislation, and the adaptation of humans to dynamic changes in the sociotechnical system. The computerized stock-trading system debacle of 1987 was an example of how society's attempt to control human task error and promulgate safe operations by rules and regulations worked in a stable environment, but when dynamic changes in technology increased integration and coupling, social and behavioral factors became critical in maintaining a safe environment (Rasmussen, 1997).

Individual errors often are recurrent and allowed to perpetuate because of system weaknesses; therefore, documenting and analyzing accidents from a personal task analysis perspective is key to locating certain systemic dysfunctions; however, securing total safe and reliable operations exceeds the simple decomposition of individual task performance and mandated rules and regulations (Rasmussen, 1997; Reason, 2000). This tenet was evident in the "tsunami of accounting scandals" (Ball, 2009, p. 277) from the turn of the millennium, with Enron being one of the more notorious cases.

Accounting and governmental sectors responded to the financial crises of the time with further regulation in the form of SOX in 2002 (COSO, 2004). The subsequent Lehman Brothers banking scandal (Valukas, 2010) prompted Congress to enact the Dodd-Frank Wall Street Reform and Consumer Protection Act (Webel, 2010), and the Madoff Ponzi scheme (Markopolos, 2010) spurred the Securities and Exchange

Commission (SEC, 2012) to take "decisive and comprehensive steps to reduce the chances that such frauds would occur undetected in the future" (p. 1). Cullinan (2004) maintained that although some SOX provisions might have mitigated risk-harm to third parties, the act "does not contain provisions designed to enhance intellectual ability and diligence of auditors to recognize problems" and prevent future fraud (p. 862). Cullinan posited that the focused reaction of Congress to the symptoms of Enron's audit process failure limited the act's provisions from "engaging in a more serious effort to identify and treat the underlying disease of a lack of a sense of public duty, and inadequate emphasis on audit competence in the audit profession's culture" (p. 862). Even with stricter standards, mandates, and other regulatory intercessions in place, human acts of financial fraud still occur (Association of Certified Fraud Examiners, 2014).

Latent errors. Latent errors are uncorrected organizational deviations. On their own, they might not result in an accident, but they can develop into or combine with other latent errors to create system weaknesses (Ramanujam & Goodman, 2003; Reason, 1997). Ramanujam and Goodman (2003 conducted a content analysis of internal audit reports to investigate the construct validity, antecedents, and adverse consequences of latent errors in the Barings Bank collapse. They identified the distribution of work, interdependence upon work activities, and stability of the organizational culture affect the linkage between latent errors and adverse consequences. When controls such as internal audits fail to detect latent errors, or when cultural constraints negate appropriate actions, an external event, even one as unlikely as an earthquake in Japan (Ramanujam & Goodman, 2003) can trigger an adverse financial consequence.

Reason (1997) proposed a schema commonly known as the Swiss cheese model to communicate how active failures and latent risk conditions can result in disasters (see Figure 2). Simply summarized, the model illustrates that active failures and latent conditions create holes in otherwise solid planes, or slices, of organizational systemic defenses. Poor design, gaps in supervision, and weak processes and procedures allow an accident causal trajectory to pass through a hole in a control layer, and in most cases, a defensive subsequent solid layer will stop the trajectory, alleviating the chance of disaster (Reason, 1997). The holes open and close as the organization learns from the failures and makes corrections. When soft (i.e., training, regulations, learning, etc.) and hard (i.e., safety features, alarms, working equipment, etc.) defensive measures are in place and operational, the adverse effect of a single unsafe act on the system is minimal if existent. However, in reality, culturally shaped active failures, and latent errors created by poor executive, regulative, and managerial decision making create various random holes in the defensive planes. When a failure or a latent error is not recognized or corrected, the hole does not close, and the chance that subsequent weaknesses will align increases. The aligned holes eliminate defensive layers, which creates an unobstructed accident trajectory for an unchecked hazardous event to gain momentum through the organization, giving way to a catastrophic accident (Reason, 1997).

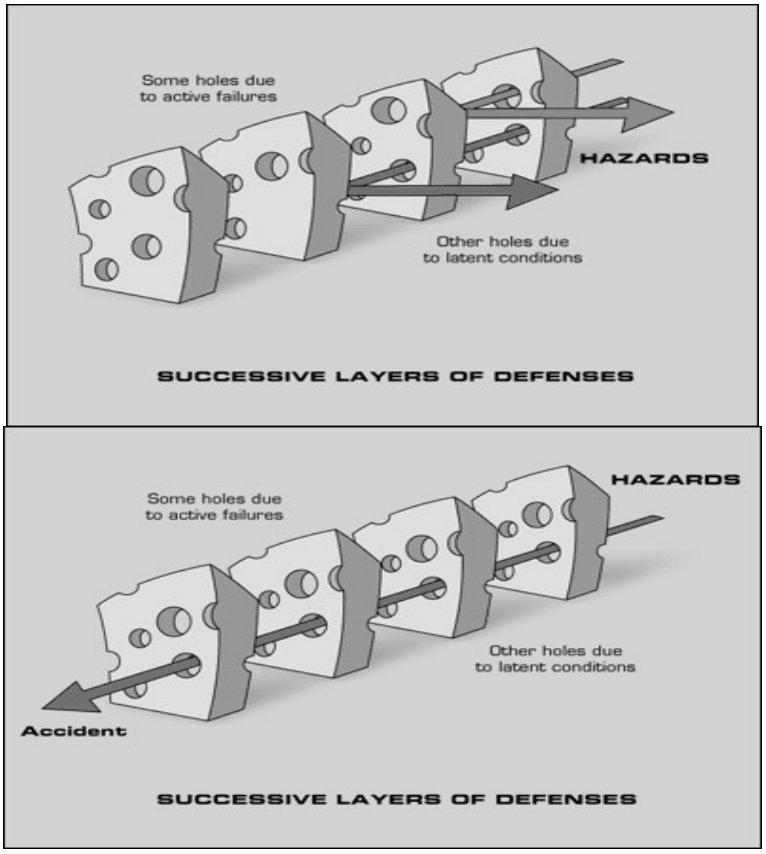


Figure 2. Reason's Swiss cheese model of risk. Reprinted from *Managing the Risks of Organizational Accidents* (p. 12), by J. Reason, 1997, Burlington, VT: Ashgate, Copyright 1997. Reprinted with permission.

The notion of latent conditions and the breakdown of defenses was important to this study because although purported dubious technical accounting, reporting, and disclosure measures were seen as the root cause of financial disasters such as Enron (Jickling, 2002; SEC, 2009), latent conditions such as leadership centered on pecuniary self-interest and fraudulent decision making cultivated these financial ignominies (Ball, 2009).

Man-made disasters. Turner (1976) performed a detailed qualitative, grounded theory analysis of 84 official accident reports logged with the British Government during 1965 through 1975 and developed the MMD model to explain catastrophic events from the discordant perspective of espoused organizational values and beliefs (i.e., what is intended) and organizational realties (i.e., what is actual). Most case reports acknowledged the existence of psychological factors of proximal actors and conditions in the preaccident phase (Turner & Pidgeon, 1997). However, Turner and Pidgeon (1997) further found that overarching shared intentions, assumptions, and actions of safety culture actors embodied an environment prohibiting disaster foresight and increasing vulnerability.

According to the MMD model, the initial culturally accepted beliefs and associated precautionary norms as set forth in laws, codes of practice, mores and folkways provide the platform for Stage I of the sequential events predicating disasters (Turner, 1976; Turner & Pidgeon, 1997). Stage II, the disaster incubation period (Turner & Pidgeon, 1997), is the passage of time when discrepant, unnoticed interactions between culturally accepted beliefs and actions and the potential for real hazard accumulate. During this stage, intentional or unintentional disregard for information and its processing, bounded rationale, power-influenced hierarchal decision making, organizational learning ability, and misdirected assumptions during “business as usual” allow energies, resources, and manpower to stealthily fester into a culminating negative event, or as Turner labeled, Stage III of MMDs.

In Stage IV, organizations absorb the consequences of the incubating chains of discrepant events, which inform organizations of the inaccuracies of their cultural assumptions and beliefs. The organizations interpret these data to reform the organizational norms (Scheytt et al., 2006). The resulting rescue and salvage efforts of Stage V make ready the way for learning from the events. Operationalizing the newfound knowledge gained in Stage IV and Stage V by reshaping the organizational cultural to prevent future disasters occurs in Stage VI (Turner, 1976). The difficulty with effectuating learning in Stage VI is that the same breadth and depth of cultural assumptions and norms that allowed the disaster to occur in the first place might skew inquiry, which could inhibit or prohibit substantive corrective adjustments (Turner & Pidgeon, 1997). The MMD theory informed this study from the perspective that financial disasters are not acute, sudden, and unexpected events; rather, they are the resulting culmination of intentional or unintentional fiscal systemic latent errors.

Near misses. Sagan (1993) grounded his analysis of the U.S. nuclear weapons industry in NAT and HRO theory. He found that apparent accident-free operations were not necessarily the result of systems designed to promote reliability, but were fortuitous actions not credited to a specific preventative protocol. Political in-fighting and deflection of blame can cause a serious near miss to be overlooked as a sign of an emergent incubating disaster, meaning that if the near miss is ignored, it might go away (Pidgeon & O'Leary, 2000; Sagan, 1993). Weick and Sutcliffe (2007) provided an example of such ignorance when patients expressing concerns were not recognized as opportunities for learning but were dismissed by staff as "complaints."

Sagan (1993) asserted that organizational culture grounded in politics and self-interest stifled learning from previous near misses. The point of Sagan's research was that apparent safe and reliable operations do not dismiss the need for disaster awareness in highly complex, tightly coupled organizations. The value of individual alertness and readiness to respond to anomalies and irregularities is critical to averting catastrophes more than creating additional systems to increase reliability. Sagan's near-miss research was used in this study to point out that what might appear to be proper organizational reporting might not be representative of reality and the underlying developing financial disasters.

Production pressures. Perrow (1999) argued that the call for efficiencies in tangible systems to get there faster and do things quicker, better, and cheaper puts undue pressures on systems and their members to perform in ways that outweigh their social and moderated capacity for safety. Decisions to improve the cost effectiveness of an operation increase the chances of causal accident factors to align and result in a tragic event (Rasmussen, 1997). Organizational "elites" are at fault for putting profits ahead of safety because they feel insulated from risk. Private gain, power, and self-interests direct the pressure to perform and are difficult to adjust in the interest of risk management (Christian et al., 2009; Perrow, 1999; Vaughan, 1990; Weick, 2004).

Production pressures not only impair physical systems but also push financial systems to produce beyond their intended capacity (Müssig, 2009). The drive for financial institutions such as banks, brokerage houses, and insurance companies to gain competitive advantage for finite consumer financial resources promulgated the

development of innovative investment instruments fraught with financial risk and potential collapse (Lo, 2009). Financial performance pressures often resolve in the abuse of earnings management tactics (Lou & Wang, 2011). Earnings management, when used in a reasonable manner that does not violate federal antifraud statutes (Beasley et al., 2010) or generally accepted accounting principles (GAAP; Nobles et al., 2014), is a legal but often questionably ethical, financial reporting tool used to smooth volatile financial activity via reasonable adjustments to the books (Ball, 2009; Rosenfield, 2000). However, when used to support share price artificially and as a basis for executive/managerial remuneration plans, earnings management becomes a manipulation tool for fraudulent reporting (Ball, 2009; Beasley et al., 2010; Lou & Wang, 2011; O'Connell, 2004).

When pressures to perform financially outweigh the moral saliency of proper reporting, executives breach their fiduciary responsibility and commit financial reporting fraud (Lou & Wang, 2011). Ostas (2007) investigated the determinants of executive fraud decisions and reported that because fiduciary fiscal infractions were not associated with physical human harm, executives perceived financial reporting fraud as less immoral than breaking workplace safety regulations. The need to maintain earnings levels for Wall Street and executives' immoral and unethical decision making were at the heart of Enron's catastrophic financial system failure (Arnold & De Lange, 2004). Ostas used Enron to demonstrate how financial systems, including controls, fail when a corporate culture tolerates executives' decisions to breach their fiduciary duty to pursue pecuniary gain rather than exercise moral self-restraint.

In their discussion of the keys to enhancing reliability in complex organizations, K. H. Roberts and Bea (2001) iterated the need for aggressive error seeking and containment mindfulness, and integrated communication outlined by other HRO theorists, and they added a cost-benefit analysis perspective by pointing out that HROs address the tension between rewarding efficiency and rewarding reliability. This notion is important when discussing the reliability of financial reporting because the expense of accident-avoiding strategies can appear to erode profitability if management's focus is on short-term monetary gain. When an organization's focus is on profit or benefit sustainability through reliable operations, the apparent erosion of short-term gain from increased training, maintenance, testing, and other redundant HRO strategies is accepted, measured, incentivized, and rewarded (K. H. Roberts & Bea, 2001).

Workers often are conflicted by leadership rhetoric regarding organizational goals for safe and reliable operations while basing rewarding and incentivizing programs on fiscal performance only. The pressure to produce earnings often outweighs espoused goals for reliable operations, making K. H. Roberts and Bea's (2001) point particularly salient in promoting reliable financial reporting. HROs appreciate and manage the delicate balance between fiscal and reliable performance by quantifying the cost of accidents as well as the value of mitigating these costs, continually evaluating reward and incentive plans, and assessing the alignment of espoused goals with real goals (K. H. Roberts & Bea, 2001). Vaughan (2009) observed that historic political budgetary decisions created a collusion of bureaucratic, technical, and cost/schedule/efficiency

mandates in NASA's desirable safe culture, transforming it to an environment ripe for cultivating disaster.

Learning failure. On January 28, 1986, the space shuttle Challenger exploded only 72 seconds after liftoff (Presidential Commission on the Space Shuttle Challenger Accident, 1986). A technical O-ring failure was the component failure of the Challenger accident, but deep-seated organizational factors such as decision making, organizational learning, culture, and hierarchal structure caused the accident (Vaughan, 1990, 2003, 2009). In 2003, 17 years after the Challenger disaster, the space shuttle Columbia exploded upon reentry into the Earth's atmosphere (Columbia Accident Investigation Board, 2003). Again, although the physical cause of the accident was a technical breach in the thermal protection system caused by a piece of insulating foam, investigative reports indicated that dysfunctional organizational factors such as communication, information processing, decision making, learning, and culture factors were at fault (Deal, 2004; Pidgeon & O'Leary, 2000; Vaughan, 1990, 2009).

Experiences of failed task performance can transfer into knowledge to be shared with other organizational members. However, the successful transfer of this knowledge into learning is contingent upon the latent context of the organization (Argote & Miron-Spektor, 2011). Failure to respond in accordance to generally accepted advice can cause harm to victims (Turner & Pidgeon, 1997), yet Vaughan (2009) pointed out that even when generally accepted advice dictates needed change, negative patterns embedded in the organizational culture can continue because of external, political, and other unpredictable control agents.

Carmeli and Gittell (2009) found that the probability of losing a lot by admitting a mistake often prohibits learning. When this happens, the depth of learning is limited to detecting and correcting superficial errors rather than investigating and challenging the deep organizational causes. Superficial single-loop learning leads to band-aid fixes rather than adjustments to the underlying culture. A culture of trust, psychological safety, and high-quality interpersonal relationships are variables that correlate to successful learning from experience, or deep-seated double-loop learning that challenges the underlying beliefs and assumptions of the organization (Argote & Miron-Spektor, 2011; Carmeli & Gittell, 2009).

Schein (1993) posited that psychological safety is a variable in group change because it promotes learning through substantive communication or dialogue between and among hierarchal corporate levels. However, Schein also pointed out that latent hierarchy-based subcultures hinder learning, organizational integration, and coordination because organizational learning cannot occur until the learning first takes place in the executive subculture, which is doubtful when executives resist self-analysis. Effecting cultural change by learning from mistakes is difficult for an organization because of the underlying culture.

Management of Risk

Risk management. Risk management research has been a prevalent and relevant paradigm worthy of investigation and implementation, as indicated by the increase in the number of articles referencing ERM and risk management officers (Liebenberg & Hoyt, 2003). Because the current study was concerned with providing empirical evidence to

assist in managing integrated financial systems risk to ameliorate financial disaster, the predominant source of risk management literature for the study has centered on the risk factors of catastrophes caused by failures in complex technical systems. Managing catastrophic risk is essential because even though space shuttle explosions (Vaughan, 2003); oil spills (Gill et al., 2011; Graham et al., 2011; Harrald et al., 1990); nuclear power plant meltdowns (Perrow, 1999); nuclear weapons near misses (Sagan, 1993); chemical plant leaks and explosions; and mass transit accidents are rare, the damage is generally devastating, tangible, and easily observed. However, the risk management literature also has included research in less formidable yet vital technical systems as information technology (Sammarco, 2005) and health care services (Bagnara et al., 2010; Pronovost et al., 2006). Institutions manage market risk by using mathematical equations to quantitatively analyze the effects of business practices or specific transactions used to protect assets, realize returns on investments, or mitigate losses associated with capital market activity uncertainties (Ernst & Young, 2013; Lo, 2009; Power, 2005). Furthermore, often overlooked in the discussion of risk management has been the strategic risk in protecting an organization's most valuable intangible asset, namely, its reputation (O'Rourke, 2004) or headline news exposure (Levine, 2004; Valukas, 2010).

In their discussion of reputation risk management, Bebbington, Larrinaga, and Moneva (2008) stated that reputation is a valuable intangible asset that "produces tangible benefits such as charging premium prices in exchange for quality, lower resource costs, customer and employee loyalty, and cushion when a crisis occurs" (p. 339). Valukas's (2010) report on the Lehman Brothers' bankruptcy included comments from

the then-global financial controller regarding concerns about the reputational and headline risk inherent in certain transactions used to reduce the balance sheet and impact the publicly reported net leverage ratio. Irresponsible financial reporting agents manipulated fiscal data and breached their fiduciary duty to achieve pecuniary gain, disregarding the long-term effect of their decisions on the organization or other stakeholders (Valukas, 2010).

Executive disregard for policies and perpetual warnings from internal and external sources, a nontransparent reporting culture, and negligent external control on the part of independent auditors Ernst & Young allowed Lehman's questionable accounting practices to incubate into a financial disaster adversely affecting the organization and related stakeholders, including the U.S. economy (Valukas, 2010). Reputational capital can be managed through strategic operational compliance and financial (reporting) interactions with stakeholders (Bebbington et al., 2008).

Enterprise risk management. COSO (2004) designed the ERM framework to provide a common language and guide to operationalize stakeholder organizational value by maximizing opportunity while minimizing risk to achieve the organization's strategic, operational, reporting, and compliance goal objectives.

COSO (2004) defined ERM as

> A process, effected by an entity's board of directors, management and other personnel, applied in a 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. (p. 2)

The ERM framework also expanded the previously established internal control framework of operational, reporting, and compliance goal achievement to anticipate, assess, and embrace uncertainties from a strategic goal achievement perspective (COSO, 2004). Furthermore, where the internal control framework included risk assessment as a forensic component of quality internal control, the ERM model expanded the risk assessment component into three segments that when coupled with components from the internal control framework make up the total risk management components in COSO's ERM framework (DeLoach & Thomson, 2014).

Eight ERM components integrate with the management process of an organization. The checkpoints ensure that the tenor of the organization is centered on risk appetite values and ideals (internal environment), then it ensures that objectives are set (objective setting) so that internal and external threats or opportunities can be identified (event identification), assessed (risk assessment), and actions developed to respond to the events (risk response). Procedures and processes (control activities) operationalize effective risk response actions. Capturing, analyzing, and effectively disseminating relevant information (i.e., communication) to all members of the organization is integral to the fluid, iterative, and interactive nature of ERM. As organizations change, so may the requirements of ERM. Therefore, regularly evaluating (i.e., monitoring) the ERM process ensures that the framework is modified and adjusted accordingly to accomplish its goal (COSO, 2004). A comprehensive and fluid integrated ERM system facilitates insight into

all aspects of business planning because it approaches risk management from various organizational perspectives and provides a standard for implementation and monitoring.

Some organizations have adopted ERM's holistic risk management system to increase stakeholder value, but others have not (Beasley et al., 2005). Determinants of ERM system adoption include dictates from boards of directors or other senior leadership, external regulatory standards, and the presence of risk managers or other such designated executives whose duty it is to focus on risk matters (Kleffner, Lee, & McGannon, 2003; Liebenberg & Hoyt, 2003). Other organizational factors that influence ERM adoption are organization size, auditor type, industry categorization, and statute requirements (Beasley et al., 2005). ERM does not look the same in every organization. However, Peter Frank, PwC partner, stated that successful ERM programs have one thing in common, a robust risk process culture (as cited in Essaides, 2013).

J. Cohen et al. (2017) used the ERM framework outlined by COSO (2004) to examine the linkage between ERM and the quality of financial reporting by performing a qualitative analysis of 11 organizations' governance triad that they defined as chief financial officers (CFOs), audit committee members, and external audit partners. They found that ERM influenced the quality of financial reporting and internal controls but had less impact on the quality of external audits. J. Cohen et al. attributed this lowered impact to the propensity for auditors to focus on audit compliance standards and lack of ERM knowledge or value. Although the ERM framework was intended to provide an objective structure to implement a comprehensive risk management platform, Power (2009) purported that without more emphasis on governance quality rather than regulatory

compliance, ERM might be reduced to a "corporate policy document only to provide symbolic security" (p. 851). Clarke (1999) referred to plans that try to control dangers as fantasy documents "set in rhetoric of technical competence, and often in one of national interest, providing a context that helps persuade audiences (internal and external) of their legitimacy" (p. 16). The frequency with which external auditors have played a role in financial disasters (e.g., Enron, Madoff, Lehman Brothers, and others) raises the question whether financial audit documents are simply fantasy documents designed to assert tenuous confidence in the financial condition of a company.

Although the ERM framework was intended to assure stakeholders that inclusive goal achievement would be at minimal risk, it has limitations. ERM is a system addressed, developed, and implemented by individuals, and the human resource system drives its success (COSO, 2004). It is reasonable that similar factors causing technical system failures, such as misguided cultural assumptions and values, fiscal pressures, errors, injudicious agentic decisions, and control failure, can cause an ERM system to fail (DeLoach & Thomson, 2014).

Power (2009) expounded on the systemic risk of ERM by outlining the conflicts of a holistic risk appetite concept built on compliance-driven notions. Power maintained that harnessing an organization's entire risk scenario under one premise is nearly impossible because of the behavioral subjective biases and predispositions of the individuals involved. The critical imagination necessary to excavate unknown future events requires an arena of discomfort and ambiguity, yet this appears to be in conflict with an ERM designed as an auditable tool of due process (Power, 2009). A compliance-

driven risk management approach prohibits the intricate view of interconnectivity that organizations have with their environment, which in itself limits the scope of risk assessment. Scheytt et al. (2006) maintained that regulatory process side effects can be counterproductive to risk management in that they create their own subset of procedural, reputational, and legal risks. A comprehensive, firm-wide ERM framework provides value to organizations and their stakeholders. However, excessive emphasis on compliance and regulation limits ERM effectiveness by placing a wedge between managing uncertainties and the overarching purpose of supporting goal objective achievement.

High-Reliability Organizations

Certain technical high-risk operations cannot implement trial-and-error risk management methods because the cost of a system failure to a population or an environment outweighs the benefit of learning from an error (LaPorte & Consolini, 1991), which precipitates the need to operate at a high rate of reliability from the start. Groups of researchers investigated the unique characteristics of these high-risk technical organizations operating with unusually high rates of reliability and developed the HRO theory and the concept of HROs (LaPorte & Consolini, 1991; Orlitzky et al., 2003; K. H. Roberts, 1990; Schulman, 1993). HRO theory defines the deliberate systemic organizational paradigm, meaning that despite the normal accident tendency, some organizations are able to manage risk where they operate nearly failure free (Lekka, 2011; Perrow, 1999; Rijpma, 1997; K. H. Roberts, 1990; Sagan, 1993; Schulman, 1993; Weick et al., 2008).

HRO theory parallels NAT's premise, wherein deeper organizational characteristics and system interaction failures often are the antecedents to accidents in high-risk technical industries, even when it appears initially to be operator error (LaPorte & Consolini, 1991; Perrow, 1999). Furthermore, like the MMD model, HRO theory acknowledges that certain organizational factors allow active and latent failures to compile and incubate to a point where the rules and regulations in place to mitigate accidents lose their defensibility (Pidgeon, 1997; Reason, 1997; Sagan, 1993; Turner & Pidgeon, 1997).

HROs reduce the risks associated with human-technical system interaction by designing initial systems to address the organizational factors outlined in NAT's complex and highly coupled inevitable accident model (Perrow, 1999) and the MMD model of accumulated latent and active errors (Turner & Pidgeon, 1997), which increases an organization's vulnerability paradigm (Sagan, 1993). The accident-causing literature regarding risk factors in high-risk industries has contained theories developed from a posteriori analyses of accident case reports, but the HRO literature has contained research about the antecedents and determinants of reliability from a concurrent ethnographic approach to identify the factors that contribute to nearly accident-free operations in high-risk organizations (Bourrier, 2011).

Leveson et al. (2009) outlined the fallibility of high reliability as the prominent construct in safe operations from a systems theory engineering perspective, in that dysfunctional yet reliable systemic interaction can lead to accidents. When production pressures or migration in processes influence safety constraints and processes negatively,

system interactions become dysfunctional, creating an accident-prone environment (Leveson et al., 2009). From this idea, Leveson et al. developed a fluid, enterprise-wide systems/control safety risk model that includes mathematical risk analysis processes to combat system degradation resulting from active pressures or constraints on the system. Control and communication between and among levels maintain the hierarchical system control process in the desired model. Leveson et al.'s application of an active and iterative enterprise systems/control risk model to promote reliable and safe operations in high-risk organizations supports the application of a fluid ERM model to control system degradation for managing risk in less highly technical operations not subject to immediate safety breaches.

HROs are not error free. They are organizations recognized by their lack of catastrophic events, despite advanced technological capabilities and complex interdependent systems (K. H. Roberts, 1990). Seminal HRO theorists recognized this characteristic and conducted studies to investigate performance reliability traits of the U.S. Federal Aviation Administration air traffic control system; the Pacific Gas and Electric Company's electric power system, which includes the Diablo Canyon nuclear power plant; and the flight operations of U.S. aircraft carriers and other similar organizations (Bourrier, 2011; Sagan, 1993; Schulman, 1993). The literature generated by these and other studies outlined specific thematic characteristics germane to HROs, with the overarching characteristic being the continued mind set to actively and aggressively seek, gather, analyze, and synthesize data regarding the current operating environment to diligently and vigilantly search out system failures or errors that would lead to disastrous

outcomes if not addressed (Lekka, 2011; K. H. Roberts & Bea, 2001; Weick & Sutcliffe, 2007; Weick et al., 2008). However, error awareness without actions to mitigate danger are useless and allow errors to accrue into disastrous events (Weick et al., 2008).

Collective mindfulness. HROs anticipate, contain, respond to, and rebound from errors through collective and mindful attention to errors operationalized by a preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience, and deference to expertise (Weick & Sutcliffe, 2007; Weick et al., 2008). Collective mindfulness was significant to the theoretical basis of the current study as an antithetic construct to the unreliable irresponsible financial reporting that led to the Enron case (McLean & Elkind, 2004). Financial reporting agents in this case observed and understood some of the latent errors and active failures in the reporting system, yet they either chose not to, or were unable to, act to correct them (McLean & Elkind, 2004), which engendered unreliable reporting and potential financial debacle.

Preoccupation with failure. HROs exist in a constant state of failure anticipation, that is, they expect the unexpected (Weick & Sutcliffe, 2007). As stated earlier, failure is a precursor to learning how to avert disaster. However, if HROs rarely experience failure, the opportunity to learn is not apparent. Therefore, how can preoccupation with failure be a factor of successful ERM in an organization with limited failure? Weick et al. (2008) surmised that any lapse in system or component operation is reason for investigation and that one deviation, no matter how small, if left unaddressed could breed disaster. Examples include “recent changes in supervision, issues delegated

without follow-up, lack of a questioning attitude, missed steps in a procedure, people not on the same page, and staff spread thin, distraction from schedule pressures" (Weick & Sutcliffe, 2007, pp. 47-48). Broadening the definition of error from only egregious and interrupting to include commonplace changes makes seemingly mundane maintenance activities high order for locating small incidents or weaknesses for accident prevention learning (LaPorte, 1996; K. H. Roberts & Bea, 2001; Weick & Sutcliffe, 2007; Weick et al., 2008). Taking from Sagan's (1993) near-miss discussion, even those actions used to avert accidents are opportunities to learn.

Consistent success promulgates complacency and self-reliance, both of which can increase the tendency for human error (LaPorte & Consolini, 1991). Lo (2009) suggested that long periods of economic growth and prosperity lead to investor complacency, which reduces the diligent seeking of latent errors and failures that could lead to financial crises. Even during periods of continued operational success, HROs diligently combat failure potentials that emerge from diminished vigilance, discontinued adjustments, and the failure to strive in a complacent environment (Weick et al., 2008). An organization preoccupied with failure assumes that something is wrong, even when it appears not to be.

Reluctance to simplify interpretations. Non-HROs strive to simplify or streamline processes and procedures in the interests of efficiency, productivity, and profitability by arriving at consensus about which data to ignore and which to act upon (Shawn Burke, Wilson, & Salas, 2005). Simplification in HROs is slower and evolves differently, and the need for simplification diminishes with each analytical challenge

(Weick & Sutcliffe, 2007). Reluctance to simplify interpretations means continuously dissecting and analyzing organized processes and procedures from divergent perspectives to combat risk inertia created by complacency (Weick et al., 2008). HROs seek and embrace reasons to challenge the system status because they are never satisfied with the accident-prevention status quo.

Heterogeneous inquiry instigated by team members diverse in experience, training, and organizational status can generate redundant system analysis through skepticism and disagreement (Shawn Burke et al., 2005). Vogus and Welbourne (2003) suggested that organizations use skilled temporary employees to provide fresh insight to mindless routines. Resulting consensus from challenged perspectives can generate additional skepticism from other members, which generates yet more probing and analysis of processes and procedures (Weick et al., 2008). Managing the various perspectives of individual challenge and debate for the good of operations requires a culture of interpersonal excellence, such as active communication, employee engagement, trust, and mutual respect, to mitigate potential issues resulting from hubris, bullying, and self-importance (Vogus & Welbourne, 2003; Weick et al., 2008). The HRO concept of reluctance to simplify interpretations was relevant to this study as a construct to combat the simplification of auditing and reporting techniques, processes, and procedures simplified in the interest of profitability.

Redundancy. NAT theorists have argued that redundant measures create an atmosphere of complacency (Rijpma, 1997). HROs value the redundancy of informational technology components, parts, and personnel duties because it ameliorates

the brittleness of tight coupling, so they use methods to actively address complacency from reliance on duplicity (LaPorte & Consolini, 1991; Lekka, 2011; Rijpma, 2003; K. H. Roberts, 1990; Weick et al., 2008). Extra efforts to implement redundant technologies, components, and extensive cross training come at a cost. Therefore, the decision to invest in high-reliability measures depends upon the weight of avoiding hazardous accidents versus the cost of hazardous disasters (K. H. Roberts, 1990).

Sensitivity to operations. The notion of sensitivity to operations questions whether the reality of the work is being performed as prescribed by the analyses, plans, and designs developed to address the complexity of the operations (Weick & Sutcliffe, 2007). Sensitivity to operations means taking a step away from the objective, measured, and quantified operational constraints to view operations from an experiential and comprehensive perspective for thematic anomalies, or other evidence of changes in operational condition that can pose safety threats. Weick and Sutcliffe (2007) provided an example of sensitivity to operations when a high level of needle stick injuries was occurring among medical cleaning personnel. By analyzing the process, management realized that the injuries were not the result of careless individual error; instead, they occurred because trash receptacles resided under old needle dispensers. The trash receptacles were moved, and the injuries stopped. Reacting insightfully to an existing error to correct it is one indication of sensitivity to operations. However, an HRO that successfully operationalizes sensitivity to operations will look at a near miss as an active failure or an error worthy of investigation and learning, not as evidence of its satisfactory safety and reliability processes (Weick & Sutcliffe, 2007).

Saturated awareness and alertness to every situational aspect of the current operating environment requires effective communication, valid interpretation, and higher level cognitive interaction between team members and the social construct of the system. Weick and Roberts (1993) surmised that collective, heedful actions of system actors creates a platform upon which sense making can occur to validate and confirm that operations are going as planned. When the collective group's "knowledge of failure, details, potential for recovery, and relevant experience" indicate that operations do not make sense within the confines of the system, the same collective effort is used to reconstruct the system to make sense (Weick et al., 2008, p. 45). When the social construct of the human resource system promotes heedless actions dissociated from the system, errors accumulate, and accidents occur (Weick & Roberts, 1993).

Commitment to resilience. The ability to reconstruct a system contemporaneously or asynchronously to make sense of adverse conditions and to contain and bounce back from disruptions (Weick et al., 2008) distinguishes HROs from other organizations. Resilient organizations learn from adversity caused by internal (i.e. production pressures) and external (i.e. investor and market) influences, with the result being reliable operations. Resilient commitment assumes that current knowledge is not adequate to manage what is unexpected, so HROs continue to press and challenge the system's perceived accurate interactions, even when the system appears to be stronger after having addressed a particular error (Vogus & Welbourne, 2003; Weick et al., 2008). The medical maintenance team whose members suffered from accidental needle pricks responded to the repetitive and unsafe occurrences in a manner that made their operations

stronger and posed less threat to employees and possible greater societal danger, had disease been spread by unintended needle pricks. However, the team's knowledge of and effective response to the needle prick threat unwittingly stifled anticipation of a similar yet unrelated error because the actors might simply have applied the successful removal strategy of the trash receptacles as a fix rather than investigate other failure outcroppings.

Weick and Sutcliffe (2007) defined resilience in the form of control as

> A system able to minimize or eliminate unwanted variability, either in its own performance, in the environment, or in both…The fundamental characteristic of a resilient organization is that it does not lose control of what it does but is able to continue and rebound. (p. 70)

Taking control can refer to the ad hoc convergence of informed and knowledgeable individuals to contain an emerging crisis stemming from an adverse system disruption, to fighting ambivalence occurring from the orderliness of successful past performance (Weick et al., 2008). The reflexivity of response and reaction to a situation depends upon the accessibility of information needed at the time, regardless of decision-making authority.

Structure and deference to expertise. As a participant observer in an in-depth case study aboard two nuclear-powered aircraft carriers, K. H. Roberts (1990) recognized that structured hierarchical differentiation facilitated routine operations through a rigid chain of responsibility and extensive communication methods facilitated access to expertise in critical situations. However, in a moment of crisis, personnel of hierarchical rank could invoke their specific expertise to make emergent decisions in the name of

safety (Bigley & Roberts, 2001; LaPorte & Consolini, 1991; Vogus & Welbourne, 2003; Weick et al., 2008). Members of the team closest to frontline operations often are the most proximal to error events and are, therefore, the best people to make quick decisions to prevent conversions of system disruptions to serious accidents (Weick & Sutcliffe, 2007). The apparent decentralization of the hierarchical decision-making dimension of HROs seems paradoxical, but Leveson et al. (2009) pointed out that the immediate limited decision-making nature of lower ranking individuals, such as the authority of aircraft carriers' seamen to abort landings, mitigates disaster, but does not change policy or process unless leadership addresses the effect of the decisions on the system.

When the hierarchical structure is impenetrable, lower ranking corporate members often are reluctant to speak up, challenge authority, and push the matter of correcting discovered latent failures (Weick et al., 2008). Furthermore, higher power-ranked members generally operate in a bounded and rational decision-making zone (Turner & Pidgeon, 1997) because they do not have the hands-on work experience knowledge to value the information offered. In some cases, underling concerns are ignored so as not to interrupt a seemingly profitable status quo. When a lower level error combines with a higher order error such as bounded and rational decision making, unethical leadership, or poor communication, the resulting effect can be complex and difficult to reconcile (Weick et al., 2008).

When higher ranked corporate members who possess the hierarchical power to make permanent change do not address errors declared by lower ranked members, normalization of acceptable deviance develops (Vaughan, 2003). Ordered reliability in a

culture of normalized deviance is dangerous because it allows risk inertia to multiply exponentially as the hazard slips through the holes in the organization's defenses that leadership refuses to plug (K. H. Roberts & Bea, 2001; Weick et al., 2008). Turner and Pidgeon (1997) referred to the structured nature of unintended consequences as antitasks. If the purpose of hierarchically structured systems is to accomplish the organization's tasks, then the unintended consequences that arise from these negentropic, order-seeking systems are considered antitasks rather than completely random errors. Antitasks of a hierarchical structure can amplify a failed system component in such an orderly fashion that problem acceptance integrates into the organization's culture and that even when higher ranked members finally acknowledge and deem the deviance formidable, the inertia cannot be stopped, and disaster occurs (Vaughan, 2009).

This notion is particularly salient to irresponsible financial reporting. McLean and Elkind (2004) provided various examples of lower ranked stakeholders questioning the financial reporting practices of Enron, with no heedful reactions from the executives for various self-centered reasons. Enron's aggressive, individual success-seeking, competitive, unethical, and rule-stretching culture allowed the orderly, negentropic nature of financial reporting systems to promulgate its financial accounting system failures in an orderly fashion all the way to Wall Street's unsupported earnings reports (Sims & Brinkmann, 2003). Sims and Brinkman (2003) posited that Enron's culminated financial collapse was the direct result of decisions and actions permitted by Enron's culture.

Organizational culture. A culture embodies the embedded shared assumptions, values, and beliefs developed to make sense of organizational problems and solutions

(Schein, 1983). Leaders establish and drive organizational culture, and culture shapes the paradigm in which organizations operate (Schein, 1983, 1984). Weick and Sutcliffe (2007) used O'Reilly's (1989) model of corporate culture conditions to corroborate their notion of reporting, justice, flexibility, and learning in HRO culture (see Figure 3).

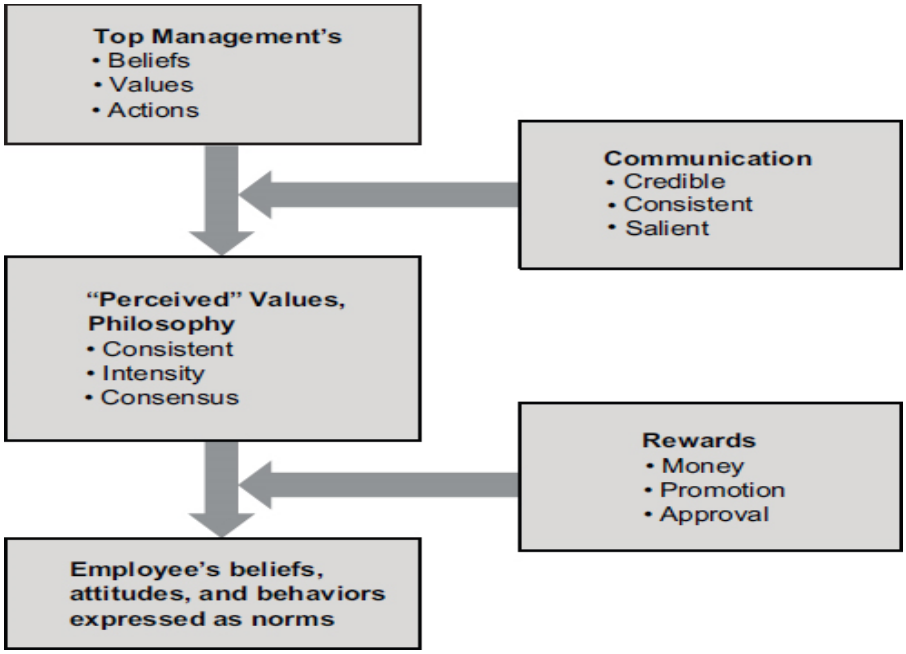


Figure 3. Managing culture. Reprinted from "Corporations, Culture, and Commitment: Motivation and Social Control in Organizations," by C. O'Reilly in *California Management Review, 32*(4), p. 23. Copyright 1989 by the Regents of the University of California. Reprinted with permission.

Organizational culture eventually resolves in financial outcomes, often referred to as the "bottom line" of a business (Denison, 1984; Glaser, 2014). Negative cultural influences can soften the boundaries of control systems, thus allowing latent risk conditions to normalize into business as usual, which sets the stage for a socio-organizationally caused technical disaster (Martinez-Moyano et al., 2013; Rasmussen, 1997; Vaughan, 2009).

Sims and Brinkman (2003) used Schein's (1984) five primary cultural influencing leadership mechanisms (i.e., attention, reaction to crisis, role modeling, allocation of rewards, and criteria for selection and dismissal) to analyze the effect of leadership on Enron's demise. The analysis detailed various examples of negative leadership influences responsible for generating a culture of antitask development. To protect stakeholders from the harmful effects of negative influences, authorities designed and implemented regulatory, legislative, and industry controls. However, if the organizational culture does not embrace and promote the control system, stakeholders can experience risk-harm.

In the wake of Enron, O'Connell (2004) analyzed accounting practices, corporate governance, and regulations, positing that "fundamental failure of contemporary regulatory and corporate governance systems means that ongoing abuses and costly failures will continue to plague our capitalist system" (p. 737). Calandro (2012) used NAT to define and assess methodologies for analyzing global systemic financial risk, and argued that although quantitative and regulatory measures can moderate risk and decrease the probability of financial crises, financial risk management methodologies must acknowledge and account for qualitative social and behavioral factors to be truly effective. HROs operate in a rules-and-regulation schema, but they also engender and nurture a culture that addresses the human social factors to operationalize the regulations and controls designed for risk management effectively (LaPorte & Consolini, 1991).

Informed culture. An organizational culture develops from the stories, artifacts, and common language of the members (Schein, 1983). Storytelling is a natural mechanism used to transfer knowledge between and among organizational constituents.

Initial reactions to what organizational members learn upon assimilation are integral in determining their reactions to pressure-driven factors during performance (Weick, 1987). By telling stories of previous incidents, problematic situations, and subsequent resolutions or difficulties, HROs send the message that it is safe to report to others information about potential errors and possible solutions (K. H. Roberts & Bea, 2001; Weick, 1987).

Just culture. To foster open communication, there must exist a trusting atmosphere where members report errors, both theirs and the errors of others, without fear of retribution. Reason (2000) conveyed that a reporting culture requires the key element of trust and that even though trust exists in a just culture where the boundary between blameless and blameworthy actions is blurred, accountability remains for those who intentionally engage in unacceptable and unsafe behavior. K. H. Roberts and Bea (2001) indicated that systems of reward and incentive must encourage open communication of all organizational information, including safety issues, to embellish a culture of trust in the interest of safety. Rewards skewed toward financial performance will extinguish espoused values of failure avoidance and affect reliable operations negatively.

Diverse culture. As a culture develops, team members assimilate to the culture and share like-minded thinking. A diverse culture creates the requisite variety of individual characteristics to address potential errors and accident mitigation in HROs (Weick, 1987). This thought contradicts the homogeneous nature of redundant safeguards and further supports the need for a just culture whose members are less likely to trust

individuals who are different from them (Weick, 1987). Gifun and Karydas (2010) promoted the value of diverse perspectives in the analytic-deliberative decision making process of the highly reliable resilient organization model.

The various functions of financial reporting systems create an integrated web of operations manifested under one set of overarching general accounting, auditing, and reporting rules and regulations. Organizational complexity increases when processes and procedures require participatory and coordinated integration across departmental lines (Schulman, 1993). At Enron, internal competing constraints such as compensation structures linked to profit and revenue production, and external performance pressures to produce earnings, generate and maintain viable market presence, and meet financing covenants fostered a culture of fiefdoms operating out of self-interest (Arnold & De Lange, 2004; McLean & Elkind, 2004). Lekka's (2011) review of HRO literature emphasized the importance of organizational culture factors to ensure consistent and reliable operations in organizations subject to catastrophic events.

Summary and Transition

The purpose of this qualitative, grounded theory study was to use HRO constructs as a frame to identify and define the psychological factors of ERM effectiveness in organizational financial reporting responsibility. Chapter 2 provided an overview of financial reporting and management systems, along with a review of relevant literature, to showcase the theoretical basis for the study as it pertained to mitigating disaster factors, managing risk, and organizing for high reliability. The NAT and error literature have explained possible socio-organizational factors of financial system collapse and resulting

disaster (Perrow, 1999; Pidgeon & O'Leary, 2000; Reason, 2000; Sagan, 1993; Turner & Pidgeon, 1997). The ERM literature was presented as an established framework for operationalizing the human factor in risk management (Beasley et al., 2005; COSO, 2004; Power, 2009; Rasmussen, 1997; Reason, 1997). The HRO literature served as an applicable guidance to frame this investigative study to define the psychological factors integral in reliable and responsible financial reporting systems (K. H. Roberts, 1990; Schulman, 1993; Vogus & Welbourne, 2003; Weick & Sutcliffe, 2007; Weick et al., 2008).

The interaction of an organization's accounting, financial reporting, and control subsystems is key to generating accurate and dependable information about the financial condition of a company. Interruptions in complex organizational financial systems can result in distorted views of the economic outlooks of companies that can become a platform for fiscal disaster (Calandro, 2012). Perrow (1999) developed NAT to explain how disruptions in complex, integrated, and tangible systems create the potential for physical catastrophes. Regulations, statutes, and professional standards provide internal and external control risk management processes and procedures to protect stakeholders, the public, and the larger economy from the effects of catastrophic financial meltdowns. Just as habitual disregard for harm avoidance measures can incubate and precipitate physical disasters, as outlined in the MMD model (Turner & Pidgeon, 1997), financial control system failures permit erroneous, negligent, and fraudulent acts to evolve into egregious financial disasters (Calandro, 2012; Perrow, 2010).

Also bound by regulations, rules, and standards to protect third parties, highly technical and complexly integrated organizations such as petrochemical and nuclear power plants use HRO constructs to conduct operations in nearly accident-free environments. HROs address potential risk-harm to third parties by developing and nurturing organizational cultures that promote collective and mindful ERM through learning, preoccupation with failure, reluctance to simplify, redundant training and safety measures, sensitivity to operations, and fluid structural decision making with deference to expertise. Although the literature on financial risk and crises management has addressed the human factor in minimizing financial disasters, the ERM factors outlined in these sources primarily have addressed quantitative measures balancing risk-taking transactional activities with reward and minimal negative impact on organizational stakeholders, a tenet known as risk appetite (Arena et al., 2011; Beasley et al., 2005). There has been a gap in the literature regarding the psychological constructs of successful human interaction with organizational factors to mitigate the risk of financial reporting system disaster (Calandro, 2012; Müssig, 2009; Power, 2009).

Chapter 3 outlines the rationale for choosing a grounded theory research design, my influence as the data collection instrument in the study, the recruitment and selection of the participants, and the criteria for saturation and sample size. In addition, information regarding data collection, analysis, and coding is included in Chapter 3, along with assurances regarding the consideration of trustworthiness and the ethical treatment of the participants.

Chapter 4 presents the data revealed from interviewing 13 participants engaged in reputable responsible financial reporting systems. The influencing human factors of responsible financial reporting systems data are organized and analyzed from a core category to subcategories, and applied to the RQs based on the subcategorical groupings. Tables, figures, and narratives using quotations from the participants and juxtaposed examples from the discrepant Enron (McLean & Elkind, 2004) case to support the thematic trends used to present the data. Chapter 5 summarizes the data related to HRO and ERM theory, and provides theoretical modeling to address the human factors that support the accurate and reliable reporting of entity financial activity in a manner to mitigate risk-harm to third-party stakeholders. Chapter 5 also presents information about the delimitations and limitations of the study, opportunities for further research, and the social implications of the findings.

Chapter 3: Research Methods

Introduction

Despite preventive regulatory constraints and best practice policies and procedures, financial disasters resulting from irresponsible fiscal management and reporting occur, causing risk-harm to unsuspecting stakeholders, innocent other third-parties, and the greater economic environment. HROs are subject to regulatory constraints and best practice policies and procedures, but they also possess organizational characteristics that promote reliable operations, despite the tendency for accidents to happen (LaPorte, 1996; K. H. Roberts, 1990; K. H. Roberts & Bea, 2001). Understanding the psychological factors of HROs as they apply to responsible fiscal management would assist in promoting reliability in the less tangible yet highly integrated systems of financial management. The organizational psychology literature discussing such an application has been sparse and disconnected; therefore, the purpose of this study was to use NAT factors and HRO constructs as a frame to identify characteristics of ERM effectiveness in organizational financial reporting responsibility.

This chapter includes an explanation of the research design as well as the rationale for the choice of design, including participant selection logic, sampling strategy, instrumentation, and data analysis methodology. Because researchers are the instrument in qualitative studies (Creswell, 2013; Patton, 2002), the chapter also includes a detailed discussion about my role as the researcher. Matters of trustworthiness and the ethical procedures used to protect the participants also are presented in this chapter.

Research Design and Rationale

Grounded theory inquiry uses objective induction to elucidate empirical knowledge from a target population involved in a common practice or process that will generate or expand, rather than simply test, theory (Patton, 2002). The rigors of grounded theory inquiry provide organizing and coding tools useful for the in-depth analysis of potentially large amounts of data by subjective and penetrative exploration through interviews while applying extant theory to maintain objectivity during inquiry (Patton, 2002). This method of inquiry was appropriate to explicate the unique dimensions of HRO psychological constructs germane to effective ERM in fiscal management and financial reporting.

The following RQs were designed to generate relative interpretable data:

1. What HRO constructs applied in ERM are present in reliable financial reporting?
2. How can HRO constructs applied in ERM minimize organizational stakeholder financial risk-harm?
3. How can HRO constructs applied in ERM inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility while maximizing profitability?

Role of the Researcher

The measurement instrument in qualitative research is the researcher (Creswell, 2013; Patton, 2002). As an observer participant, my experience, knowledge, feelings, beliefs, and values affected the variety of reactivity in the study (Patton, 2002). A

philosophical assumption in qualitative inquiry is that by acknowledging personal factors or biases that might affect data analysis and interpretation, researchers engage in epoche, or the setting aside of their experiences, as much as possible to facilitate discovery of an original perspective of the phenomenon being studied (Creswell, 2013). Because biases can affect data coding, analysis, and interpretation, all of which can reduce the credibility or validity of the findings (Creswell, 2013; Patton, 2002; Trochim, 2006a, 2006b), I managed my personal influencing factors by understanding my predispositions, contemplating how they could have affected the study, and reserving them until the study was complete. Furthermore, I used an initial coding scheme (see Appendix A) to remain objective and focused on the thematic concepts relevant to this study (Corbin & Strauss, 2008). This coding scheme allowed me to remain open to all possible data defining HRO psychology constructs as they might have applied to organizational financial risk-harm management without straying into unrelated areas.

I am a CPA licensed in the state of Maryland. In line with the AICPA's (2014) Code of Professional Conduct, CPAs are qualified professionals whose overarching ethical responsibility is to serve the public interest with integrity and due care by providing objective and independent third-party assurance regarding the validity and accuracy of the financial activities reported by the management of organizations. CPAs perform attest, tax, managerial, and other derivations of related professional services, depending on the needs of the user. Assurance services such as audit and review engagements are designed to inform third-party users of the integrity of the information

presented by management in the statements of financial position (AICPA, 2013). The precept of third-party reliance upon financial reporting was central to this study.

My credentialing lent credibility to my ability to mine and analyze the data from a financial perspective. A possible bias arising from my credentialing was the presumption that all individuals involved in accounting inherently abide by the specific regulatory, ethical, and reporting standards set forth by the governing agencies guiding assurance servicers. This presupposition might have restricted my openness to emerging trends and themes of HRO constructs apparent in responsible financial reporting and management. However, although I have some experience with assurance services, the preponderance of my public accounting experience has been with tax compliance and managerial consulting, which might have ameliorated the constricting effects of the presumption allowing me to be open to apparent HRO constructs of responsible financial reporting. Furthermore, I reviewed cases of fraudulent financial reporting evidencing that not all individuals subject to the AICPA assurance standards have exercised their professional responsibility to third-party users with objectivity and integrity (Calandro, 2012; Ernst & Young, 2013; Markopolos, 2010; McLean & Elkind, 2004).

As the measurement tool in this study, I was aware that any professional association or relationship with any of the participants, coupled with the sensitive and revealing nature of financial reporting and fiscal performance, could have resulted in the halo effect (Patton, 2002). I had to be cognizant of the possibility of participants providing false information to portray themselves and their organizations positively rather than realistically. To mitigate the variety of reactivity of this effect, I asserted my

position as a researcher, not as a CPA, a colleague, or a professional network contact. I provided assurance that the identities of the participants and their organizations would be protected, as outlined in the informed consent. To mitigate a halo effect further, I used my accounting knowledge to mine truthful and honest information from the participants by analyzing publicly published or requested financial statements and reports. This procedure facilitated triangulation of the data provided by the participants (see Appendix B). I also was cognizant of the fact that some participants simply were not forthcoming and truthful about their actions if they were contrary to responsible reporting, regardless of my association with them.

Gender could have been a factor in my role in this study in that I am a female CPA. According to the Current Population Survey (U.S. Bureau of Labor Statistics, 2014), women represent more than 60% of the accountant and auditor population. However, according to the same survey results, women represent less than 30% of chief organizational officers, which could include CFOs. Because I sought participants who were predominantly responsible for promoting accurate and responsible financial reporting and mitigating financial risk-harm, some participants were CFOs and were male. Men and women have different financial risk tolerance (Francis, Hasan, Park, & Wu, 2014), a factor that could have had a bearing on my interpretation of the data. I was cognizant of this factor when analyzing the data.

In some qualitative settings, the role of the researcher as observer participant affects the variety of reactivity simply by being present (Patton, 2002). This situation was not a concern in this study because my short-term presence as an interviewer did not

affect the characteristically longitudinal outcome of the embedded financial reporting and management practices of the organization with which I was associated at the time of the study.

Target Population

The target population comprised individuals responsible for or involved in organizational fiscal risk management and financial reporting. I anticipated that CFOs, CROs, controllers, auditors (external or internal), and accounting staff of organizations possessing sound financial management would fit this inclusion criterion. The SEC cited the need to meet internal or external earnings expectations as the most common motivations for fraud (as cited in Beasley et al., 2010). I sought participants who were members of fiscally solvent, publicly traded companies who used certain procedures to reveal indicators of sound financial position (AICPA, 2015). Because meeting earnings expectations is limited not only to Wall Street expectations but also is used in securing debt financing and as the basis for compensation structures, securing participants from smaller private organizations was appropriate and helped me to triangulate the data, adding trustworthiness to the findings (Patton, 2002).

In the COSO-sponsored study authored by Beasley et al. (2010), the most frequent industries cited as engaging in fraudulent reporting were computer hardware and software, other manufacturing, health care/health products, retailers/wholesalers, telecommunications, and other service providers. These conclusions were consistent with COSO's (1999) study (as cited in Beasley et al., 2010). Therefore, to qualify the target population further, I chose organizations whose primary business purpose was similar to

those listed for a more comparable yet still heterogeneous sample frame. The participants chosen to be in the study shouldered the burden of the research, but they also became the beneficiaries of the research in that they might be able to use the psychological factors defined by this research to further their mission of promoting responsible financial reporting and management while maximizing organizational goals.

Participants were selected using a maximum variation purposeful sampling strategy (Patton, 2002), an approach that supported the credibility and transferability of the results (Creswell, 2013; Patton, 2002). Participants were screened to ascertain their knowledge of financial reporting, as dictated by the rules, regulations, and standards of the accounting profession, so that I could consider the level of knowledge during data analysis. The deep inquiry of the critical homogeneous sample frame of actors responsible for fiscal risk management and financial reporting revealed the rich and thick data required to define HRO psychological constructs in organizational financial responsibility, and the heterogeneity of organizations across business purposes provided a breadth of understanding and support for theoretical application across groups (Patton, 2002).

Data richness was further enhanced by exploring the phenomenon under study from different perspectives (Creswell, 2013); therefore, the sample frame also stratified employees, leadership, and external accountants related to the financial environment and the ERM framework of organizations. The goal was to obtain participants from different levels of power in organizational reporting systems. Doing so provided information from different work experiences, system involvement, and output angles, thus improving the

likelihood of retrieving valid data. To approach the data from yet another perspective, I used the Enron (McLean & Elkind, 2004) financial disaster as a deviant case to contrast and compare the emergent HRO psychological constructs with the deleterious factors of irresponsible financial management that contributed to fiscal systemic interruptions and ultimate third-party risk-harm in these cases.

Theoretical sample size is determined by the research purpose, the data elucidated, and phenomenological emergence (Corbin & Strauss, 2008; Patton, 2002). At a certain point in inductive inquiry, gathering a larger quantity of information does not contribute to the phenomenological model. When this happens, the data are considered saturated (Corbin & Strauss, 2008; Creswell, 2013; Patton, 2002). Theoretical development research is an iterative process with no definitive precepts other than to do the necessary work to extract the relative theoretical data (Corbin & Strauss, 2008; Creswell, 2013; Patton, 2002). Based on this notion, I determined that the direction of the research and the availability of the organizational constituents dictated a sample size of eight to 10 participants. I was satisfied with the final sample of 13 participants.

Participant Recruitment

After receiving approval from Walden University's Institutional Review Board (IRB approval #08-10-16-0331125), I recruited the qualified participants via nondirect and direct personal invitation. Nondirect invitations were made by posting an invitation to join the study on the professional social media site LinkedIn, the Maryland Association of Certified Public Accounts' (MACPA) volunteer opportunity webpage and through its listserv, and Walden University's Participant Pool. Although the LinkedIn call for

participants received 41 views, no participants were generated from that venue or the indirect invitations posted on the Walden University Participant Pool or the MACPA volunteer page or listserv. However, association with MACPA proved fruitful because it solidified the credibility of the study in the local professional community and generated an opportunity for a direct invitation to one participant who subsequently agreed to join the study.

Personalized e-mail has positive effects on response rates (Heerwegh, 2005). Any confidentiality and privacy concerns regarding the use of e-mail are addressed in the Human Research Protection section of this chapter. I sent direct e-mail invitations to individuals of organizations that were financially sound, as indicated from public knowledge, such as in *Forbes Magazine's* list of America's 100 most trustworthy companies that was generated by GMI Ratings, a provider of governance research and ratings, and public financial data found in the annual Form 10-K, which is the public financial disclosure of publicly traded organizations. No responses were generated from these direct e-mail invitations; however, direct invitations sent to individuals responsible for the sound, ethical, and responsible financial reporting of reputable companies known professionally by me and referred to me by others generated the remaining participants.

After a recruited individual agreed to participate, I generated an e-mail from SurveyMonkey's Email Survey Collector, which provided more information and a link to the informed consent and the demographics survey. In an effort to secure further participants, the invitation also contained the following information:

NOTE: If you have personal contacts outside of your place of employment, whom you believe may meet the requirements to participate in this study, please forward this invitation to participate to them so they can contact me and I can send them their personal SurveyMonkey link. A forwarded link will not work.

Because participation in the study was voluntary, no questions, with the exception of Question 1, which consented to participating in the study, required an answer before moving on. If this question was not answered, the participant received the following message: "You must consent to participate to continue; otherwise, you can exit the survey and not participate, or, if you need more information before agreeing, please contact the researcher."

I used the self-reported information in the demographics survey (see Appendix C) to determine the eligibility of the participants to be in the study. For example, if the company was privately held and did not issue reviewed or audited financial statements for third-party reliance, the individual was not qualified to participate. Had any disqualifying events occurred, the individuals would have been sent private e-mails thanking them for their time and advising them they did not meet the participation criteria. I did not need to send any disqualification e-mail notices because there were no contraindications in the survey responses indicating that any participants were not qualified to be in the study.

Instrumentation

I used a demographics questionnaire to collect specific information about the eligibility of the participants, and I collected inductive data using a standardized, open-

ended interview approach (Patton, 2002). Using a rigid questionnaire would have inhibited the natural phenomenological discovery and data elucidation germane to qualitative inquiry (Corbin & Strauss, 2008; Creswell, 2013; Patton, 2002). However, conducting the interviews without using a guideline in this grounded theory study might not have mined the consistent thematic data required to develop or advance extant theory (Patton, 2002). A semistructured interview protocol acted as the framework to gather related emergent qualitative data (Patton, 2002) and as an agenda for collecting and analyzing voluminous narrative data that assured interested third parties such as IRBs or subsequent researchers of the dependability and confirmability of the results (Corbin & Strauss, 2008).

To address the RQs, I developed the interview protocol from an NAT, HRO, and ERM lens using analysis of the deviant Enron case and my professional knowledge of financial reporting and management. Analyzing historical financial disaster information from the Enron scandal (McLean & Elkind, 2004) facilitated the data triangulation regarding responsible financial reporting and fiscal management. I formatted the open-ended interview questions (IQs) to seek data about promoting as well as prohibiting responsible financial management to add descriptive richness by triangulating the data from negative and positive perspectives (Patton, 2002). Ethical standards and professional principles in accounting are operationalized through rules and regulations guided by GAAP (Nobles et al., 2014). They promote integrity, objectivity, uniformity, and comparability of financial reports to protect users relying on the financial information contained in the reports from risk-harm (AICPA, 2014).

To ensure credibility, I sought peer-debriefing (Chenail, 2011) or peer-auditing (Seale, 1999) feedback from professional colleagues regarding the ability of the IQs to elucidate rich and valuable data pertinent to the RQs. Most valuable was the feedback from forensic accounting colleagues. These peers did not qualify as participants in the study because of our employment relationship or contractual professional association.

Data Collection

After the qualified participants consented to join the study voluntarily, I contacted them to schedule private interviews at times and locations convenient to them, suggesting quiet locations with limited distractions (Creswell, 2013). If time or distance did not allow any participants to meet with me in person, I offered to conduct the interviews via Voice over Internet Protocol (VoIP)/video calls such as Skype and record the calls, or via non-video-recorded calls. Of the 13 interviews, eight were face-to-face meetings in the participants' office settings. One interview took place in my office, another in a conference room at the educational institution where the participant taught, one in the participant's home, and one in a local coffee shop. Initially, I was concerned about the audibility of the recorded interview in the coffee shop, but we were able to sit in a private area of the shop. I also tested the recording device before we started. I had no trouble hearing the recording while transcribing the participants' responses. Only one interview was conducted via recorded telephone call because the participant's schedule was such that an arranged location could not be set. At the onset of the interview, I informed this particular participant that the call was being recorded. Consent to record the call was

obtained and recorded before the interview began. No other interview methods were used to collect the data.

No personal or organizational conditions negatively influenced the respondents' participation. However, one organization was in a period of reorganization with regard to structure and strategy, a situation that provided a unique perspective of the ERM of responsible financial reporting and management. Also worthy of noting is the fact that although financial reporting deadlines loom throughout the year, the interview period occurred during the fall and winter holidays, which provided a more relaxed platform that encouraged fluid and easy conversation. This time-induced setting was not anticipated when outlining the interview process, but it did give me more time to extract substantial data from the respondents than might have been possible under more stressful circumstances and tighter time constraints.

At the scheduled times of the face-to-face interviews, I arrived early enough to set up and test the Olympus WS-853 digital voice recorder that I used to record the interviews before the participants arrived. I tested the digital recorder before the respondents arrived and again after their arrival by introducing myself and then asking the participants to state their first names and the date. At that point, I stopped the recording so that each participant and I could listen to it to ensure that we had quality audio for the interview. We then proceeded with the actual interview. Testing the equipment before recording ensured quality audio reception and negated the need to repeat the initial interview (Corbin & Strauss, 2008; Creswell, 2013; Patton, 2002).

I noticed that when the face-to-face interviews commenced, the participants fixated on the audio recorder that I had placed on the table or desk, which made the start to each interview slightly stilted. Because building trust and rapport between researcher and participant elucidates richer data (Patton, 2002), I was concerned that the focus on the equipment would prohibit rich data mining. However, additional questions in the interview protocol regarding job duties, involvement with rules and regulations, and expertise took the focus from the equipment and placed it on the participants, which provided a platform for me to build rapport with them and for the participants to relax and speak freely and often passionately about the topic thereafter.

I followed the same protocol for each interview, modifying it as the interviews progressed for redundancy, clarity, and to fit each participant's situation and circumstances. The open-ended IQs were successful in focusing the dialogue on the purpose of the study while also encouraging the participants to share their unique experiences in responsible financial reporting. At times, the participants became so passionate and informative that I had to redirect some participants back to the essence of the IQs.

If I believed that I could excavate more data from any of the interviews, or if any participants offered data that deserved to be pursued, I obtained their permission to follow up with them for clarification or verification (Creswell, 2013). All but three cases went no longer than the 1 hour promised. I advised the participants in the three extended interviews that my allotted time had expired and that unless they wished to continue, I would thank them for their time and conclude the interviews. The participants

appreciated my respect for their time but wished to continue because they felt that they had more information to provide. One participant was contacted via e-mail after the interview for additional information. I downloaded the audio files to my laptop immediately after the interviews for redundant storage in the event that the data on the recorder were accidentally erased or corrupted.

In all data collection scenarios, there were no debriefing procedures. I thanked the participants for their time and reminded them that as a part of member checking, I would send them copies of their individual transcribed responses to review and summaries of the preliminary interpretation of the data derived from the interviews to provide feedback concerning accuracy. I also advised the participants that they would receive an executive summary of the study upon completion.

Data Reduction

I designed the IQs to elucidate data connected to each RQ. The IQs relevant to RQ1 were intended to investigate the presence of HRO constructs that promote reliability in organizational financial reporting. The IQs pertaining to RQ2 addressed adherence to the rules, regulations, standards, and statutes intended to mitigate financial risk-harm.

Some peers have argued that “doing the right thing” and maximizing organizational net income rarely coexist in successful organizational reality. They have not been alone in this thought: Many researchers have addressed variations of dichotomous relationships between corporate social responsibility, that is, doing the right thing, and financial organizational success (Aguinis & Glavas, 2012; Frooman, 1997; Orlitzky et al., 2003; Peloza, 2009). The IQs relevant to RQ3 were intended to address

how leadership and employees in currently financially sound organizations value, operationalize, and promote this seemingly paradoxical relationship in practice and how this knowledge can be transferred to other organizations. Defining the motivational psychological constructs of leaders who promote fiscal fiduciary responsibility within their organizations' ERM while achieving sustained financial success in practice will provide evidence to other leaders that there are contributing psychological factors to acknowledge when promoting fiscal responsibility without harming the sought-after profitability of the organizations. The data extracted using these IQs supported RQ3 in providing tools for leadership to select and motivate employees to achieve organizational goals by performing their duties and tasks in the realm of responsible financial reporting and management.

I looked to embodied transcription (ET; Brooks, 2010) and Matheson's (2007) detailed and iterative transcribing methodologies as the first step in reducing and coding the data. Transcribing is the first step in qualitative data analysis (Bailey, 2008), yet descriptions of the transcription stage in qualitative literature often have been limited to brief mention that the data were transcribed, with little attention to the interpretive process occurring during this step (Brooks, 2010; Lapadat & Lindsay, 1999; Matheson, 2007). The iterative process of listening and speaking the words of the interviewees repeatedly immerses researchers in the information provided by the interviewees, allowing for better detection of converging data, thematic commonalities, and emerging theory (Brooks, 2010). Brooks (2010) defined the iterative three-cycle process of transcribing, that is, (a) revisit and repeat, (b) revision, and (c) refinement and reflection,

as ET. I used and adapted to my purpose the descriptive methods of ET provided by Brooks and the detailed methodology outlined by Matheson (2007).

The iterative ET process in this study went as follows:

1. I listened to the interview responses with earphones while speaking what I heard so that the voice recognition software, Dragon NaturallySpeaking v.13 (DNS) could transcribe my spoken words. This process included rewinding and repeatedly listening to various phrases to ensure that I heard the words correctly and understood their meaning.
2. I listened to the interview responses with earphones again while following the original rough transcriptions to correct misinterpretations by DNS of substantive content and correct typographical errors. This step also included various instances of rewinding and repetitive listening.
3. I then read the transcriptions for sensibility and corrected nonsubstantive content, such as they’re/there, and/in, and we’re/were.
4. Although the conversational nature of each interview resulted in grammatically imperfect transcriptions, I used Microsoft Word’s spell and grammar check capabilities to correct items that would not affect content but would make the transcriptions easier to read and interpret. These checks included items such as mistyped words, capitalizations, and punctuation not caught during previous content reviews.
5. I then sought credibility of the data by giving the participants the opportunity to review their individual transcriptions for errors, a validation method called

member checking (Creswell, 2013). This process occurred as soon after the interviews as possible to take advantage of personal recollections of the responses.

During the interviews, I took brief field notes of body language such as smirks or shrugs that were impossible to capture in the recordings. Doing so proved useful in interpreting the participants' spoken words. I incorporated these notes in the memos documenting my interpretive thoughts (Creswell, 2013). Field notes and memos contributed to the credibility of the data analysis by providing a framework to conceptualize the thematic trends, patterns, and models (Corbin & Strauss, 2008; Patton, 2002). Memoing while transcribing the interview responses helped me to recognize when the data collection efforts reached data saturation (Patton, 2002) and acted as a precursor to open coding (Lapadat & Lindsay, 1999), the first step in the data analysis process. Experiencing the transcription process segued naturally into the open, axial, and selective coding required in grounded theory (Creswell, 2013). After transcribing the interview responses and receiving no changes from the participants during member checking, I imported the raw transcriptions into NVivo v.11 and used the documents to create initial case nodes.

I used NVivo v.11, Microsoft Excel, and Microsoft Word to elucidate and triangulate the emergent data. I used open coding to manipulate and assemble the data to capture commonalities in the data and axial coding to assemble these commonalities into categories or groupings as they related to each other. To explain further any relationship between the categories and the central phenomenon, I used selective coding by RQ to

show how the data contributed to the emergent theory (Creswell, 2013). However, the raw data contained in the participants' experiences and captured in their transcriptions were complex and multifarious, requiring intricate analysis to elucidate theoretical meaning. This process began by organizing the data.

Data Analysis

The analytic process in qualitative research is not static; rather, it continuously evolves, possibly requiring several iterations and methodical attempts to reveal linkages and relationships within the data, thus exposing the developing theory (Patton, 2002). Analyzing the data in this case proved no different. I scrutinized and manipulated the data from various perspectives as needed to complete the coding process.

Open Coding

During the interviews, some participants answered the IQs in an orderly way that allowed the data to fall naturally into various categories established by the IQs as they related to the RQs. However, other participants responded to one IQ and continued to share information that answered or provided data for various other IQs without prompting. Because the initial coding schema and interview protocol aligned with the RQs, I attempted to organize the initial transcribed responses by copying and pasting them into a Microsoft Word document formatted with headings by IQ to import and auto code in NVivo v.11. To ensure that I had captured all of the raw data in the transcriptions, I highlighted the responses in the raw transcriptions in yellow to indicate that I had reviewed and addressed them. Organizing the data gives qualitative researchers a preview of the analytic process (Saldana, 2013).

The IQs generated integrated and related data, which signaled possible overlapping discussions in the constructs of reliable procedural adherence in the ERM of responsible financial reporting. Participants often responded as if I had already asked them the IQ previously by using words like, “As stated previously” or “Like I said before.” In situations where the answers fit more than one IQ, I copied the responses to both questions in the formatted Word document.

After organizing the responses per IQ, I further exposed the data by importing the formatted documents into NVivo v.11 for auto coding, creating parent nodes from the RQs and child nodes for the IQs as they related to the RQs. I then read the interview responses again and created categorical nodes within the IQ nodes to code relevant data. Because the amount of data generated was overwhelming and unruly, I attempted to cultivate the data by coding via a priori coding schema initially developed from the HRO and NAT theoretical frameworks. Glimpses of concepts and themes emerged, but the data still seemed to be static rather than forthcoming in a manner conducive to theoretical construction. Therefore, I approached the coding from yet another perspective by creating an outline of the RQs and the supporting interview prompts in Excel, coding the applicable phrases with the questions, and labeling the answers with the applicable ERM component and HRO construct. Although frustrating, this iterative process is typical of qualitative analysis and facilitates reduction and analysis from various perspectives in order to arrive at the thematic story and developing theory (Corbin & Strauss, 2008).

Axial Coding

Raw coded data alone do not determine the substantive significance of the information provided by study participants (Patton, 2002). Per Corbin and Strauss (2008), grounded theory researchers benefit by using the "flip-flop" technique of turning a concept "inside out" and "upside down" to microanalyze the data through a combination of open and axial coding to expose categorical relationships. I compared, manipulated, and analyzed the data to group themes logically from a holistic perspective to construct a platform for theme emergence and ultimate theory production. Reducing the data by revisiting the processes and information was a challenging and time-consuming yet enlightening process because it converged the essence of inductive, open-minded analysis through an interpretive lens of relational data interaction to produce cogent theoretical direction.

Discrepant Cases

The only discrepant case in this study was the Enron case, which was used for deviant case comparative research analysis to support the data from a juxtaposed perspective by illustrating factors related to fraudulent or irresponsible reporting that were missing or converse to the factors identified in this study. To analyze the data from this case, I read *The Smartest Guys in the Room: The Rise and Fall of Enron* (McLean & Elkind, 2004); marked pages; highlighted text; and made notations in the margins. I also obtained trial proceedings and antidotal and empirical literature regarding the Enron case. I used NVivo v.11 to assist in the analysis of the data gleaned from the 13 interviews.

After completing the coding, I analyzed the path of emergence and created a narrative to support the findings by outlining the propositions and schemas for a new theory (Patton, 2002). I then developed a model to illustrate my findings when such a process was deemed appropriate. I anticipated that the emergent theory would define HRO psychological constructs applicable to the ERM of responsible financial management.

Trustworthiness

Because qualitative research does not derive empirical knowledge based upon quantitative numerical methods, matters of trustworthiness are different from those relevant to validity, reliability, generalizability, and objectivity seen in quantitative research (Corbin & Strauss, 2008; Creswell, 2013; Patton, 2002; Trochim, 2006a, 2006b). Although various criteria exist to measure a qualitative study's counterpart to quantitative validity and reliability (Creswell, 2013), in this qualitative study, I addressed matters of trustworthiness using Lincoln and Guba's postpositivism evaluative criteria of credibility, transferability, dependability, and confirmability (as cited in Creswell, 2013).

Throughout the study, I accounted for credibility through such processes as triangulation, member checking, data saturation, reflexivity, and peer debriefing (Patton, 2002). I addressed transferability by seeking a homogeneous sample from heterogenetic industries to generate detailed descriptions to support the findings (Creswell, 2013). Field notes, memoing, and peer review supported dependability (Creswell, 2013); I addressed confirmability by outlining the research procedures and methods in detail and reflexivity by discussing my role as the researcher.

Human Research Protection

Participant risk analysis performed using Walden University's IRB application revealed no participant risk-harm in regard to psychological stress, jeopardy of personal information irrelevant to the study, or physical harm. However, there was the potential for minimal beneficence, justice, and respect (American Psychological Association, 2002) risk-harm in regard to confidentiality, unsolicited interruption to the participants' work routines and workplace environments, impact on social or economic standing, and coercion to participate because of any possible professional relationship with me.

To address confidentiality risks, participants were assured upon initial verbal or e-mail contact that all information provided by them and reported in the study would not be specifically linked to any personally identifiable information (PII). Participants provided their preferred e-mail addresses to link to the informed consent and demographics survey. Unless the participants chose to change them, those e-mail addresses were used throughout the study. I used alphanumeric nonspecific identifiers consisting of letters to identify the source (i.e. EXT for external accountant, IPR for private company, and IPU for public company) and numbers to identify the participants within the source (i.e. EXT01, IPR02, IPU03). All data were stored on my personal, password-protected computer. A backup of the data was made and stored on a separate removable hard drive and locked in my personal office desk. No PII or interview recordings were uploaded to any virtual online storage platform.

To limit the negative impact on the participants' work routines and the work routines of their colleagues, I clarified when, where, and how it was appropriate for me to

contact them. I respected their privacy and professional duties by not interrupting them needlessly and at inopportune times. The participants' positions or statuses in the organizations were not negatively impacted by their involvement in the study. No specific financial information about any of the organizations was revealed by any participants.

My credentials as a CPA further bound my ethical treatment of any revealed financial data. To mitigate any coercion factor brought on by any professional relationships with any of the participants, I reiterated that during the study, I was acting as a researcher, not a professional colleague. The informed consent form read and agreed to by the participants before the interviews educated them about the study, including the fact that their participation was voluntary and that they could withdraw from the study or stop the interviews at any time, including not agreeing to any follow-up interview requests. Participants agreed to participate only if they were compelled to contribute to scientific knowledge; they were not coerced into participating.

Summary and Transition

This chapter presented information about the rationale for using grounded theory inquiry to define the HRO constructs as they applied to responsible financial reporting. Also included was information about the research methods, including the overarching influence of my role as the data collection instrument and my control of bias in reflexivity. The participant selection criteria and recruitment procedures, including the relationship between data saturation and sample size specific to this study, were explained. Information about collecting the data using a semistructured interview

protocol and analyzing the data was included. The chapter concluded by addressing matters of trustworthiness and the ethical treatment and protection of the participants.

Chapter 4 outlines the data elucidated from reputable, responsible financial reporting systems. The influencing human factors of responsible financial reporting systems are revealed by showing how the data were organized and analyzed and how the data within the subcategories were applied to the RQs. The data are presented in tables, figures, and narratives using quotations from the participants and juxtaposed examples from the discrepant Enron (McLean & Elkind, 2004) case to support the thematic trends. Chapter 5 discusses the results, provides a conclusive theoretical summary, and offers recommendations for future research.

Chapter 4: Results

Introduction

Rules, regulations, standards, and statutes guide actors in the financial reporting arena to protect those who depend on financial statements as a reflection of an organization's fiscal health (Wild, 2013). Although most organizations employ some variation of ERM in their financial reporting systems to achieve organizational goals and mitigate risk, there are still accounts of fiscal misappropriation, unethical behavior, and misguided actions by financial reporting actors that result in third-party harm. Examples include Enron (McClean & Elkind, 2004); the Madoff Ponzi scheme (Markopolos, 2010); and Lehman Brothers (Valukas, 2010). There has been relevant research regarding human factors of financial crises, monetary debacles, and unethical fiscal behavior (Lo, 2009; Ostas 2007; Power, 2009), yet antipodal research has been limited when investigating the beneficial behavior and psychological factors that contribute to responsible reporting in organizations that sustain positive operational goals while mitigating third-party risk harm (Finkelstein, 2003; Jameson, 2009). Guided by NAT and HRO research, I investigated the presence of human-related constructs in the effective and reliable ERM of highly integrated yet less tangible responsible financial reporting systems.

Three RQs guided the study:

1. What HRO constructs applied in ERM are present in reliable financial reporting?

2. How can HRO constructs applied in ERM minimize organizational stakeholder financial risk-harm?
3. How can HRO constructs applied in ERM inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility while maximizing profitability?

This chapter includes a discussion of the personal and organizational conditions that influenced the interpretation of the study results, participant demographics, and characteristics relevant to the results, as well as pertinent details about the data collection, reduction, and analysis processes. To address trustworthiness, the chapter also includes a discussion of matters relevant to credibility, transferability, dependability, and confirmability.

Participant Demographics

The 13 participants in the study came from three groups of accounting professionals. Four individuals were external accountants (EXT) with experience in auditing and consulting; five members represented private companies from industry (IPR) that issue financial statements reviewed or audited by external accountants; and four participants represented publicly traded companies (IPU), whose financial statements are readily available via their investor relations or investor services site on the Internet. The industries represented were public accounting firms (31%), financial services (15%), health care/health products (8%), manufacturing (8%), telecommunications/technology (23%), mass communications (8%), and distribution/logistics (8%). This representation of industries was consistent with the target population outlined in Chapter 3. The gross

revenue of the represented companies averaged from under $10 million (8%) to over $100 million (39%), with the majority in the $10 million to $100 million range (54%). The companies' average number of years in existence was 48.85 (*SD* = 38.07; see Table 1).

Table 1

Participant Industry, Reporting Status, and Average Gross Revenue

Classification	*n*	%
Industry		
External accounting	4	31%
Financial services	2	15%
Health care/Health products	1	8%
Manufacturing	1	8%
Other services provider	2	15%
Telecommunications/Technology	3	23%
Reporting status		
Privately held public accounting firms	4	31%
Privately held with issued statements	5	38%
Publicly traded	4	31%
Average gross revenue rank		
> $100 million	5	38%
$10 million-$100 million	7	54%
< $10 Million	1	8%

Note. $N = 13$

Personnel positions stratified three external accounting managers and one external accounting partner, five industry members from the C-suite, two internal accounting managers, and two internal staff accountants. Participant gender was distributed as evenly as possible with an odd number of participants (women at 54%; men at 46%). Ten participants were CPAs, with two CPAs also achieving a master's of business administration (MBA) degree, and one of them further certified as a charted global management accountant (CGMA) and certified merger & acquisition advisor® (CM&AA). One participant, an IPU CFO, achieved the MBA degree, and two participants held undergraduate accounting degrees. The average participant age was

49.00 (*SD* = 11.56), with average experience in financial reporting and management being 23.85 (*SD* = 10.11) years (see Table 2). Six participants reported years of experience in enterprise risk management (*M* = 14.17, *SD* = 11.48).

Table 2

Participant Organizational Position, Gender, and Credentials

Classification	*n*	%
Position		
External: Manager	3	23%
External: Partner	1	8%
Internal: C-Suite	5	39%
Internal: Management	2	15%
Internal: Staff	2	15%
Gender		
Female	7	54%
Male	6	46%
Credentials		
Accounting degree	2	15%
CPA	7	54%
CPA, CGMA, MBA, CM&AA	1	8%
CPA, MBA	2	15%
MBA	1	8%

Note. *N* = 13

Data Saturation

Repetitive thematic indicators began to emerge about the sixth interview, but because I was aware of the tendency for new grounded theory investigators to fall prey to theoretical bits (Patton, 2002), I continued to conduct the interviews, using the previous transcribed data as a comparative analytic tool for each subsequent interview. Although the same thematic sampling seemed to be present in the transcribed data, I was not satisfied that the data had become saturated because I had not secured representation from the IPU population. Because financial debacles that cause the greatest stakeholder financial risk-harm seemingly occur in publicly held and traded companies, obtaining participants from this area was critical to the credibility of this study. Therefore, I

continued to recruit participants in this financial reporting arena until I secured and interviewed three qualified IPU representatives. After hearing the same thematic trends from these participants, I felt that gathering more data would not add to the theoretical basis of this research, so I ceased recruitment efforts.

Core Category Identification and Characterization

According to Patton (2002), "Grounded theory produces a core category and continually resolves a main concern, and through sorting the core category, organizes the integration of theory" (p. 489). I performed a word frequency query in NVivo v.11 with stemmed words and a minimum length of four letters to initialize data theming (Saldana, 2013). A word frequency query on the auto-coded data identified "people" as the prominent theme. Initially, I discounted this result because (a) there were duplicate bodies of text coded to different question nodes in the auto-coded data that might have skewed the data, and (b) the result appeared to impair credibility because it simply seemed too obvious. It made sense that "people" would be the most prominent theme, but could this finding be relevant to the theoretical outcome of this study? To test this notion, I first eliminated the possibility of excess frequencies from the duplicate references in the NVivo v.11 auto-coded data by performing an additional word frequency query using the same parameters on the raw interview transcriptions. Again, "people" was the prominent theme. Figure 4 shows the similarities using word clouds.

(data coded by RQ)

(raw interview data)

Figure 4. Word cloud comparison. Results of Nvivo v.11 word frequency queries for coded data by RQ and raw interview data.

To seek further credence to the theoretical relevance that "people influence the ERM in responsible financial reporting," I performed a case-by-case comparative data analysis using a word frequency query in each case. This analysis revealed that although people was the most frequently used word in eight cases, the most frequently used words in the other five cases were organization, look, different, accounts, and control. Furthermore, in four of the five cases in which people was not the most frequently used

word, other words relating to individuals, such as managing, management, manager, and staff appeared in the top five positions (see Table 3).

Table 3

Five Most Frequently Referenced Words in Interview Transcriptions

Participant identifier	1	2	3	4	5
EXT01	people	talking	client	look	believe
EXT02	people	needs	look	good	help
EXT03	organization	audit	people	staff	firm
EXT04	people	look	managing	audit	organization
IPR01	people	department	change	management	good
IPR02	look	people	sure	reports	managers
IPR03	people	managers	business	report	look
IPR04	people	needs	talking	billing	account
IPR05	different	accounts	project	people	organization
IPU01	people	money	opportunities	balance	good
IPU02	accounts	function	audit	control	manager
IPU03	people	managers	process	reporting	mistake
IPU04	control	sure	reporting	audit	right

Note. $N = 13$; "people" mentioned 11 times

Table 4 shows the results of an analysis of the word frequencies greater than 100 for the aggregated interview cases, which revealed that although other relevant words appeared with great frequency, the word people was mentioned 565 times, more than 300 times more often than the next frequent word, manage, which was mentioned 248 times.

Table 4

Word Frequencies > 100 for Aggregated Interview Transcriptions

Root word	Similar words	No. of times mentioned
People	Peoples	565
Manage	manage, manageable, managed, management, manager, managers, manages, managing	248
Look	looked, looking, looks	227
Report	reporting, reported, reporter, reports	224
Talk	talked, talking, talks	188
Account	accountability, accountable, accountancy, accountant(s), accounted, accounting	182
Organization	organizations, organizations', organize	170
Audit	audited, auditing, audits	169
Sure	make sure, making sure	156
Different	differently, difference	138
Control	controller, controllers, controls	123
Process	processes, processing	117
Right	right, "right"	109*
Culture	cultural, culturally, culture, cultures	104
Responsible	response, responses, responsibilities, responsibility, responsible, responsibly	102

Note. *The word frequency for "right" was 343 times. The word "right" was used in conversation to acknowledge statements and end phrases. The data were cleaned to eliminate conversational references and retain 109 references in the context of "doing the right thing," "hiring the right people," "the right answer," and "making the right choice."

Finally satisfied with the results of this analysis, I deduced that because not all the participants used people the most frequently, other relevant themes could have emerged as a core category to describe the factors of ERM in responsible financial reporting. Therefore, the finding that *people* was the most prominent theme in this stage of analysis was relevant and provided the basis for data reduction and analysis.

This induced interpretation provided a starting point for data reduction and theory development, and it also gave credence to the value of investigating the psychological constructs of human resources in reliable ERM in the reporting systems of fiscally reputable organizations. Sole reliance on mandated control mechanisms, compliance measures, and other authoritative dictates designed to mitigate third-party risk-harm are

not in and of themselves sufficient for responsible financial reporting. If organizational psychological human factors prohibit proper implementation and utilization of the processes and procedures essential to the ERM framework of financial reporting systems, responsible reporting is sabotaged, rendering any existing control and monitoring mechanisms fantasy tools (Clarke, 1999) with no purpose than to feign responsible reporting activities and protect third parties from risk-harm.

Subcategory Identification and Characterization

For further analysis, I reduced and assembled the data into subcategories of relative analytical pieces to investigate the structural conditions of the people factor integral to the reliable ERM of responsible financial reporting. To do this, I made the following open-ended qualitative inquiries: (a) What do they do? (b) How do they do it? (c) Why do they do it? (d) Who are they? and (e) Where are they? With the exception of the Where data, which I organized and analyzed in table format, I used NVivo v.11 to position these questions as child categories under the core category of People and coded the frequently used words and themes according to these qualitative inquiries to document the thematic data, as discussed next.

Under this scrutiny, the data revealed thematic commonalities of reliability in responsible financial reporting. They are summarized as follows:

- What do they do?: Internal and external reporting actors of reputable organizations have ERM control and monitoring measures and tools in place to promote responsible financial reporting. They use processes and procedures

such as analytical reporting, metrics, and reconciliations to internally and externally audit system controls (see Appendix D).

- How do they do it?: Through effective communication and information, individuals who promote responsible financial reporting take an active role in operationalizing the ERM control measures and tools successfully. When individuals seek, share, inquire about, and use information pertaining to reporting compliance, they do the "right" thing and own the compliant reporting process (see Appendix E).
- Why do they do it?: Internal environment characteristics in the organization's culture and leadership seduce employee engagement, motivation, accountability, and reputation sensitivity, all of which influence the establishment and maintenance of positive reporting behaviors. Although slightly adapted for the nontangible nature of financial reporting, reputable organizations' mind map of ERM of financial reporting appears to possess HRO characteristics centered on the internal environment (see Appendix F).
- Who are they?: The individuals operationalizing the ERM factors in responsible financial reporting possess the "right" traits and skills to dictate or encourage ethical actions in the context of strategic fiscal decisions. Individuals different. They appear to be responsible, knowledgeable, virtuous, and they care that they are doing the "right" thing (see Appendix G).
- Where are they?: I analyzed the references made to organizational positions and created a table to analyze these data, which are in Table 5 later in the

study. It appeared that individuals occupying various positions inside and outside the organization influenced the quality of the reporting system. Leadership in the form of C-Suite and Board members was the primary internal influencer of ethical behavior and accounting task performance. Yet even more reference was made to the employees and managers as the actual reporting actors. Surprisingly, although referenced often as a method of accountability in monitoring controls, the policing force of the external auditor appeared not to be the primary influencer of reliability.

Analyzing and grouping the data from a subcategory perspective allowed further exploration of thematic connections as a progression to theoretical development (Corbin & Straus, 2008; Patton, 2002). After exposing the data further, I noticed that some subcategories shared conceptual properties and themes. When variations in similar data fit into more than one category, I placed them in the most relevant subcategory.

Research Question Identification and Characterization

I grouped the subcategories as they best related to the RQs. I realized the redundancy of RQ1 and RQ2 in that they were essentially making the same inquiry when I felt it appropriate to place the same subcategories in each RQ. Because HROs are concerned with mitigating third-party risk-harm, RQ1 was asking RQ2 in the context of reliable financial reporting. Because RQ1 did not specifically deal with third-party risk-harm, I grouped the subcategories outlining the explicit data relevant to tasks and procedures with RQ1 and the more underlying human factors with RQ2.

Research Question 1

RQ1: What HRO constructs applied in ERM are present in reliable financial reporting?

What do they do? People in responsible reporting systems of reputable organizations tend to the objective setting, event identification, risk response, risk assessment, control activities, and monitoring components of COSO's (2004) ERM framework. From a financial reporting perspective, the overall ERM objective setting component was focused on reputation management within the purview of overall operating strategies and goals.

Interestingly, all participants provided data indicating that they were actively integrating these various components of the ERM framework in their reporting activities, yet only six participants indicated years of experience in risk management when completing the demographics survey. The element that all participants did not state, namely, that they had experience in ERM, could have indicated that they were unaware that the activities that they performed were a part of COSO's ERM framework.

Control activities. The most common ERM themes to mitigate reporting risk while achieving the organization's objective found in this study were (a) control activities, and (b) monitoring tasks. The data revealed that all the participants in reputable reporting systems felt that controls (mentioned 123 times) were integral to the activities required to mitigate enterprise reporting risk. Participants spoke of internal and external audits (169 times) to identify control needs, create the controls, and test controls. Furthermore, procedures (75 times), and processes (117 times) were designed to make

sure that all controls were in place to detect and report errors and mistakes when they occurred. Participants used metrics and budgets as measurements to monitor control effectiveness. In line with these methods were regular reconciling activities such as checking (60 times), comparing (16 times), forecasting (16 times), balancing (27 times), analysis (23 times) and reporting (81 times). Because words can have different meanings, "reporting" under these subcategory analyses were modified to exclude references to "financial reporting" as a noun because of the frequent use of the phrase in the interviews as the topic of the study. Frequencies included the reporting activities only as a verb.

> IPR03 described the company's attention to dissecting and organizing processes: I'll say this, we analyze everything. If it flies in and around your head, I probably have a chart on it. It's really kind of exhausting but we continually look at possibly the same thing many different ways. So we just keep coming back to stuff and pounding it and maybe we'll leave it alone for a while, then we come back and say, how's [that item] doing now, in a different view? And then it usually discloses something you didn't assess when you looked at it 3 years ago.

The data in my study revealed that the standard professional control procedures and processes designed to protect the third-party stakeholders who relied on financial statements produced by the organizations were respected and adhered to.

How do they do it? Information and communication (COSO, 2004) was a strong ERM element that influenced the proper operationalization and performance of control and monitoring activities in the reputable organizations of this study and was missing from the discrepant Enron case.

Inform and communicate. In this study, actions outside the bounds of the typical compliance reporting that promoted effective enterprise reporting risk management (ERRM) included effective communication (349 times). Communication references in these cases included engaging in regular exchanges between leaders and employees, asking or being asked questions, actively watching or looking for items or opportunities then having conversations about the findings, making documentation for others to follow, documenting deviations and errors, and encouraging individuals to raise concerns.

A sample of the integration of effective professional control and monitoring measures and the information/communication connection is present in the quote from IPU03:

> A lot of it was *communicated* and a lot of it was *process and policy* and *documentation* [italics added to emphasize applicability]. Everything there was documented, everything was documented, everything. Every procedure, every process, there was as little judgment involved as possible. And in accounting and reporting there is a ton of judgment…but every process is documented, and all work is documented, and signed off and reviewed…there were questions, if you did these 12 steps … and you signed off on them when you did them, and then you handed that to your supervisor and your supervisor verified them in some way that you did what you said you did. And if there was ever a problem or mistake identified it was absolutely clear that you better communicate that up. As soon as or before you even know it's an issue, you need to communicate that. And we did that and as soon as you communicated that, the documentation process

> started as far as evaluating what actually happened, what's supposed to happen, why did this happened and all of that. The legal department was notified, the upper management was notified… it was just unbelievable… There would be a person designated as the person responsible for getting this issue documented and communicated up.

As mentioned previously, an organization can have procedures, processes, policies, and controls in place but if the human resources system does not operationalize them through documentation and communication, they become nothing more than fantasy documents intended to provide false comfort to unknowing reliant third parties. Organizations with reliable financial reporting systems hire the right people and manage them to operationalize control activities successfully. The reporting actors at Enron, including external auditors and regulatory monitors, were subject to the same compliance standards as the participants in the public organizations whom I interviewed, but the deviant case organization appeared not to possess the critical human factors and psychological constructs relating to communication and information to operationalize reliable financial ERM successfully.

Although at one time Enron hired the right people to perform responsible reporting, managing them to do what they believed they were hired to do was tainted by a culture and a value system that rewarded revenue-generating reporting. Concerned individuals in the Enron reporting system wrote memos and tried to bring up irregularities, but their efforts fell on the deaf ears of leadership. Although a contributor to some of Enron's intricate dealings, corporate treasurer Jeff McMahon finally raised

concerns about the noneconomic purpose of the self-dealings surrounding the special purpose entities created by Enron to manipulate earnings. He was dismissed by a transfer to a new start-up special purpose entity. When discussing the effective implementation and use of control procedures and processes, the participants in this study emphasized the importance of open access to financial, strategic, and operational organizational information, and they espoused the benefits of regular and open communication between staff and leadership so that all were engaged in promoting the ERRM of the organization.

Research Question 2

RQ2: How can HRO constructs applied in ERM minimize organizational stakeholder financial risk-harm?

Why do they do it? The data describing what people do to contribute to the responsible financial reporting system and how they do it emphasized the active oversight components of COSO's (2004) ERM framework; the "why" data revealed the less overt or latent factors of the internal environment component of the ERM framework. These factors aligned with HRO and NAT factors. Participants described the organizations as different from other organizations for which they had worked in terms of their internal environments and their influence on individual reporting behaviors and reporting outcomes. Interestingly, the effect of an organization's internal environment was not mentioned by any governance triad in J. Cohen et al.'s (2017) study as being an ERM factor. The researchers, who also were surprised at this omission, stated that it was possibly due to the difficulty in measuring factors such as tone at the top and linking them to ERM.

Culture and leadership qualities. Although there were other noncontrol activity-related factors of the internal environment in the data, organizational culture and leadership attributes and actions were the primary factors referred to by the participants as the greatest influencers of organizational success. Reference to the culture or the corporate environment was made a collective 149 times, and reference to leadership, which included managers and members of governance boards, was mentioned 479 times. If culture influences responsible reporting, it would make sense that some form of leadership would be a conjoined theme because leaders develop and reinforce an organization's culture (Schein, 1983, 1984),

Informed culture. Internal environment descriptions of the organizations in this study indicated evidence of informed, just, and diverse cultures. The research outlined in Chapter 2 showed that similar cultural factors existed in HROs (Weick & Sutcliffe, 2007). The previous outline of data indicated that the free flow of information and open communication contributed to how the people in organizations with responsible reporting systems accomplished their goals. This communicative atmosphere created an informed culture. The organizations in this study fostered informed cultures through transparency and disclosure. An informed culture supported by a transparent society encouraged financial information sharing freely between various units of organizations so that the other organizational actors could analyze and integrate the financial data with their operational data to achieve organizational goals.

When answering what factor most influences organizational success, IPR03 stated, “Communication is huge. Transparency, kind of goes along with that… we don’t have anything to hide.”

IPR05 commented:

> I think …we are pretty transparent, if that’s the right word. We kind of give the organization…okay, from a financial reporting viewpoint, going back to my job and financial reporting, on a weekly basis I put in front of them a report that tells them what our current cash, accounts receivable, and accounts payable is. It gives them what our labor is, our utilization is, our headcounts, our turnover is, our billings month to date, year to date, what our forecasts are. I mean it’s a ton of information at their fingertips. And this is filtered to the executive level; to the partners and then it stops at the top layer of management, about 30 or 40 people, and financial people are included there.

In addition to contributing to organizational success, transparency created reporting accountability within the organizations. Non-financial-reporting actors fed the reporting system information from their operating units, so skewed budget, forecast, or result information would taint the outcome of the synthesized financial data, resulting in inaccurate reporting.

The following comment from IPR03 was an example of how an organization used metrics reporting to generate communication and foster an informed culture:

> It’s kind of like what we are doing is we are really just saying to the individual, really you think estimated costs, are going to be $25,000 to finish? That doesn’t

> feel right, because last time you told me it was going to take $12,000 and that was only a week ago when we met. What's changed this week? We are helping people by reminding them and asking questions. You know we're clearer in our expectations.

EXT04 credited transparency and the resulting accountability as a factor for adherence to policies and procedures in the statement, "The whole big brother concept. Unfortunately, you know it is human behavior. And when you know someone is looking over your shoulder, you're gonna behave differently."

These organizations were fastidious in disclosing to interested parties nonfavorable organizational events that might negatively affect operations and subsequently affect their financial well-being. Because the organizations in this study were sensitive to their reputations as stable successful companies and not just short-term financial results, they disclosed irregular items so that deviations could be addressed and fixed to manage reputation risk. In some cases, high-level financial actors reported in person periodically to their respective audit committees, and as part of the discussion, they were expected to disclose concerns within their control environments that required monitoring.

IPU04 described these meetings:

> And they talk about the area that they are influencing. And about what areas in their businesses that they have to pay attention to, I mean you have to pay attention to everything for control purposes, but what are the areas they have to [concentrate] on…. if there's been an acquisition, how does integration affect the

> control environment for that acquisition. What you're going to say is, here's a key area of my business that I'm concerned about, that I'm working on it and so forth…and so you know, if I have a blowup, I'm going to have to tell the audit committee. If I [hadn't told] them or hadn't highlighted some areas of significant control that I have to pay attention to [during that conversation], and then I have a blowup in that area, they are going to say to me, why wasn't that on your radar screen.

Conversely, Sharren Watkins, former vice president of Enron and former reporting agent under CFO Andrew Fastow, recalled Skilling, then COO of Enron, lamenting about having to report a more than $400 million portfolio loss to the audit committee. McClean and Elkind (2004) quoted him as saying, "I don't want to be the one to go tell Enron's board we've had a big loss when we're supposed to be such great risk managers" (p. 131).

Just culture. There was evidence in the data that indicated that open communication and free-flowing information allowed the reporting actors, financial and nonfinancial, to feel comfortable enough to voice their observations, concerns, and opinions about specific items being reported; the existence of possible errors; and impediments in the general flow of information without judgment or negative retribution. Cox, Jones, and Collinson (2006) pointed out that open and honest communication between and among members provides a sound basis for trust, an element of a safety environment. The ability to report, share, and communicate in a safe atmosphere instills a certain trust among agents and fosters a just culture (Reason, 2000).

Human error can result in honest mistakes, but honest mistakes can incubate into extraordinary events that cause unintended harm to third parties relying on the organizations' financial reporting (Reason, 2000). No fear of retribution to report a mistake might mitigate a larger reporting mishap, thereby protecting unsuspecting third-party stakeholders. Lower ranked participants expressed little or no hesitation to admitting a mistake or reporting a discovered error for fear of negative reprisal.

The following quote by high-ranking IPU01 triangulated the lower ranked participants' sentiments from a varied perspective:

> I mean people make mistakes or just [do] sloppy work. And if you make a mistake, we don't crucify you over that. If you make a mistake every now and then, we fix it, you know; it's not the end of the world.

Conversely, there was evidence that there would be retribution if a mistake was not reported:

When I probed to investigate any existing reflexive relationship between reporting mistakes and punishment, IPU03 responded emphatically:

> You would be fired if you *didn't* [Italics added] communicate an issue. If you hid anything, or if somebody found that you hid something, or if somebody found that you checked the procedure and you really didn't do it, you would be fired.

In most cases, if a teammate, a manager, or any other superior found a mistake during the review process, the error was brought to the person's attention, and the individual was coached to correct the reporting actions.

EXT04 credited transparency and sensitivity to the development of a trusting environment that eased corrective conversations:

> Well, in the being totally transparent [environment], he would bring it up to you and your supervisor at the same time. So, it may not be comfortable to anyone, but if there is any issue, then it's confronted at the beginning. [Researcher: Communication?] Absolutely.

In some cases in this study, said employees were sorted, or relocated, to different areas of their respective organizations to perhaps find a better fit and remain employed, a strategy described by almost half (46%) of the participants. However, if the individuals did not improve and grow, but continued to make mistakes, or if behavioral issues were the basis for continual errors that created a risk to the responsible reporting system, those individuals were counseled out.

EXT04 explained it this way:

> At some point, if you stop growing where you are, then it's not beneficial to you or the organization. You need to move on to a new place where you can continue to grow… and make a more positive contribution to the organization. … they refer to that as sorting. And so they basically evaluate skill sets continuously, and they work at it. If there is a performance issue or borderline performance issue, then [you ask] does that correlate with the skill set. You know, is there a deficiency in the skill set for that particular position, and is that individual and their skill set, is it valuable to the organization, and is there another better fit? Or is it behavioral, and then you're counseled out.

To support the maintenance of a just culture, care was taken as to how the discovery of a mistake, corrective coaching, and counseling out of an ineffective actor was communicated so that trust among the remaining members was maintained.

EXT04 continued:

> And that needs to be communicated in the right way not only to that individual but to the entire organization, and do I think we've done it perfectly? Absolutely not, but we certainly tried to do the best job of communicating that. These decisions were very difficult to come to, they were difficult to handle, but they were done from the right place. And that's with the idea of having a better organization for the future.

All participants agreed that intentional wrongdoers were terminated immediately, and in some cases, the participants shared experiences where the offenders were prosecuted. Although it appeared that a just culture contributed to reliable ERRM, there was no tolerance for fraud or deception in these organizations. If an employee continued to make the same mistake and was not held accountable, there also could be negative reverberations in organizational moral and trust (Reason, 1997). The opposite was true at Enron when it came to adhering to accounting standards and regulations. Enron rewarded those who twisted, pulled, and broke the boundaries of reporting tolerance in the name of pure revenue generation.

In her address to the Academy of Management address shortly after the demise of Enron, Watkins (2003) discussed her position in the back office:

> That's when I ran into what I thought was the worst accounting fraud I'd ever seen. Enron had allowed Andy Fastow to enter into an unprecedented conflict of interest: as chief financial officer of Enron, where his fiduciary duties meant looking out for the best interests of Enron, while also becoming general partner of an investment partnership, LJM, where Andy raised $600 million of limited-partner monies and was charged with maximizing returns for limited partners….Now, I hadn't practiced accounting in over 10 years, but I knew accounting had not gotten that creative; basically, Enron was hedging with itself. (pp. 120-121)

Diverse culture. In addition, although most of the organizations appeared hierarchical in structure, the cultures also reflected diversity in regard to experience and expertise. In fact, two cases of fraud were detected, not by dictated audit procedures but by a staff auditor's awareness that various transactions did not appear proper.

EXT03 explained the discovery of fraud:

> And the unique thing is that people would need to recognize is fraud is not necessarily caught by doing an audit. This [fraud] was found by "whoopsie," by one of our staff who happened to be reviewing an invoice … And again it was just happenstance... And then, this whole thing unraveled from there.

Although testing the discovered transaction was not in the scope of the audit plan, the audit manager acknowledged the staff auditor's concern at the presence of a possible material deviation and acted by allowing further investigation and averted an accounting catastrophe by tending to a near miss, a term coined by Sagan (1993). In the interest of

time and money, the audit manager could have dismissed the staff auditor's concern over an invoice or chastised the individual for taking the time to dig into the details and encourage the person to move forward, leaving the fraud undiscovered. However, the manager deferred to the expertise of the auditor by respecting that the individual had the knowledge to detect a deviation. Furthermore, the auditor displayed an active role in being aware of possible deviations in the reporting system outside the scope of the audit, which demonstrated a preoccupation with failure, which is an HRO construct.

The reporting actors at Enron also displayed active roles. However, their roles were not concerned with seeking out financial reporting system deviations and control weaknesses; instead, they were actively seeking the next best way to circumvent controls and monitoring activities. The culture at Enron cultivated innovation at all costs and rewarded unchecked ambition, encouraged fraudulent or deceptive practices to stretch the rules to add value, and publicly punished poor revenue-generating performance. Leadership at Enron only deferred to the expertise of those from lower ranks when they could assist in furthering revenue generation, not in reporting risk management. Sims and Brinkmann (2003) deliberated on the juxtaposed term *Enron ethics* as the contradictory reality of words and deeds, that is, what values are espoused and what are actual core values. At Enron, there was a definite disconnection between what was held out to the public as the code of ethics and what was happening during regular operations. This façade degraded, not generated, trust in an organization.

Allocation of rewards. In an integrated culture, the criteria for allocating rewards and punishments determine individual behavior (Schein, 1983). As seen in Table 5, 54%

(n = 7) of the participants reported compensation structures of salary with reward incentive linked to organizational financial performance, 30% (n = 4) of the participants' compensation was salary with other reward incentives, and 15% (n = 2) received salary only.

Table 5

Participant Compensation Base

Classification	*n*	%
Compensation basis		
Salary only	2	15%
Salary with reward incentive linked to organizational financial performance	7	54%
Salary with other reward incentive	4	31%

Note. N = 13

How rewards are allocated signals to the actors what an organization values and its expectations (Schein, 1983). The organizations in this study used monetary rewards such as incentivized compensation and bonuses based on financial performance. There also were cases of nonmonetary rewards such as parties and career opportunities to recognize and acknowledge a job well done. Ostas (2007) argued that rewards promulgate financial fraud, and K. H. Roberts and Bae (2001) asserted that rewards and incentives that encourage open communication of lasting safety issues promote trust. However, when they are tied to a short-term focus on profits, the rewards and incentives diminish the value of long-term failure and accident avoidance activities that should ensure reliable operations. "Enron's reward system rewarded individuals who embraced Enron's aggressive individualistic culture and were based on short-term profits and financial measures" (Sims & Brinkman, 2003, p. 251). The data in this study indicated that reward plans in the reputable organizations appeared not to contribute to unethical

behavior. This finding provides support that incentivized reward structures are not absolute antecedents to fraudulent behavior when implemented within an internal environment conducive to ERRM.

Leadership qualities. The wording "tone at the top" was mentioned 24 times to describe the driver of the success of the organizations in this study by seven of the 13 participants. Another four participants referred to the tenor, or attitude, from the "top" being the driver of ethical behavior and responsible reporting. The participants described leadership as being communicative, connected, informative, and transparent; possessing integrity and honesty; and being referred to as "big brother." There was evidence of high-quality leader-member exchange (HQLMX; Gerstner & Day, 1997) in these organizations. Cultural composition perceptions and leadership traits of the organizations engaged individuals in their jobs toward adhering to reporting compliance tools by providing moral expectations, accountability that encouraged ownership in reporting outcomes, and motivation to perform properly.

Employees look to the behaviors exampled by the leadership as indicators of what is valued in and by an organization (Sims & Brinkman, 2003). Former Enron Vice-President Watkins (2003) addressed leadership and the tie to ethics by stating, "All eyes are on you, and the slightest erosion in values at the CEO level is magnified in the trenches" (p. 123). Enron leadership espoused a code of ethics of commitments to communication, respect, integrity, and excellence, but they modeled, condoned, and rewarded actions that were in direct contrast with the code, which led to rapid degradation in the ethical culture of the company. Furthermore, Watkins alluded to a

divisive and elusive tone of leadership when she described how it was not until she took a back office job that was less trying and protracted to spend more time with her child, did she notice the irregularities, inconsistencies, and absolute fraud that was taking place. As leadership, she had been caught up in the "heady" façade, as she described it, as the $1 billion portfolio manager jet-setting around the globe to find the next deal or to court clients at ski weekends or the Master's Golf Tournament. As a reporting agent, she saw what was happening.

Collective mindfulness. Accountability based on transparency and disclosure generated by open communication and the free flow of information of the informed, just, and diverse cultures created a platform for mindful awareness and diligence in the search for errors. As stated in Chapter 2, the HRO concept of collective mindfulness is a state wherein the internal organizational environment engages actors to identify risk by being preoccupied with failure, sensitivity to operations, reluctant to simplify interpretations, committed to resilience, tolerant of redundancy, aware of the current situation, and open to deference to expertise (Weick et al., 2008). Preoccupation with failure and sensitivity to operations were the strong HRO themes that embodied collective mindfulness in addressing RQ2.

Preoccupied with failure. Data in the preceding example provided evidence that the staff auditor possessed situational awareness of an item that issued a weak signal of a deficient control and was allowed to pursue it. In the case of periodic audit committee reporting, the reporter was actively seeking points where the system could be weak to report on the weakness so that it could be on the "radar" when developing the audit plan.

Sensitivity to operations. In four cases, the participants specifically expressed sensitivity to operations by actively searching for ways to simplify, improve, or streamline processes to promote accuracy in reporting historical activity in order to provide better analysis and foresight to achieve organizational outcomes.

IPR03 shared how the organization wrote a program to compile date from various reporters in the organization in order to provide comprehensive data for analysis by commenting, "Humans can't remember a lot of [information] right? I mean, it's a lot too. So, in any event …all the activities and actions are now centralized in one application we wrote."

Simplifying complex reporting to produce accurate financials for analysis and foresight facilitated organizational success while mitigating risk-harm.

IPU04 described the goals of the financial reporting system:

> We are going to constantly try to simplify [reporting] processes to remove complexity. We're going to constantly try to provide better analysis and insight, and we will do that because we always say if we strive to remove complexity and due process, simplification creates more time for us to do analysis and insight as opposed to reporting numbers. [As company accountants,] we don't want to be people who just report numbers, we want to be your business partner, and we say we will do those things under the umbrella of an efficient and effective control environment.

> EXT02, who triangulated the data regarding sensitivity to operations, explained: I know we are talking about financial reporting, but part of that is forecasting; where do you foresee a company, which is actually important…some people think it's just the actuals. Yes, it's the actual, but sometimes, also it's the actuals in comparison to what they said it was going to be. One of the problems is [reporting actors] spend so much time trying to figure out where their actuals are, that they have very limited amount of time to even forecast. So the very first thing that we do is try to limit the amount of time that you spend trying to compile the actual, to shorten that window, so [that] now, you have more time to see how things are trending over the year compared to what I thought it was going to be. And then I can make better decisions so that hopefully my Quarter 4 forecast is going to be pretty close to what it's actually going to be. And of course, we can't predict everything.

Some HROs employ skilled temporary employees to bring fresh perspectives to the organizations' systemic routine to combat complacency (Vogus & Welbourne, 2003). A participant in an organization with international operations and global reporting requirements responded to my inquiry about training or other programs that contributed to the ERM internal environment by asserting the use of a global service organization for consistency. The organization's reasoning behind this strategy was that using services from this type of enterprise provided best practices to streamline the standard reporting activities, such as accounts receivable and accounts payable, which provided assurance in consistency and accuracy, thus supporting the control environment. Assuming vendor

risk management had a place in the organization's ERM plan deeming the third-party vendor as ethical and reliable, this was an excellent best practice. However, from a human factor HRO perspective, this approach flew in the face of reluctance to simplify interpretations and complacency tenets (Coutou, 2003).

Research Question 3

RQ3: How can HRO constructs applied in ERM inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility while maximizing profitability?

Where are they? Individuals who influence ERM in reliable and responsible reporting hold various positions in organizations. Participants spoke of the employees, staff, managers, management, and other reporting actors who performed midlevel, hands-on reporting duties 357 times in aggregate. Executives, owners, partners, and other leadership references aggregated at 166. The board of directors and audit or other governance and oversight committees were mentioned 81 times in aggregate (see Table 6). The frequent references to the midlevel performers might have led one to believe that they, as a population, had the greatest influence on reliable and responsible reporting. However, data from 12 of the 13 respondents (92%) included words like tone at the top and leadership to describe the greatest influencing factor in the successful ERM of financial reporting in conjunction with organizational success. Although one participant representing the other 8% did not include those exact phrases in the interview responses, there were ample references to upper level positional members as facilitators of reporting risk management and error detection.

IPR04 explained:

> As management, as owners, as supervisors, you have to convey that culture [of compliance] to the staff and make them aware of what you're trying to accomplish, how you are trying to accomplish it, and education is a huge part of it.

Table 6

Where: Reporting Influence Position Frequencies

Position in the organization	*n*
Management	115
Managers	99
Leadership	82
Employees	66
Staff	61
Board of directors	41
Owners	34
Audit committee	31
Partners	30
Executives	20
Supervisors	16
Finance committee	3
Quality control committee	2
Management policy committee	2
Internal control committee	1
Investment committee	1

Based on the data, although the lower level reporting actors contributed to reliable responsible reporting because they did much of the day-to-day reporting activities, those in leadership positions influenced the reporting actors to adhere to the control and monitoring policies and procedural tasks designed to produce the accurate information.

Who are they? I clustered the individuals from various positions into three groups: externals, leadership, and employees. Auditors and consultants were grouped as externals; members of governing boards or committees, the C-suite, and other individuals who influenced the culture of the organization were grouped as leaders; and staff and

managers were grouped as employees.

Essence of "right" or "good." Sixty-two percent of the participants described the individuals who comprised the human resources responsible for proper and reliable reporting and organizational success as the "right people" or "good people." Following are responses given by the participants when prompted to identify factors promoting success in organizational reporting and goal achievement:

IPU01 said, "You surround yourself with good people…Making sure that you have the talent that understands the complexity of all the accounting rules and how they need to be handled."

EXT04 stated, "Organizations that grow and continue to thrive and retain good people do so because of the good people that they bring on board and treat fairly."

EXT01 remarked, "I think it is really dependent upon the right people."

EXT02 commented, "Making sure that I'm hiring the right people to take care of implementing those policies, monitoring those policies."

Attributes of right or good included knowledgeable, responsible, caring, different, honest, possessing integrity, and having a core value to do the "right thing." Each attribute is described next.

Knowledgeable: IPU03 said, "In many respects, in my opinion they brought in people from public accounting because that's the only place that I know of that you learn what's required of the financial reporting process."

Responsible: IPU03 stated:

> Yeah well, I guess the thing that just popped out was personal responsibility. That everyone is willing to take personal responsibility for their own actions and what happened. And that the culture in the organization and the tone at the top making it clear that, you know, that they want to do not only what's legally right but what's morally right.

Integrity: IPU01 remarked, "So, I just have a simple approach with the financial folks and the culture of the financial reporting here is integrity is everything. And if you are ever asked to compromise your integrity you should say no. It's simple."

Care: EXT02 noted:

> Because I'll be honest, I don't care about [the market]. But you know who I do care about? I care about these people, and I care about my clients and making sure that I'm giving them the best possible service.

Different: EXT01 said:

> I think that in our industry, we tend to want the cookie cutter accountant. We have an idea of what qualities they should possess, and that's like what we want. But actually, I don't agree with that. I think that we are better off with people who have different ways of thinking about things because maybe they will actually stumble upon something that we wouldn't otherwise have caught.

Core value or values system: IPR stated, "So if you have solid value oriented people at the top that are setting the culture of the organization."

EXT01 said:

I think that in the end it boils down to your personal value system. And you know like work related, not work related. I would say that who you are is who you are, …Okay so me as an example, I am a Christian, so I believe in the bible, I believe in integrity, and I believe in honesty and just having an honest side. Therefore, it would be contrary to my belief system to swindle a company out of whatever, not to say that it can't happen because I am not perfect, but overall, I hold strongly to these things because I feel very…because I understand what I am representing and what is important to me.

IPR02 commented:

Well you know, your interview is with someone who really was grilled from even the early days, that integrity, is important ….say the right thing or do the right thing, you know, don't lie, all that good stuff. This is pretty important. The foundational level of attributes of my upbringing and the combination of getting that CPA really made me feel like, wow, I've got to keep this….I've got to do the right thing all the time because too many people rely on me. If I don't have that, then basically the organization can't grow, or move forward, or exist without this position, specifically being high in integrity.

Many participants acknowledged that because the possibility of acting in a deviant manner exists in human nature, monitoring for this risk is important. However, most participants offered that their sense of responsibility was embedded through their upbringing, faith-based beliefs, respect for the CPA designation and/or fear of losing it,

karma, doing to others as you want them to do to you, or simply being afraid of getting caught and damaging their own reputations or suffering embarrassment. These intangible factors were more valuable to the individuals than the achievement of wealth through deceptive measures.

The following quote from EXT03 reflected the sentiments of most participants when asked about quality human characteristics and traits of actors in successful responsible reporting: "So coupled with being somebody who is honest and has integrity and wants to do the right thing, you also have to know and have knowledge that you are doing the right thing or have people who do."

*Commitment to resiliency***.** The reporting systems in reputable organizations are not subject to the quick thinking reinvention of information found in the error response of traditional HROs. However, they are more like the previously mentioned needle-pricking incident, wherein the analysis and reinvention of a way to combat and correct an adverse event develops into a stronger system and more reputable organization worthy of stakeholder trust. The data indicated that the reputable organizations represented in this study were committed to reputation resiliency.

A definition of reputation offered by Google is "a widespread belief that someone or something has a particular habit or characteristic." The characteristics of the collective individual and organizational value system influence the objective setting of the business, which is a strategic component of the ERM framework (COSO, 2004). Although the objective of most for-profit companies is to achieve and maintain profitability and shareholder market, the organizations in this study also were vigilant in their objective of

protecting their reputations via straightforward economic reflections of their actual financial health to generate shareholder trust and long-term investment. They did not let short-term market decoys distract them in their efforts.

Perrow (1999) discussed production pressures as a factor of accidents in NAT. A factor in the reputation management strategies of the public companies studied was the reluctance to concede to the pressures from stock market analysts to show short-term revenue for the sole purpose of driving stock prices. The data indicated that these reputable, publicly traded organizations held strongly to the long-term objective of creating solid value and reputation management through accurate and reliable reporting, despite the market effect. This is not to say that they were not concerned with market volatility and analyst perception, but as Weick and Sutcliffe (2007) said of organizational resiliency, these companies were committed to their objectives and rebound effectively.

Participants advised that possessing a virtuous character and doing the right thing might have meant losing revenue by terminating or not beginning a client relationship with a prospective high revenue-producing organization that would not comply with rules and regulations to which the accountants attested. In the context of a private organization, it might have meant losing high revenue-producing individuals because of questionable ethics. In the case of publicly traded organizations, it might have meant losing stock market points because of a drop in earnings per share. In all cases, it could have meant paying higher provider costs because the organizations terminated vendor relationships with organizations as measured vendor risk because of substandard quality, irresponsible

ethical practices, or both. Organizations with reputable reporting practices hire the right people, who will continue the practice of ethical reporting, no matter the cost.

Conversely, reputable vendors prospected by Enron refused to do business with the company, no matter the cost of lost revenue. In one instance, an expert was recruited by Enron to develop hedging techniques for locking in gains on private-equity investments to disguise an impending catastrophic loss, but declined, stating that the deal was impossible and that he would not be involved because "it's called equity risk for a reason" (as cited in McLean & Elkind, 2004, p. 131). The essence of right or good people had a different meaning at Enron. Employees were hired for their competence and ability to generate revenue, even to the extent that it involved creative accounting. Because generating revenue was valued in the Enron culture and was the criterion for advancement, individuals were encouraged to step on other employees in an effort to make the company money and were punished for doing the moral or ethical thing.

Mclean and Elkind (2004) cited Amanda Martin:

> If you made money at the expense of other business units, it was good. To put one over on one of your own was a sign of creativity and greatness. After time, those who valued teamwork and collaboration were weeded out, and those who remained were ruthless in cutting deals and looking out for themselves. (p. 121)

Generating investor trust in accurate and reliable reporting by doing the right thing proved fruitful. IPU01 talked about the pressures of meeting the stock market demand using the following metaphor: "[It] would be the tail wagging the dog if [the market] dictated your way of operating. So you can't let that happen."

To demonstrate this observation further, IPU04 acknowledged the market value in committing to and being resilient to long-term objectives:

> I just heard two analysts speak in the last month or so about [the Company] and it is that we "look at the long-term," you know. It's the … consistent performance over the long term [that] drives the interest; it's what drives the shareholder value. It's not any one blip. You can have a really good year, you can even have a really bad year…, but it's over the long haul, you're consistent and stable and that's what makes the difference, not the "let's just make this one quarter." What we don't want is, "Oh, great news they made the year," and then something come out about how we made the year. We get a lot of credit in the analyst community and I think this "do the right thing" keeps carrying forward to that high level because of that.

Enron also was sensitive to its reputation, but only as it related to Wall Street's perception of its current earnings per share. A former aide of Skilling, one of Enron's leaders, stated, "The stock price was his report card" (as cited in McClean & Elkind, 2004, p. 125). Enron's objective of short-term revenue generation resulted in the production of questionable intricate business maneuvers and unreliable financial statements (Arnold & de Lange, 2004). In contrast to reputation resiliency at Enron, IPU03 responded that reputable organizations "don't care if they miss earnings by 3 cents or whatever…[because] a short-term view is just the biggest harm to most public companies."

In one particular case of doing the right thing, the company came forward unprompted and absorbed an exorbitant loss to make a sector of third-party stakeholders whole after a near $200 million mistake. Although there could have been perceived potential financial risk harm to the investing shareholders, the overarching desire to maintain its stellar reputation of being shareholder friendly was an asset that the organization was unwilling to forfeit for short-term fiscal gain. In another case, a mistake resulted in the possibility of losing more than money for a large client and its reputation for exemplary customer service.

When the mistake was disclosed, the group behind the problem was not terminated immediately. Conversely, leadership and other employees of an organization rallied, or "swarmed," as the participant stated, to save the multimillion dollar job to protect its client and reputation for outstanding customer service at a monetary cost to the organization and personal sacrifice to some of the employees, who rectified the problem by working "day and night, over a holiday weekend." Regardless of the expense, the job was saved, and the value of the monetary loss was capitalized into intangible customer loyalty.

As discussed in learning failure from Chapter 2, being wholly in the experience of correcting a mistake to prevent it from happening again is indicative of a learning organization. The organization in this example experienced successful transfer knowledge about the root of the mistake and subsequent correction to operationalize the deep-seated double-loop learning, as discussed by Argote and Miron-Spektor (2011) and Carmeli and Gittell (2009). It also indicated the existence of a psychological safety net,

wherein learning by various levels of the organization was facilitated through robust and effective communication (Schein, 1993).

> When challenged further about the outcomes of this experience, IPR05 explained: They learned from their mistakes….I think it gave them a respect and knowing that not that you don't want to be in that position again but knowing that you had a place to turn you're not just going to turn around and say okay they're going to fire me so I might as well keep screwing up.

IPR05 commented further about leadership that "I think it builds confidence … I think it built a lot of confidence in the leadership."

When asked what happened at an organizational level after the mistake was corrected, IPR05 answered that "it prevented it from happening again. Learning from our mistakes."

The reporting agents from the reputable organizations who participated in this study used the ERM framework components of objective setting, event identification, risk response, and risk assessment as a basis for establishing control and monitoring procedures and processes such as checking, comparing, forecasting, balancing, analysis, and reporting required to generate accurate and reliable financial reports (i.e., What they do). Effective information and communication, another component of ERM, between and among the reporting mechanisms from financial, strategic, and operational areas fostered engagement between leadership and employees to adhere to the procedures and processes (i.e., How do they do it?). The internal environment of the organization, another component of the ERM framework, embodied the human factors (i.e., Why do they do

it?) relevant to adherence to the procedures and processes. Present were data evidencing quality leadership driving an informed, just, and diverse culture, which facilitated collective mindfulness, a state wherein the actors are preoccupied with failure, sensitive to operations, reluctant to simplify interpretations, committed to resilience, tolerant of redundancy, aware of the current situation, and deferent to those with the expertise (Weick et al., 2008). Every individual in hierarchical positions in the organizations (i.e., Where are they?) played a part in the responsible execution of procedures and policies. However, although the lower ranked actors executed the procedural tasks, the HQLMX and the oversight of the governing boards encouraged adherence to the rules. The essence of the right traits and characteristics of the individuals (i.e., Who are they?) comprised the general underlying virtuous tenet of the individuals who worked in these reputable organizations.

Evidence of Trustworthiness

I was able to ensure confidence in the credibility and transferability of the findings by securing participants who possessed common reporting goals yet different tasks and duties in various reporting system positions of heterogeneous organizations, including external accounting firms, private organizations, and publicly traded organizations. Having a diverse sample was essential because the participants provided viewpoints from different perspectives to ensure data saturation and to triangulate the data. I used member checking to confirm reliability by e-mailing the individual transcriptions to the participants as soon as they were fully transcribed and by e-mailing the preliminary data interpretation after data reduction and analysis. Although I had asked

the participants to respond only if there was a misunderstanding or a misinterpretation of the contents of the transcriptions, I received three positive responses confirming their accuracy and four positive responses indicating that the interpretation appeared on track. Furthermore, the participants who responded were eager to see the study when it was finalized and approved. Although there have been scientific discussions regarding the drawbacks and problems with member checking (Morrow, 2005), using this method to assure validity and verification was appropriate for this study.

I used negative case analysis to ascertain dependability by performing comparative analyses of the contraindications to the factors found in the data that contributed to responsible financial reporting. I did not perform rigorous data analysis to discover the factors of financial fraud because that research had been conducted previously and was not the purpose of my study. Furthermore, as themes and trends emerged, I discussed them with my professional peers as a method to obtain dependability.

Although the researcher is the measurement in any qualitative study, by memoing my individual perceptions, I was able to bracket my initial perceptions to limit reflexivity and view the data through a more independent lens because I did not perform external audits or was part of an internal auditing team at the time of the study. This position, coupled with the detailed procedures, addressed confirmability. However, my credentialing as a CPA provided the ability to build rapport with the clients, understand terms of art, and place myself in a situation described by a participant that allowed me to

be open to possible dynamic influencing human factors not evident to a nonaccounting professional researcher.

Summary and Transition

Findings indicate that reputable organizations have the right people (Who are they) in place throughout the financial management system (Where are they) to identify financial reporting risk events and create effective control and monitoring processes and procedures to mitigate third-party risk-harm (What do they do). Members effectively communicate pertinent information throughout the organizations to those responsible for operationalizing the procedures and processes, engaging them to take an active role in responsible reporting outcomes (How do they do it). The elements of what the people do and how they do responsible reporting aligned with the objective setting; control activities; information and communication; monitoring; and risk event, assessment, and response components of COSO's (2004) ERM framework. In most organizations, governance boards, compliance officers, or their equivalents directly address the above oversight elements (J. Cohen et al., 2017; S. Cohen & Falcone, 2016). Answering the "Why do they do it?" question revealed integral human factors and organizational psychological constructs such as culture and HQLMX that influenced financial reporting actors to act ethically, operationalize the procedures, and own responsible reporting outcomes.

Chapter 5 summarizes the study with a discussion of the ways in which the data related to HRO and ERM theory, and it provides theoretical modeling as a basis for organizations to address the human factors that support the accurate and reliable reporting

of entity financial activity in a manner to mitigate risk-harm to third-party stakeholders. Chapter 5 also presents information about the delimitations and limitations, opportunities for further research, and the social implications of the findings.

Chapter 5: Discussion, Conclusion, and Recommendations

Findings

HRO theory guided this grounded theory study to identify and define the psychological factors of ERM effectiveness in organizational financial reporting responsibility. The intention of this study was to establish a theoretical foundation to assist the leadership of organizations desiring long-term organizational success through reputation management and responsible reporting with the information necessary to promote effective financial risk-harm management through ERM. The data showed that HRO constructs existed in reputable companies that used ERM framework components to manage financial reporting risk, which translated into reputation and third-party risk management.

The interpretation of the findings includes a discussion of the integration of the data with HRO literature and the ERM framework, the limitations of the study, and recommendations for future research. The chapter concludes with an explanation of the ways in which the findings can be used by other organizations to influence positive social change.

Interpretation of the Findings

Results confirmed that HRO theoretical constructs existed to promote reporting compliance via COSO's (2004) ERM framework in the financial reporting and management systems of reputable organizations, thus mitigating financial stakeholder risk-harm. This finding aligned with the literature outlining the ways that other non-HROs have applied high reliability theory (HRT) to achieve organizational goals and

limit third-party risk-harm (Bagnara et al., 2010; Baker et al., 2006; Bellamy et al., 2005; Pronovost et al., 2006; Ramanujam & Goodman, 2003; Stringfield et al., 2008; Vogus & Welbourne, 2003). To arrive at this finding, I analyzed the data via the RQs and then applied them in context to reporting systems using the components of COSO's ERM framework.

Enterprise Risk Management Framework

Although only about half (46%) of the participants indicated that they had formal experience in risk management, evidence existed that these reputable organizations actively used various components of COSO's (2004) ERM framework to promote accurate and reliable reporting in their responsible fiscal management systems. In some of the organizations, governance boards or other leadership dictated formal ERM programs, but in others, risk-mitigating activities and other inherent organizational factors required to achieve organizational goals framed informal ERM plans.

The observation that the participants might have been unaware of their participation in an ERM framework was in line with J. Cohen et al.'s (2017) investigation into the existence of formal ERM frameworks in financial reporting. In their study, some participants from the organizational governance triad (i.e., the audit committee, the CFO, and the external auditor) did not definitively declare that a complete ERM program existed as formal oversight for financial reporting. These results were concurrent with the data from my study suggesting that demonstrated themes of ERM components existed, providing risk reduction, accuracy of the financial reporting outcomes, and the integrity of the fiscal management of reputable organizations.

RQ1 inquired about the HRO constructs applied in the ERM of responsible reliable financial reporting. The results indicated a linkage to HROs. The collective efforts to mitigate risk, either as a formal ERM program or from an informal ERM framework, indicated the existence of an underlying common reporting risk management mind set, or collective mindfulness (Weick et al., 2008), among responsible financial reporting agents to alleviate the effect of fiscal deviations and financial reporting errors. A collectively mindful approach to risk management in these organizations resulted in evidence of the HRO constructs found in high-reliability theory; preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, and commitment to resiliency. Furthermore, the data showed evidence of HRO culture and leadership as an influencing factor in the ERM of responsible reporting. There also were some deviations from HRO influences such as less redundancy and reward structures similar to those found in fraud cases. These separations from theory could have been related to the subsystem coupling or integration differences that reporting systems possess versus traditional HROs.

Objective Setting

Because some organizations involve dangerous systemic integration to reach their goals, any interruptions in their systems have tremendous potential to harm innocent bystanders (Perrow, 1999). HROs expend resources and energy to achieve their objectives of failure-free performance, and many succeed, despite their highly integrated and tightly coupled systems (LaPorte & Consolini, 1991). The strategic objectives set by

the organizations in this study were to achieve failure-free reporting in an effort to protect the organizations' reputations by managing stakeholders' risk-harm.

When pursuing profit motives, these organizations considered how their efforts to achieve profits affected investor trust and long-term market share. They were reluctant to concede to market pressures for immediate earnings and were willing to sacrifice short-term revenue streams for long-term investor interest. They also were committed to reputation resiliency. Although not verbatim, reluctance to concede and reputation resiliency were variations of the HRO constructs of reluctance to simplify interpretations and commitment to resilience. The premise of HRO constructs is the achievement of failure-free performance by actively seeking, learning from, and correcting possible erroneous situations before they incubate into system interruptions that result in disasters. HROs are not satisfied with the status quo.

Although the organizations with reputable reporting systems that were represented in this study were concerned with earnings performance, they looked beyond the obvious objective of short-term profits. In the case of the publicly traded companies, they looked beyond market performance and valued the investment in resources required to protect their reputations via ethical and reliable reporting that protected their stakeholders' interests and built investor trust and reliability.

Control Activities and Monitoring

Risk event identification, assessment, and response are the premises of the HRO constructs used to search for risk points and then assess their effect on the organizations' reporting goals and overall fiscal risk management. Responsible financial systems in

reputable organizations do not overlook or dismiss seemingly unrelated changes, deviations, or interruptions, such as staffing shifts or IT modifications; instead, they actively investigate whether the change resulted in a negative effect on reporting outcomes. Constant awareness, acknowledgment, and action to address possible financial system interruptions indicate evidence of a preoccupation with failure in the financial reporting system.

EXT03 gave an example of how the external audit firm was engaged to perform a best-practices audit by the leadership of a well-known nonprofit, even though it was exempt from preparing disclosure filings. There was dissention in the organization about the need to expend the funds for such an engagement, but leadership claimed that it wanted to combat arrogance-generated complacency and look actively for errors, deviations, and interruptions via whistleblower opportunities, conflict-of-interest disclosures, and transparency to protect the reputation of the organization.

IPU04 gave another example: The CFOs of various divisions of an international publicly traded company were encouraged to find possible interruptions to report to the audit committee for fear that a systemic collapse would occur and that governance had not been informed previously. Being situationally aware of unsuspecting signals that could have generated a negative change in the financial system protected the organization by reporting the errors or deviations that could have incubated into financial disasters. Addressing the event identification, risk assessment, and risk response components precipitated the need for control activities and continuous monitoring. With risk points

identified and assessed, the organization responded by creating internal and external control and monitoring activities.

Ongoing analysis via reporting and comparing actual and forecasted results, reconciling accounts, fully executing checklists, and supporting active initiatives to find errors and deviations was evident in the reputable organizations of this study. The research literature on Enron indicated that even though some employees dutifully performed their compliance activities, the organization still suffered the outcomes of fraudulent activities and caused fiscal harm to innocent third parties. In line with a premise outlined by Bebbington et al. (2008), the reputable organizations in this study used control and monitoring activities to manage and minimize stakeholder risk-harm, which resulted in reputation risk management.

External auditors tested and evaluated the controls, opined as to the quality of the internal monitoring system and accuracy of the figures reported, and provided feedback on the effectiveness of eliminating or finding deviations and errors to mitigate third-party risk-harm. Keeping control and monitoring activities relevant by objectively exposing them to review, iteratively referring to them in the context of current situations, and revising quality control standards as needed reflected sensitivity to operations and a reluctance to simplify interpretations. For instance, according to EXT04, a change in a leadership position was an event worthy of revisiting an audit plan. IPU03 asserted that a missed check box was a reason to investigate and report up. Weick et al. (2008) posited that situational readjustments occur during times of interruption and resolve in individual, interactive, and cultural readjustments.

When the reporting system members do not evaluate and challenge the status quo of control activities and monitoring processes, deviant behavior normalizes, and financial actors become complacent and approach audit procedures and processes by simply "checking the box." This thought was in line with MMD theory (Turner, 1978), which posits that inattention to latent errors and collapse in organizational foresightedness causes the reporting system to drift into failure (Turner & Pidgeon, 1997), allowing a financial disaster to develop and cause financial harm to third-party stakeholders.

At Enron, leadership sent mixed signals of espoused ethics values. Although to the public, Enron leaders held out to value outstanding ethics, what they truly valued was the effect of reporting on Wall Street's reaction to the stock in terms of short-term earnings. Even if employees were originally hired as morally principled reporters, they soon learned that ethical reporting was not the objective; instead, rewards were given to individuals in the company who did whatever it took to show profits and earnings. This decoy distracted the reporting actors from taking ethical actions to resolve the errors in the reporting system, which then allowed the fraudulent acts to develop into an egregious crash of intentionally ignored signs and subsequent financial reporting system disaster that harmed thousands of stakeholders. Because the importance of adhering to control and monitoring activities, as well as ethics, was not pushed down from the top, the reporting control and monitoring procedures and policies at Enron morphed into fantasy documents (Clarke, 1999).

Information regarding the effect of control and monitoring activities is not new or theoretically groundbreaking to those individuals who produce reliable and accurate

financial reports for reputable organizations. Expectations set forth by the accounting profession's standard-setting boards and mandated regulations (Nobles et al., 2014; Wild, 2013) are designed to protect users of the fiscal information contained in the financial statements upon which they rely. However, this information is significant within the context of HRO theory because it supports attention to the human resource and mindful nature of effective ERM control activities and monitoring components, which supports effective implementation of procedures, policies, and achievement of the organizational goals.

Information and Communication

The data showed that the financial reporting systems used control activities and monitoring to facilitate accurate and reliable statements. However, the efforts to seek, gather, and share significant information and effectively communicate it to pertinent individuals in the organizations via documentation, training, and continual learning operationalized the control procedures and processes into high-reliability tools. Quality communication and the sharing of information created a transparent society, which deeply engaged the reporting actors to be involved in the processes and outcomes generated by reporting system controls.

Effective and quality communication between and among units is a key HRO element in determining a comprehensive plan for risk management in complex systems (Shawn Burke et al., 2005). This observation was in contrast to Jameson's (2009) commentary on communication failures as contributors to financial disasters and the resulting economic downturn around 2008. Dysfunctional communication and

information processing also were found to contribute to the Space Shuttle Columbia explosion (Deal, 2004; Pidgeon & O'Leary, 2000; Vaughan, 1990, 2009).

IPU02 provided a comprehensive example of how control and monitoring activities, or lack thereof, and the communication and the flow of information, starting at the lowest level, affected the financial reporting in an organization that had little or no formal control policies. The CFO then described the haphazard methodology of reconciling the subsidiary systems that was not working to promote accurate and reliable reporting, even though members seemed to be communicating. Having identified the risk, the CFO went through a process of risk response by creating control and monitoring tools and then putting them in place.

However, there were cases where the policies were not being adhered to, so yet another policy was created as a response to nonadherence. Monitoring activities were also put in place to follow up on the effectiveness of the control activities. According to the data, the presence of control and monitoring activities, quality information, and effective communication to operationalize the procedures and policies were essential to promote responsible financial reporting and fiscal management. Furthermore, these activities contained HRO constructs to further the initiative to achieve ERRM, with the goal of protecting organizational reputations.

Internal Environment

Like Enron, organizations can have various controls, procedures, and policies in place and they can communicate and share information all day long, but if the actors do not perform the procedures as intended, or if the information generated is contrary to the

purpose of the process, the tools become fantasy documents and become ineffective in truly mitigating third-party risk-harm. RQ2 inquired about the HRO constructs in ERM that would minimize organizational stakeholder financial risk-harm, and the evidence pointing to the overarching themes or filters that motivated, involved, and further engaged the participants to adhere to the rules and procedures of successful ERRM was found in the internal environment.

Although individual core values, personal traits, and characteristics contributed to ethical reporting, elements of culture and leadership in the internal environment strongly influenced the reporting human resource to adhere to the control and monitoring activities designed to minimize stakeholder risk-harm. Elements of the internal environment as factors that influence reporting compliance have been a theme discussed in the accounting literature, but they have not been easily measured or operationalized (J. Cohen et al., 2017; S. Cohen & Falcione, 2016). The data showed that signs of HRO culture and leadership were similar to those found in HROs, which could have provided a basis for measuring and operationalizing the internal environment elements discussed in the accounting literature as antecedents to compliant reporting.

Culture. The overarching HRO factor and antecedent to responsible financial reporting was organizational culture. The availability of information and effective communication were mechanistic factors in nature and were responsible in operationalizing control activities and monitoring processes. The mechanism was important because if data were unavailable, inaccurate, or unreliable, internal users could make poor decisions that might result in poor outcomes for that division, the entire

organization, and eventually innocent stakeholders. However, there was a deeper aspect of information and communication embedded in the internal environment that psychologically motivated the individual reporting actors to adhere vigorously to the procedures and policies in a manner that actively investigated systemic variables to manage risk effectively in the reporting environment.

Informed culture. The sequential effect of uninhibited communication indicated the existence of an informed culture that fostered the transparency and accountability themes found in HRO constructs. An informed culture in an HRO context contains artifacts and stories that create a deep-seated message that it is acceptable to seek out errors proactively, admit mistakes, and report deviations.

In some cases, the informed culture also influenced disclosing or remediating possible harmful events to third parties. However, compliance with disclosure requirements depended on whether management was aware of any required disclosures, and would actually come forth and document the events. If they were not aware, were the events discoverable by external auditors during audit activities? Furthermore, if the external auditors discovered events, actual disclosure compliance was dependent upon the auditors' dedication to doing the "right thing" and not conceding to revenue production pressures to not disclose required items for fear of losing large revenue-producing clients. An informed and transparent society encouraged proper disclosure because engaged individuals saw the input and outcomes of their actions that reflected their share of responsibility to promote ERRM to protect organizational reputations and third-party stakeholders.

Connecting the individuals involved in financial matters through sharing operating and compliance information freely and effectively in an informed culture fostered a sense of ownership by nonequity members, which resulted in policy and procedural adherence and subsequent accurate and reliable financial reporting. This observation was in line with K. H. Roberts and Bea's (2001) discussion about the need for integrated communication during mindful error-seeking containment to enhance reliability. Shawn Burke et al. (2005) stated that organizational member involvement in decision making is a factor for successful transformation to high reliability.

Just culture. Humans are fallible: They make mistakes and inadvertent errors. However, if left unaddressed nominal errors and mistakes can infiltrate reporting systems and culminate in material weakness in financial statements. Transparency of information generated trust among members. Reporting actors could find and report errors and deviations as a matter of regular control activities because the information was available for all to see. Reporting actors had little or no fear of retribution to admit a mistake or disclose an error because it was expected that the shared information was intended to generate awareness of reporting systemic weaknesses that would affect the business reputations. Rather than generating pride in admitting a mistake or finding an error, the just culture provided a psychological safety to the reporting actors to expose weaknesses. Once exposed and reported, it was up to leadership to acknowledge the problems and initiate actions to correct the matters systemically. This phenomenon created a circular reference back to effective communication and the sharing of valuable information, both of which encouraged transparency and accountability, and so on.

Diverse culture. These organizations possessed cultures diverse in experience and expertise, embracing differences to generate information that provided rigor to discovering errors, control weaknesses, or other deviations. A diverse culture is an HRO construct evidenced by robust dialogue to expose and explore corrections and controls from various viewpoints to arrive at the best decisions, not just an individual or a team consensus (Weick & Sutcliffe, 2007). One organization represented in the study exampled its sensitivity to operations through diversity by understanding that a voluntary retirement initiative and reorganization in the finance area were opportunities to review, revise, and create standard operating procedures (SOPs) to mitigate risk related to transfers in duties.

Value of an informed culture was evidenced by the forethought that with documented procedures to communicate objectives, required tasks, and duties of a position, another individual could come in, sit down, and fulfill the job by reading the SOPs. A respect for a diverse culture was evidenced by the value shown for all levels of expertise in the organization. However, a hierarchical structure was present, as evidenced by reporting up and by leadership being accountable by signing off on the SOP process before individuals transitioned out of their positions and others took their place.

The finance department at this organization was not distracted by the upheaval of a transition; rather, it used the transition as a learning opportunity to mitigate risk arising from the changes in roles and responsibilities. The HRT literature referred to a culture committed to learning from mistakes as having a commitment to resilience. The flexible and open flow of information between and among levels of the organization found in an

informed and diverse culture, coupled with reduced fear in reporting deviations evident in just cultures and a commitment to learning from and making the appropriate changes to address weaknesses, eventually resolves in the financial outcomes of the organization (Denison, 1984).

The conversation on human resource redundancies was flat, meaning that there was not much discussion about the benefits of redundancy or redundant measures to cover duties in the case of absences or staffing issues. It could be that they were inherent in control activities and monitoring measures, but redundancy did not seem to be forefront in the minds of the reporting actors as an influencing factor. Had this been a discussion on information technology in financial reporting, there might have been more dialogue about redundancies.

Furthermore, in the private company cases, the number of staff members who dealt with financial matters was relatively small in comparison to the transaction load; in most cases, there was some form of cross training to cover positions when employees were absent. In other cases, the reporting leaders would cover the duties of absent employees until they could find proper replacements, and in cases such as reorganization, the reporting actors took on additional duties and responsibilities permanently. This strategy seemed to be in the face of the HRO construct of reluctance to simplify interpretations because as duties are added to individuals' responsibilities, more opportunity happens for errors and mistakes to develop into systemic weaknesses in the financial reporting system. Additional rigor would be needed to investigate possible weaknesses under the possibility that a task the other person or leadership should be

doing was being left undone or if an internal control such as segregation of duties was incubating an error for possible reporting system interruption.

When asked about redundancies, IPU04 identified the benefits of redundant performance through the use of service organizations for ordinary transaction reporting to promote consistency and reliability. However, HRO theorists have posited that outsourcing can degrade a system's integrity by limiting requisite variety and beneficial mindfulness, meaning that the provider is saddled with detecting errors and the buying organization is left at risk of complacency in that reporting system (Weick et al., 2008)

Leadership. The numerous references to "tone at the top" as the influential factor of organizational success, defined as achieving profit-making objectives while protecting reputations and stakeholders, evidenced that leadership had the most influence on ERRM. This observation aligned with the HRO discussion of hierarchical structure. The hierarchical arrangement of positions by responsibilities and duties with regard to reporting processes and procedures facilitates a fluid flow of information and communication (Roberts, 1990). However, when information does not flow because of impermeable structures, the individuals performing the reporting tasks do not feel that they can reveal mistakes, errors, or deviations upwards (Weick et al., 2008). Thus, a normalization of deviance develops (Vaughan, 2003), as was evident in the Enron case. The case evidence in this study that leadership can influence responsible reporting indicated deference to expertise, in that the hierarchical structure was penetrable by rank-and-file individuals performing the reporting tasks, allowing higher positioned individuals to be informed of and able to address possible reporting risk events to

mitigate third-party risk-harm.

S. Cohen and Falcione (2016), who conducted a study for PwC, concluded that only 26% of senior executives spoke of compliance and ethics as part of everyday business communications. S. Cohen and Falcione as well as J. Cohen et al. (2017) discussed the need for a culture of compliance and a quality internal environment, but they did not provide any indication of ways to generate either. In their study on providing a climate of compliance, S. Cohen and Falcione addressed such business strategy elements as tone at the top, culture, and communication, but they did not indicate the psychological connection between leadership and reporting actors that might contribute to a compliant environment.

Results of my data showed that leadership is a central HRO theme in financial reporting systems. A discussion about culture must include leadership qualities because leadership drives culture (Schein, 1983). If leadership is unable or refuses to address system weaknesses, the control environment wanes, and the inertia from the effect of the weaknesses multiplies can result in financial disaster (K. H. Roberts & Bea, 2001; Weick et al., 2008). Seeger and Ulmer (2003) posited that the responsibilities of a leader in championing an ethical financial reporting culture include "communicating appropriate values to create a moral climate, maintaining adequate communication to be informed of organizational operations, and maintaining openness to signs of problems" (p. 59).

Leadership in responsible financial reporting cultures expressed having a deep-seated virtuous quality to do the right thing. Despite many participants being compensated by some form of incentive for financial performance, the leaders were

concerned about what was right for the stakeholders of the organizations and considered them in the decisions that they make and the role that they modeled to protect them and the reputations of their organizations. Qualities like honesty, trustworthiness, and integrity were used to describe the leaders in this study's reputable organizations. Similar value-oriented elements are present in transformational leaders who motivate their followers to look beyond their self-interests for the good of their respective organizations (Bass, 1999). Leaders in this study were knowledgeable of compliance matters and took responsibility for reporting functions and results, something that generated mutual respect and trust among the reporting members. Bass (1990) described transactional leadership, the antithesis of transformational leadership, as a "prescription for mediocrity" (p. 2) because the leaders get involved only when procedures and standards are not being adhered to. Enron's leader-driven transactional culture of reward for performance and punishment for nonperformance resulted in disastrous outcomes because of the lack of moral standards generally used by transformational leaders in motivating their team members.

Results also identified a sociorelational dynamic that fostered connectivity between leaders and reporting actors in the reputable organizations that encouraged communication and motivation. The elements of transformational leadership generated HQLMX (Gerstner & Day, 1997), which seemed to foster better compliance and operationalize ERRM components. According to LMX theory, the quality of LMX has been correlated positively with follower satisfaction, organizational commitment, role clarity, and role performance (Krishnan, 2005). Engaged employees who adhere to

policies and procedures because of a high-quality connectivity between leader and follower (Krishnan, 2005) and who have little to no fear of reporting errors and mistakes might reduce system drift and the incubation of financial control failures (Turner & Pidgeon, 1997) that might permit nominal deviations to evolve into egregious frauds.

Familial compliance environment. RQ3 addressed the ways that HRO constructs in ERM can inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility while maximizing profit. The investigation into HRO constructs as a tool to promote reliably accurate financial reporting is premature and requires development before practitioners can apply it. However, at the risk of drifting from scholarly writing but imagining how HRO constructs in ERRM might be applied to practice, the following metaphorical model developed from the interpretation of the findings that could be used to communicate to accountants information about the human factors that contribute to a compliant internal environment for ERRM.

Weick et al. (2008) referred to open and frequent communication and effective leadership as good "motherhood items" (p. 59) in their discussion of HRO foundational tenets. They surmised that in an environment under change, "a good mother is hard to find" (p. 59). "Big brother" accountability, or overarching sense of someone watching; the reference to HRO motherhood tenets discovered in the data; and the presence of transformation leadership and HQLMX simulated a familial-like internal environment where responsible reporting systems excelled. Reporting teams were akin to siblings looking out for each other by checking and advising each other of in-group mistakes or deviations so that as a team, they would be reflected in good light to the management

above them (control and monitoring activities). Then teams at that level would make certain that they were disclosing events and items among their team (information and communication), so that when they reported up, they also would be reflected in good light. Because it was expected in this family (culture) that information would circulate and reach leadership, with the goal of pleasing the respected "parent." Leadership, being of good integrity, trustworthy, virtuous, and respected, as a well-regarded parent might be, would understand an honest mistake and provide a basis for learning from the mistake, but would not tolerate intentional wrongdoing without consequences (connectivity). As in Enron, if the parents are not emotionally present (too busy looking after their own interests), the children will not receive the guidance necessary to develop and act properly and will, instead, look to modeling the parents' behavior as a guide.

Limitations of the Study

The study did have some limitations. Although stratification across industries was sufficient, there were two cases of participants being stratified over positions within the organizations. However, the positions that the participants held in the companies were sufficiently heterogeneous to address the topic from various perspectives. The representation of five women in leadership positions mediated the possible limitation of my gender as a female and gender-related risk tolerance influences.

The derived model from these organizations presented the panacea for perfectly responsible, accurate, and responsible financial reporting and management. However, the findings that certain HRO constructs exist in the ERM components of responsible financial reporting systems in the studied organizations might not be generalizable to all

organizations. Because culture and leadership characteristics were instrumental in providing a platform for HRO constructs in the internal environment, the findings of this study could be generalizable only to organizations whose governance boards and leadership desire ERRM and are committed to championing the initiative. This limitation did not allow me to address the agentic leadership influencing factors of failed reporting systems. Furthermore, because there is a cost associated with turning over every stone to look for errors (K. H. Roberts & Bea, 2004), there could be cost-benefit decisions that create unknown inherent systemic weaknesses in certain integrated systems in organizations desiring a responsible and reliable system that could not be detected in this study.

Recommendations

I conducted this study to define the HRO constructs present in the ERM of responsible financial reporting and fiscal management and find evidence of the presence of similar constructs. Because this evidence was suggestive in nature, it would be beneficial to develop a measurement to assess the state of high reliability in fiscally reputable organizations. Doing so might make the descriptive nature of this study applicable not only to financial reporting and fiscal management leaders but also the accounting profession as a whole to put into practice. Black and McBride (2013) referenced previous studies conducted to measure HRO applicability in hospital and software startup companies to support their study, whose purpose was to measure and assess HRO characteristics on collective and individual scales for applying HRO constructs in fighting wildfires. Therefore, this recommendation for further research in

applying HRO concepts in accounting practice is reasonable within the scope of human resource and organizational behavior to enhance reliable performance outside of the scope of traditional HROs.

Furthermore, although I referred to the connected nature of leadership to individuals performing the control and monitoring tasks, more research is needed to define the essence of connectivity or the quality of the social exchange between the leaders, who possess or emit transformational leadership characteristics, and the reporting actors, who are motivated by the tone at the top. Mindful leadership is integral to the composition of HRO cultures (Lekka, 2011), and LMX and transformational leadership have been linked to occupational safety outcomes (Christian et al., 2009). Vogus et al. (2014) linked prosocial motivation and emotional ambivalence to mindful organizing and warned against routinization because it prohibits the requisite variety and tension to trigger prosocial motivation and emotional ambivalence. This tenet against routinization could be a problem in the accounting profession, where procedures, policies, and process simplification are the norm in compliance. Perhaps measurement of the personal quality described by the participants as right would be integral to explaining this assumed benefit of HQLMX in a dynamic responsible reporting environment, thus furthering an ERRM model by providing a framework or tool for organizations to hire and cultivate the virtues in leadership required to champion a responsible financial reporting environment. Overlooking this as a first step in managing risk successfully could create risk in choosing the wrong leader and could lead to financial reporting leadership risk.

Social Implications

The premise of this research was to investigate the influencing factors that promoted procedure operationalization and rule adherence by the participants from the studied organizations to promote responsible reporting and limit third-party risk-harm. Because there is a fair amount of judgment in principles-based financial accounting, the profession uses rules regulations; standards; and associated policies, procedures, and processes to control deviations that incubate into material weaknesses. HROs are well versed in controlling errors and system interruptions that might affect the reputations of organizations and unwitting third parties if they are allowed to develop into disasters. By defining the existence of the HRO psychological constructs that motivated the participants, all of whom were in the financial reporting and fiscal management environment, the results of this study will provide leaders and governing boards with a framework that could influence the individual judgments inherent in principles-based accounting.

Being aware of an HRO conceptual framework will help leadership to develop internal policies and procedures that will operationalize the ethical fiscal management and representation of their respective organizations' financial resources to protect the organizations' reputations and third-party stakeholders. On a broader scale, understanding the HRO factors of the ERM of responsible financial reporting could require modifications to government and professional regulation to mitigate risk to the global economy from the effect of undetected errors in the complex financial systems of multi-national organizations. Beyond the scope of policy application, the findings of this

research could lead to the integration of HRO construct knowledge in the financial reporting curriculum to influence the education, training, and certification of accounting professionals.

Conclusion

Finding the existence of ERM components in responsible fiscal management systems was not a surprising outcome because financial reporting actors are required to abide by the AICPA (2016), whose guidelines were designed to provide external and internal control measures for mitigating the third-party risk-harm associated with errors and fraud. However, the development alone of procedures, policies, and procedures will not improve reporting compliance. ERRM in responsible financial reporting systems also addresses the human factors required to encourage adherence to procedures and policies designed to operationalize control and monitoring activities effectively. Results of the study revealed the presence of HRO collective disaster foresightedness and mitigation constructs in reputable organizations ethically achieving their organizational goals while protecting third-party stakeholders from risk-harm and that regardless of individual awareness of a formal program, a reduced yet concentrated version of the ERM framework emerged that was tailored to ERRM.

ERRM assumes a profit-making motive, meaning that organizations have assessed the risks and identified the events that could interrupt profitable operations, as most organizational ERM initiatives do. However, what also seemed to be present in the ERRM of these organizations was an overarching emphasis on reputation risk management that was accomplished via inherent HRO constructs that contributed to the

development of and adherence to adequate control activities and monitoring measures of COSO's (2004) ERM framework and regulations and standards of the accounting profession. A better understanding of the effects of an HRO environment on financial reporting outcomes to develop and implement HRO constructs in the intangible reporting systems of organizations would benefit organizations by helping to protect their reputations and, more importantly, the innocent third-party stakeholders who depend on the integrity of the organizations' reporting systems.

References

Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932-968. doi:10.1177/0149206311436079

American Institute of Certified Public Accountants. (2013). *Assurance services: A white paper for providers and users of business information.* Retrieved from http://www.aicpa.org/InterestAreas/FRC/AssuranceAdvisoryServices/DownloadableDocuments/ASEC_WP_Providers_Users_BI.PDF

American Institute of Certified Public Accountants. (2014). Code of professional conduct. Retrieved from http://pub.aicpa.org/

American Institute of Certified Public Accountants: Auditing Standards Board. (2015). *AU-C Section 520: Analytical Procedures* (From SAS No. 122). Retrieved from http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-C-00520.pdf

American Institute of Certified Public Accountants: Auditing Standards Board. (2016). *AU-C Section 420: Consideration of Fraud in a Financial Statement Audit* (From SAS No. 122; SAS No. 128). Retrieved from https://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-C-00240.pdf

American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. Retrieved from http://www.apa.org/

Arena, M., Arnaboldi, M., & Azzone, G. (2011). Is enterprise risk management real? *Journal of Risk Research, 14*(7), 779-797. doi:10.1080/13669877.2011.571775

Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization Science, 22*(5), 1123-1137.

Arnold, B., & De Lange, P. (2004). Enron: An examination of agency problems. *Critical Perspectives on Accounting, 15*(6), 751-765.

Association of Certified Fraud Examiners. (2014). *2014 Report to the nations on occupational fraud and abuse*. Retrieved from http://www.acfe.com/

Bagnara, S., Parlangeli, O., & Tartaglia, R. (2010). Are hospitals becoming high reliability organizations? *Applied Ergonomics, 41*(5), 713-718.

Bailey, J. (2008). First steps in qualitative data analysis: Transcribing. *Family Practice, 25*(2), 127-131.

Baker, D. P., Day, R., & Salas, E. (2006). Teamwork as an essential component of high-reliability organizations. *Health Services Research, 41*(4), 1576-1598.

Ball, R. (2009). Market and political/regulatory perspectives on the recent accounting scandals. *Journal of Accounting Research, 47*(2), 277-323.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19-31.

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology, 8*(1), 9-32.

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2010). *Fraudulent financial reporting 1998-2007: An analysis of US public companies.* Retrieved from http://www.coso.org/documents/COSOFRAUDSTUDY2010_001.pdf

Beasley, M. S., Clune, R., & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy, 24*(6), 521-531. doi:10.1016/j.jaccpubpol.2005.10.001

Bebbington, J., Larrinaga, C., & Moneva, J. M. (2008). Corporate social reporting and reputation risk management. *Accounting, Auditing & Accountability Journal, 21*(3), 337-361.

Bellamy, G. T., Crawford, L., Marshall, L. H., & Coulter, G. A. (2005). The fail-safe schools challenge: Leadership possibilities from high reliability organizations. *Educational Administration Quarterly, 41*(3), 383-412.

Bigley, G. A., & Roberts, K. H. (2001). The incident command system: High-reliability organizing for complex and volatile task environments. *Academy of Management Journal, 44*(6), 1281-1299.

Black, A. E., & McBride, B. B. (2013). Assessing high reliability practices in wildland fire management: An exploration and benchmarking of organizational culture. *Rocky Mountain Research Station U.S. Department of Agriculture Forest Service research note (RMRS-RN-55).* Retrieved from https://www.fs.fed.us/rm/pubs/rmrs_rn055.pdf

Bourrier, M. (2011). The legacy of the high reliability organization project. *Journal of Contingencies and Crisis Management, 19*(1), 9-13.

Brooks, C. (2010). Embodied transcription: A creative method for using voice-recognition software. *Qualitative Report, 15*(5), 1227-1242.

Calandro, J., Jr. (2012). A systems accident approach to systemic financial risk. *Journal of Financial Transformation, 35,* 39-48.

Carmeli, A., & Gittell, J. H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior, 30*(6), 709-729.

Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business horizons, 34*(4), 39-48.

Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *Qualitative Report, 16*(1), 255-262.

Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace safety: A meta-analysis of the roles of person and situation factors. *Journal of Applied Psychology, 94*(5), 1103-1127. doi:10.1037/a0016172

Civic Impulse. (2015). H. R. 3763 - 107th Congress: Sarbanes-Oxley Act of 2002.

Clarke, L. (1999). *Mission improbable: Using fantasy documents to tame disasters.* Chicago, IL: University of Chicago Press.

Cohen, J. R., Krishnamoorthy, G., & Wright, A. (2017). Enterprise risk management and the financial reporting process: The experiences of audit committee members, CFOs, and external auditors. *Contemporary Accounting Research, 34*(2), 1178-1209.

Cohen, S., & Falcione, A. (2016). *PwC state of compliance study 2016: Laying a strategic foundation for strong compliance risk management.* Retrieved from http://www.pwc.com/us/en/risk-assurance/state-of-compliance-study/assets/state-of-compliance-study-2016.pdf

Columbia Accident Investigation Board. (2003). Report Volume 1, August 2003, Chapters 1-4. Washington, DC: US Government Printing Office.

Committee of Sponsoring Organizations of the Treadway Commission. (2004). *Enterprise risk management - Integrated framework: Executive summary*. Retrieved from http://www.coso.org/documents/coso_erm_executivesummary.pdf

Committee of Sponsoring Organizations of the Treadway Commission. (2013). *Internal control - Integrated framework: Executive summary.* Retrieved from http://www.coso.org/documents/990025P_Executive_Summary_final_may20_e.pdf

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.

Coutou, D. L. (2003). Sense and reliability. *Harvard Business Review, 81*(4), 84-90.

Cox, S., Jones, B., & Collinson, D. (2006). Trust relations in high-reliability organizations. *Risk Analysis, 26*(5), 1123-1138.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Cullinan, C. (2004). Enron as a symptom of audit process breakdown: Can the Sarbanes-Oxley Act cure the disease? *Critical Perspectives on Accounting, 15*(6), 853-864.

Deal, D. W. (2004). Beyond the widget: Columbia accident lessons affirmed. *Air and Space Power Journal, 18*(2), 31-50.

DeLoach, J., & Thomson, J. (2014). *Improving organizational performance and governance*. Retrieved from http://www.coso.org/documents/2014-2-10-COSO%20Thought%20Paper.pdf

Denison, D. R. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics, 13*(2), 5-22.

Ernst & Young LLP. (2012). *The Sarbanes-Oxley Act at 10: Enhancing the reliability of financial reporting and audit quality*. Retrieved from http://www.ey.com/Publication/vwLUAssets/The_Sarbanes-Oxley_Act_at_10_-_Enhancing_the_reliability_of_financial_reporting_and_audit_quality/$FILE/JJ0003.pdf

Ernst & Young LLP. (2013). *Risk management for asset management*. Retrieved from http://www.ey.com/Publication/vwLUAssets/EY_Risk_Management_for_Asset_Management_Survey_2013/$FILE/EY-Risk-management-for-asset-management-survey-2013.pdf

Essaides, N. (2013). *Corporate Treasurers Council guide to enterprise risk management beyond theory: Practitioner perspectives on ERM.* Retrieved from https://www.pwc.com/us/en/risk-management/assets/beyond-theory.pdf

Finkelstein, C. (2003). Is risk a harm? *University of Pennsylvania Law Review, 151*(3), 963-1001.

Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). Measuring safety climate: Identifying the common features. *Safety Science, 34*(1), 177-192. doi:10.1016/S0925-7535(00)00012-6

Francis, B., Hasan, I., Park, J. C., & Wu, Q. (2014). Gender differences in financial reporting decision making: Evidence from accounting conservatism. *Contemporary Accounting Research*, n/a-n/a. doi:10.1111/1911-3846.12098

Frooman, J. (1997). Socially irresponsible and illegal behavior and shareholder wealth: A meta-analysis of event studies. *Business & Society, 36*(3), 221-249.

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 82*(6), 827-844.

Gifun, J. F., & Karydas, D. M. (2010). Organizational attributes of highly reliable complex systems. *Quality and Reliability Engineering International, 26*(1), 53-62. doi:10.1002/qre.1034

Gill, D. A., Picou, J. S., & Ritchie, L. A. (2011). The Exxon Valdez and BP oil spills: A comparison of initial social and psychological impacts. *American Behavioral Scientist, 56*(1), 3-23. doi:10.1177/0002764211408585

Glaser, B. J. (2014). *Organizational culture and financial performance and the moderating effect of organizational age* (Doctoral dissertation). Available from http://search.proquest.com/

Graham, B., Reilly, W., Beinecke, F., Boesch, D., Garcia, T., Murray, C., & Ulmer, F. (2011). *Deep Water: The Gulf oil disaster and the future of offshore drilling* [Report to the President, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Washington, DC]. Retrieved from https://www.gpo.gov/fdsys/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf

Harrald, J. R., Marcus, H. S., & Wallace, W. A. (1990). The Exxon Valdez: An assessment of crisis prevention and management systems. *Interfaces, 20*(5), 14-30.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268.

Heerwegh, D. (2005). Effects of personal salutations in e-mail invitations to participate in a web survey. *Public Opinion Quarterly, 69*(4), 588-598.

Jameson, D. A. (2009). Economic crises and financial disasters: The role of business communication. *Journal of Business Communication, 46*(4), 499-509. doi:10.1177/0021943609338667

Jickling, M. (2002). *The Enron collapse: An overview of financial issues* (CRS Report No. RS21135). Retrieved from http://fpc.state.gov/documents/organization/9267.pdf

Kleffner, A. E., Lee, R. B., & McGannon, B. (2003). The effect of corporate governance on the use of enterprise risk management: Evidence from Canada. *Risk Management and Insurance Review, 6*(1), 53-73.

Klein, R. L., Bigley, G. A., & Roberts, K. H. (1995). Organizational culture in high reliability organizations: An extension. *Human Relations, 48*(7), 771-793. doi:10.1177/001872679504800703

Krishnan, V. R. (2005). Leader-member exchange, transformational leadership, and value system. *Journal of Business Ethics and Organizations, 10*(1), 14-21.

Lapadat, J. C., & Lindsay, A. C. (1999). Transcription in research and practice: From standardization of technique to interpretive positionings. *Qualitative Inquiry, 5*(1), 64-86.

LaPorte, T. R. (1996). High reliability organizations: Unlikely, demanding and at risk. *Journal of Contingencies and Crisis Management, 4*(2), 60-71.

LaPorte, T. R., & Consolini, P. M. (1991). Working in practice but not in theory: Theoretical challenges of high-reliability organizations. In A. Boin (Ed.), *Crisis management* (Vol. 2, pp. 57-81). Thousand Oaks, CA: Sage.

Lekka, C. (2011). *High reliability organisations: A review of the literature.* Retrieved from http://www.hse.gov.uk/research/rrpdf/rr899.pdf

Leveson, N., Dulac, N., Marais, K., & Carroll, J. (2009). Moving beyond normal accidents and high reliability organizations: A systems approach to safety in complex systems. *Organization Studies, 30*(2-3), 227-249.

Levine, R. (2004). Risk management systems: Understanding the need. *Information Systems Management, 21*(2), 31.

Libuser, C. (1994). *Organizational structure and risk mitigation* (Doctoral dissertation). Retrieved from http://high-reliability.org/

Liebenberg, A. P., & Hoyt, R. E. (2003). The determinants of enterprise risk management: Evidence from the appointment of chief risk officers. *Risk Management and Insurance Review, 6*(1), 37-52.

Lo, A. W. (2009). Regulatory reform in the wake of the financial crisis of 2007-2008. *Journal of Financial Economic Policy, 1*(1), 4-43. doi:10.1108/17576380910962376

Lou, Y.-I., & Wang, M.-L. (2011). Fraud risk factor of the fraud triangle assessing the likelihood of fraudulent financial reporting. *Journal of Business & Economics Research, 7*(2), 61-78.

Macey, W. H., & Schneider, B. (2008). Engaged in engagement: We are delighted we did it. *Industrial and Organizational Psychology, 1*(1), 76-83.

Markopolos, H. (2010). *No one would listen: A true financial thriller*. Hoboken, NJ: John Wiley & Sons.

Martinez-Moyano, I. J., McCaffrey, D. P., & Oliva, R. (2013). Drift and adjustment in organizational rule compliance: A grounded theory of the regulatory pendulum in financial markets. *Organization Science, 25*(2), 321-338. doi:10.1287/orsc.2013.0847

Matheson, J. L. (2007). The voice transcription technique: Use of voice recognition software to transcribe digital interview data in qualitative research. *Qualitative Report, 12*(4), 547-560.

McLean, B., & Elkind, P. (2004). *The smartest guys in the room: The amazing rise and scandalous fall of Enron.* New York, NY: Penguin Group.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250.

Müssig, A. (2009). The financial crisis: Caused by unpreventable or organized failures? *International Journal of Economic Sciences and Applied Research, 2*(1), 51-70.

Nobles, T., Mattison, B., & Matsumura, E. M. (2014). *Horngren's accounting* (10th ed.). Upper Saddle River, NJ: Pearson.

O'Connell, B. T. (2004). Enron. Con: "He that filches from me my good name… makes me poor indeed." *Critical Perspectives on Accounting, 15*(6), 733-749.

O'Reilly, C. (1989). Corporations, culture, and commitment: Motivation and social control in organizations. *California Management Review, 31*(4), 9-25.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies, 24*(3), 403-441.

O'Rourke, M. (2004). Protecting your reputation. *Risk Management Magazine, 51*(4), 14-17.

Ostas, D. T. (2007). When fraud pays: Executive self-dealing and the failure of self-restraint. *American Business Law Journal, 44*(4), 571-601.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Peloza, J. (2009). The challenge of measuring financial impacts from investments in corporate social performance. *Journal of Management, 35*(6), 1518-1541.

Perrow, C. (1999). *Normal accidents: Living with high risk technologies.* Princeton, NJ: Princeton University Press.

Perrow, C. (2004). A personal note on normal accidents. *Organization & Environment, 17*(1), 9-14.

Perrow, C. (2010). The meltdown was not an accident. *Markets on Trial: The Economic Sociology of the US Financial Crisis: Part A, Research in the Sociology of Organizations, 30*(A), 309-330.

Pidgeon, N. F. (1997). The limits to safety? Culture, politics, learning and man-made disasters. *Journal of Contingencies and Crisis Management, 5*(1), 1-14.

Pidgeon, N. F., & O'Leary, M. (2000). Man-made disasters: Why technology and organization (sometimes) fail. *Safety Science, 34*(1-3), 12-30. doi:10.1016/s0925-7535(00)00004-7

Power, M. (2005). Enterprise risk management and the organization of uncertainty in financial institutions. In K. K. Cetina & A. Preda (Eds.), *The sociology of financial markets* (pp. 250-268). New York, NY: Oxford University Press.

Power, M. (2009). The risk management of nothing. *Accounting, Organizations and Society, 34*(6-7), 849-855. doi:10.1016/j.aos.2009.06.001

Presidential Commission on the Space Shuttle Challenger Accident. (1986). Report of the presidential commission on the space shuttle Challenger accident. Retrieved from http://history.nasa.gov/

Pronovost, P. J., Berenholtz, S. M., Goeschel, C. A., Needham, D. M., Sexton, J. B., Thompson, D. A., … Hunt, E. (2006). Creating high reliability in health care organizations. *Health Services Research, 41*(4), 1599-1617.

Public Company Accounting Oversight Board. (2015). About the PCAOB. Retrieved from http://pcaobus.org/

Qureshi, Z. H. (2007). A review of accident modelling approaches for complex socio-technical systems. In T. Cant (Ed.), *12th Australian workshop on safety-related programmable systems* (pp. 47-59). Australian Computer Society.

Ramanujam, R., & Goodman, P. S. (2003). Latent errors and adverse organizational consequences: A conceptualization. *Journal of Organizational Behavior, 24*(7), 815-836. doi:10.1002/job.218

Rasmussen, J. (1997). Risk management in a dynamic society: A modelling problem. *Safety Science, 27*(2), 183-213.

Reason, J. (1997). *Managing the risks of organizational accidents.* Farnham, England: Ashgate.

Reason, J. (2000). Human error: Models and management. *British Medical Journal, 320*(7237), 768-770. doi:10.1136/bmj.320.7237.768

Rijpma, J. A. (1997). Complexity, tight-coupling, and reliability: Connecting normal accidents theory and high reliability theory. *Journal of Contingencies and Crisis Management, 5*(1), 15-22. doi:10.1111/1468-5973.00033

Rijpma, J. A. (2003). From deadlock to dead end: The normal accidents-high reliability debate revisited. *Journal of Contingencies and Crisis Management, 11*(1), 37-45.

Roberts, C. M. (2010). *The dissertation journey: A practical and comprehensive guide to planning, writing, and defending your dissertation.* Thousand Oaks, CA: Corwin.

Roberts, K. H. (1990). Some characteristics of one type of high reliability organization. *Organization Science, 1*(12), 160-176. doi:10.1287/orsc.1.2.160

Roberts, K. H., & Bea, R. (2001). Must accidents happen? Lessons from high-reliability organizations. *Academy of Management Executive, 15*(3), 70-78.

Roberts, K. H., & Libuser, C. (1993). From Bhopal to banking: Organization design can mitigate risk. *Organizational Dynamics, 21*(4), 15-26. doi:10.1016/0090-2616 (93)90030-5

Rochlin, G. I. (1999). Safe operation as a social construct. *Ergonomics, 42*(11), 1549-1560.

Rosenfield, P. (2000). What drives earnings management? *Journal of Accountancy, 190*(4), 106.

Sagan, S. D. (1993). *The limits of safety.* Princeton, NJ: Princeton University.

Saldana, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). Thousand Oaks, CA: Sage.

Sammarco, J. J. (2005). Operationalizing normal accident theory for safety-related computer systems. *Safety Science, 43*(9), 697-714.

Schein, E. H. (1983). The role of the founder in the creation of organizational culture. *Organizational Dynamics, 12*(1), 13-28.

Schein, E. H. (1984). Coming to a new awareness of organizational culture. *Sloan Management Review, 25*(2), 3-16.

Schein, E. H. (1993). On dialogue, culture, and organizational learning. *Organizational Dynamics, 22*(2), 40-51.

Scheytt, T., Soin, K., Sahlin-Andersson, K., & Power, M. (2006). Introduction: Organizations, risk and regulation. *Journal of Management Studies, 43*(6), 1331-1337.

Schulman, P. R. (1993). The negotiated order of organizational reliability. *Administration & Society, 25*(3), 353-372. doi:10.1177/009539979302500305

Seale, C. (1999). Quality in qualitative research. *Qualitative Inquiry, 5*(4), 465-478.

Seeger, M. W., & Ulmer, R. R. (2003). Explaining Enron: Communication and responsible leadership. *Management Communication Quarterly, 17*(1), 58-84.

Shawn Burke, C., Wilson, K. A., & Salas, E. (2005). The use of a team-based strategy for organizational transformation: Guidance for moving toward a high reliability organization. *Theoretical Issues in Ergonomics Science, 6*(6), 509-530.

Sims, R. R., & Brinkmann, J. (2003). Enron ethics (or: culture matters more than codes). *Journal of Business Ethics, 45*(3), 243-256.

Smith-Crowe, K., Burke, M. J., & Landis, R. S. (2003). Organizational climate as a moderator of safety knowledge-safety performance relationships. *Journal of Organizational Behavior, 24*(7), 861-876. doi:10.1002/job.217

Stringfield, S., Reynolds, D., & Schaffer, E. C. (2008). Improving secondary students' academic achievement through a focus on reform reliability: 4-and 9-year findings from the High Reliability Schools Project. *School Effectiveness and School Improvement, 19*(4), 409-428.

Taylor-Gooby, P., & Zinn, J. O. (2006). Current directions in risk research: New developments in psychology and sociology. *Risk Analysis, 26*(2), 397-411. doi:10.1111/j.1539-6924.2006.00746.x

Trochim, W. (2006a). Pattern matching for construct validity. Retrieved from http://www.socialresearchmethods.net/

Trochim, W. (2006b). Qualitative validity. Retrieved from http://www.socialresearch methods.net/

Turner, B. A. (1976). The organizational and interorganizational development of disasters. *Administrative Science Quarterly, 21*(3), 378-397.

Turner, B. A., & Pidgeon, N. F. (1997). *Man-made disasters* (2nd ed.). Oxford, UK: Butterworth–Heinemann.

U. S. Bureau of Labor Statistics. (2014). *Current Population Survey, Household Data Annual Averages Table 11: Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity.* Retrieved from http://www.bls.gov/cps/ cpsaat11.pdf

U.S. Securities and Exchange Commission. (2012). The Securities and Exchange Commission post-Madoff reforms. Retrieved from https://www.sec.gov/

U.S. Securities and Exchange Commission Office of Investigations. (2009). *Investigation of failure of the SEC to uncover Bernard Madoff's Ponzi scheme (OIG-509).* Retrieved from https://www.sec.gov/news/studies/2009/oig-509-exec-summary. pdf

Valukas, A. R. (2010). Lehman Brothers Holdings Inc. Chapter 11 proceedings examiner's report. Retrieved from https://web.stanford.edu/

Vaughan, D. (1990). Autonomy, interdependence, and social control: NASA and the space shuttle Challenger. *Administrative Science Quarterly, 35*(2), 225-257.

Vaughan, D. (2003). History as cause: Columbia and Challenger. In *Columbia Accident Investigation Board* (Vol. 1, Chapter 8, pp. 195-204). Retrieved from https://www.nasa.gov/

Vaughan, D. (2009). Slopes, repeating negative patterns, and learning from mistake? In W. Starbuck & M. Farjoun (Eds.), *Organization at the limit: Lessons from the Columbia Disaster* (pp. 41-59). Malden, MA: Blackwell.

Vogus, T. J., & Welbourne, T. M. (2003). Structuring for high reliability: HR practices and mindful processes in reliability-seeking organizations. *Journal of Organizational Behavior, 24*(7), 877-903. doi:10.1002/job.221

Von Bertalanffy, L. (1968). *General system theory: Foundations, development, applications.* New York, NY: George Braziller.

Waller, M. J., & Roberts, K. H. (2003). High reliability and organizational behavior: Finally the twain must meet. *Journal of Organizational Behavior, 24*(7), 813-814. doi:10.1002/job.224

Watkins, S. (2003). Former Enron vice president Sherron Watkins on the Enron collapse. *The Academy of Management Executive, 17*(4), 119-125.

Webel, B. (2010). *The Dodd-Frank Wall Street Reform and Consumer Protection Act: Issues and summary.* Retrieved from http://www.llsdc.org/assets/DoddFrank docs/crs-r41350.pdf

WebFinance. (2016). Stakeholder. Retrieved from http://www.businessdictionary.com/

Weick, K. E. (1987). Organizational culture as a source of high reliability. *California Management Review, 29*(2), 112-127. doi:10.2307/41165243

Weick, K. E. (2004). Normal accident theory as frame, link, and provocation. *Organization & Environment, 17*(1), 27-31. doi:1031177/1086026603262031

Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly, 38,* 357-381.

Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilience performance in an age of uncertainty* (2nd ed.). San Francisco, CA: Jossey-Bass.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. M. (2008). Organizing for high reliability: Processes of collective mindfulness. In A. Boin (Ed.), *Crisis management* (Vol. 3, pp. 31-66). London, England: Sage.

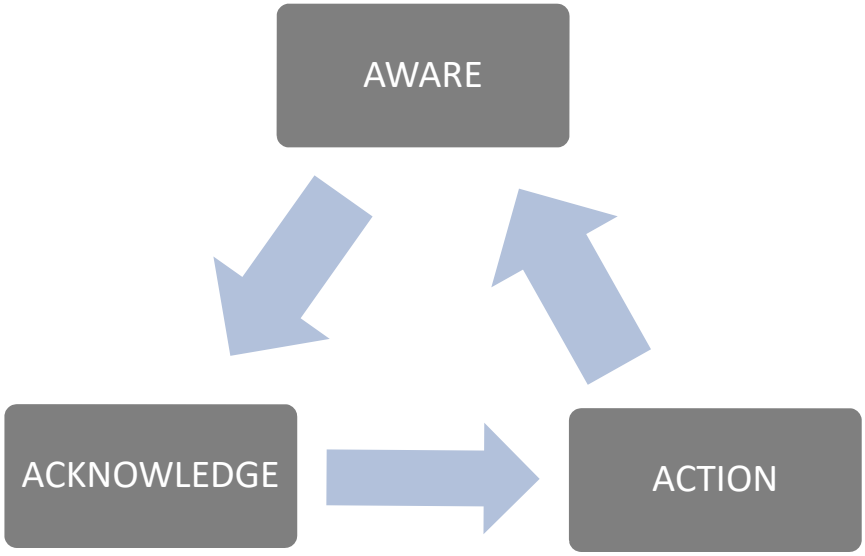
Wild, J. J. (2013). *Financial accounting fundamentals* (4th ed.). New York, NY: McGraw-Hill Education.

Appendix A: Initial Coding Scheme

AWARE: Being aware that a deviation does or could exist, opening the door for fraud.

ACKNOWLEDGE: Speaking up, vocalizing, or stating in some way the presence of a deviation to leadership, and leadership acknowledging and embracing the problem, instead of down-playing or ignoring it completely.

ACTION: Containing and correcting the deviation so that it does not escalate into a disaster.



As a guide for coding, I will listen for the following HRO and ERM constructs to emerge from the data as they apply to the following overarching concepts in financial responsibility:

AWARE (RQ1)

- Mindfulness
  - Preoccupation with failure
  - Reluctance to simplify
  - Sensitivity to operations
  - Situational Awareness:
    - Dull alertness

        - Misinterpretation
        - Overload,
        - Decoys,
        - Distraction
        - Mixed Signals (i.e. reward structure)
        - Vigilance
        - Warnings
        - Anomalies
        - Clues
        - Neglect (i.e. ‘check the box audit and internal control fantasy docs)
- Monitoring

- Risk assessment
    - Objective Setting
        - Reporting
        - Compliance
        - Strategic
        - Operations

ACKNOWLEDGE (RQ2 and RQ3)

- Commitment to resilience
- Leadership qualities
- Focus/Interest
- Communication

- Hierarchical Structure
    - Chain of command
    - Deference to expertise

- Risk Response

- Control Activities
    - Internal
    - External

- Information and communication

- Monitoring

ACTION (RQ2 & RQ 3)

- Control Activities
    - Internal
    - External

- Culture
  - Learning orientation - Resilience
  - Just
  - Informed – Sharing knowledge
  - Diverse
    - Demographically
    - Expertise/knowledge

- Inform and communicate

- Internal environment

- Monitoring

- Redundancy
  - Training
  - Duties
  - Procedures

- Reward Structure
  - Incentives based on….
  - Bonuses based on…
  - Production pressures
    - Stock market performance
    - Sales
    - Output

- Risk Response

Appendix B: Interview Protocol

Introduction:
I invited you to participate in this study because your organization, by way of analytics, reputation, or other public information, appears to be financially sound and sustainable, while managing risk to investors through organizational governance. As you know, various financial debacles occurred despite rules, regulations and procedures in place to mitigate financial risk-harm to individuals, yet your organization continues to be financially sound while sustaining operational success. I want to define the psychological factors that contribute to this coupled success so that other organizations can promote this aspect of responsibility. The interview should take no longer than an hour. We are here because you consented to participating when taking the demographic survey provided to you via Survey Monkey. Do you have any questions regarding the survey or this interview for me now? Thank you for assisting me. I am going to record a brief introduction where you state your name and the date and then I will stop recording, play the recorded message back to make sure I am getting a quality recording. When we are satisfied the recording is working well, I will continue with the interview.
{Start the Recorder}

I am Robin B. Ewers, CPA, doctoral student at Walden University. I am here with- Please state your name and today's date {Insert Name and date}. Do you understand that this interview is being recorded? {Consent obtained to meet 'two party consent' rules of certain states} {Stop recorder and test the sound quality if in person, not applicable if by phone or VoIP/phone}

Baseline Screening Questions – designed to determine expertise with regard to regulatory knowledge.

1. Please take a moment and tell me your job duties as they relate to financial reporting?
2. Can you describe for me how you are involved, if at all, in making sure the appropriate rules and regs are adhered to?
   Please give me some examples of this involvement.
3. What would you consider your expertise? Or specialty?

Research Question 1 -What HRO constructs applied in ERM are present in reliable financial reporting?

Interview Prompts:
4. To what do you attribute sustained organizational financial success?

5. In passing, I hear some colleagues say you can't make money by adhering to the rules, please tell me your experience on how organizations manage to do that?
6. Please provide some examples.
7. Please describe any processes or procedures that promote reliability in your financial reporting.
8. What do you believe makes employees adhere (or not adhere) to these processes or procedures?
9. [Further prompts will depend on the participant's answers, but will be directed to see if HRO constructs are present.]

Research Question 2 – How can HRO constructs applied in ERM minimize

organizational stakeholder financial risk-harm?

Interview Prompts:

10. Risk-harm is the harm caused by exposing an individual to risk that prohibits their best interest. It is in contrast to measured risk you might take to promote a financial or other operational or strategic position. Please tell me about your experience in minimizing financial risk-harm to third party stakeholders.
    a. Risk-harm is the harm caused by exposing an individual to risk that prohibits their best interest. It is in contrast to measured risk you might take to promote a financial or other operational or strategic position. Please tell me about your experience in minimizing financial risk-harm to third party stakeholders.
    b. Outside of "rules and regs," what organizational factors do you believe minimizes risk to those relying on the financial reporting system of this organization? (This question intends to address the possible reference to the simple reliance on SOX or the ERM/Internal Control framework to mitigate risk).
    c. How do you assure your human resource will adhere to the process and procedures in place to operationalize the rules and regs?
    d. How do you motivate employees to promote reliability in the financial reporting process while also striving for financial success of the organization?
    e. Describe your **executive** compensation or reward plans? (I am trying to find out if reward structures are tied to EPS or some other financial success measurement, or if there is compensation tied to admitting and fixing mistakes or errors).

f. Describe your **employee** bonus or reward plans? (I am trying to find out if reward structures are tied to just financial or output success measurement, or if they are tied to admitting and fixing mistakes or errors).

Research Question 3 – How can HRO constructs applied in ERM inform other organizations to motivate leadership and employees to promote fiscal fiduciary responsibility within their organization while maximizing profitability?

Interview Prompt:

11. Describe the enterprise risk management framework you work in.
12. How does your organization maintain sound financial practices among risk and reporting actors? (e.g., training, redundancy, learning…)
13. What types of programs have you seen help the people do what they are supposed to do? (Training, redundancy, learning….)
14. What human factors that promote financial responsibility can be transferred to other organizations so they too can succeed but also limit risk to their stakeholders?
15. How would you take your experiences of promoting an environment of fiduciary fiscal responsibility and apply it to another organization?

That's it for my questions, do you have any questions for me? If not, as a reminder, I will be sending you the transcript to review and my interpretation of the data for you to provide feedback if necessary. In the meantime, I will be in contact with you if I have any questions. Please do not hesitate to contact me if you have any questions. Thank you so much for participating in this interview.

Appendix C: Demographics Survey

*1. Do you agree to participate in the study based upon the information outlined in the Informed Consent? By clicking Yes, you are providing your consent and will continue to the Demographic Survey. Thank you.

- o Yes, I agree.

2. The industry into which my organization best fits is:

- o Computer Hardware and Software
- o Manufacturing
- o Healthcare/Health Products
- o Retailers/Wholesalers
- o Telecommunications/Technology
- o Other Service Provider
- o External Accounting Services
- o Not Listed

3. My organization is...

- o Publicly Traded
- o Privately held and issues reviewed or audited financial statements
- o Privately held and does not issue reviewed or audited financial statements

4. My organization has been in business this many years (for publicly traded organizations, please include years privately held):

5. My organization averages gross revenue of:

- o Under $10 Million
- o $10 Million to $100 Million
- o Over $100 Million
- o I don't know.

6. Organizational position:

- o Internal: C-Suite
- o Internal: Management
- o Internal: Senior
- o Internal: Staff
- o Internal: Other
- o External: Partner

- External: Manager
- External: Senior
- External: Staff
- External: Other

7. Please provide your age:

8. Gender:

- Female
- Male
- Not disclosed

9. Please indicate your credentials, if applicable:

10. Career years in Financial Reporting/Management:

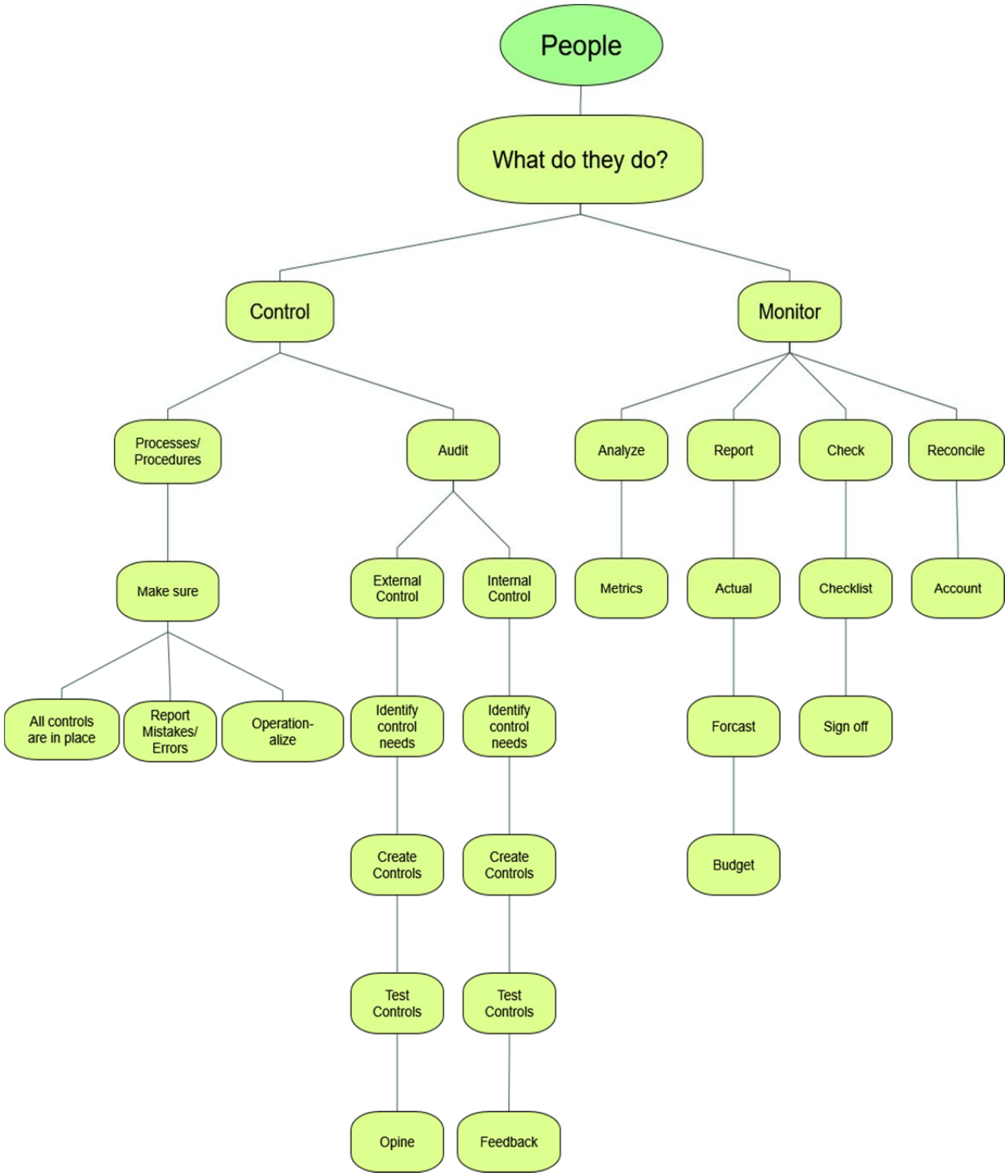
11. Career years in Financial Risk Management:

12. Years with your current organization:

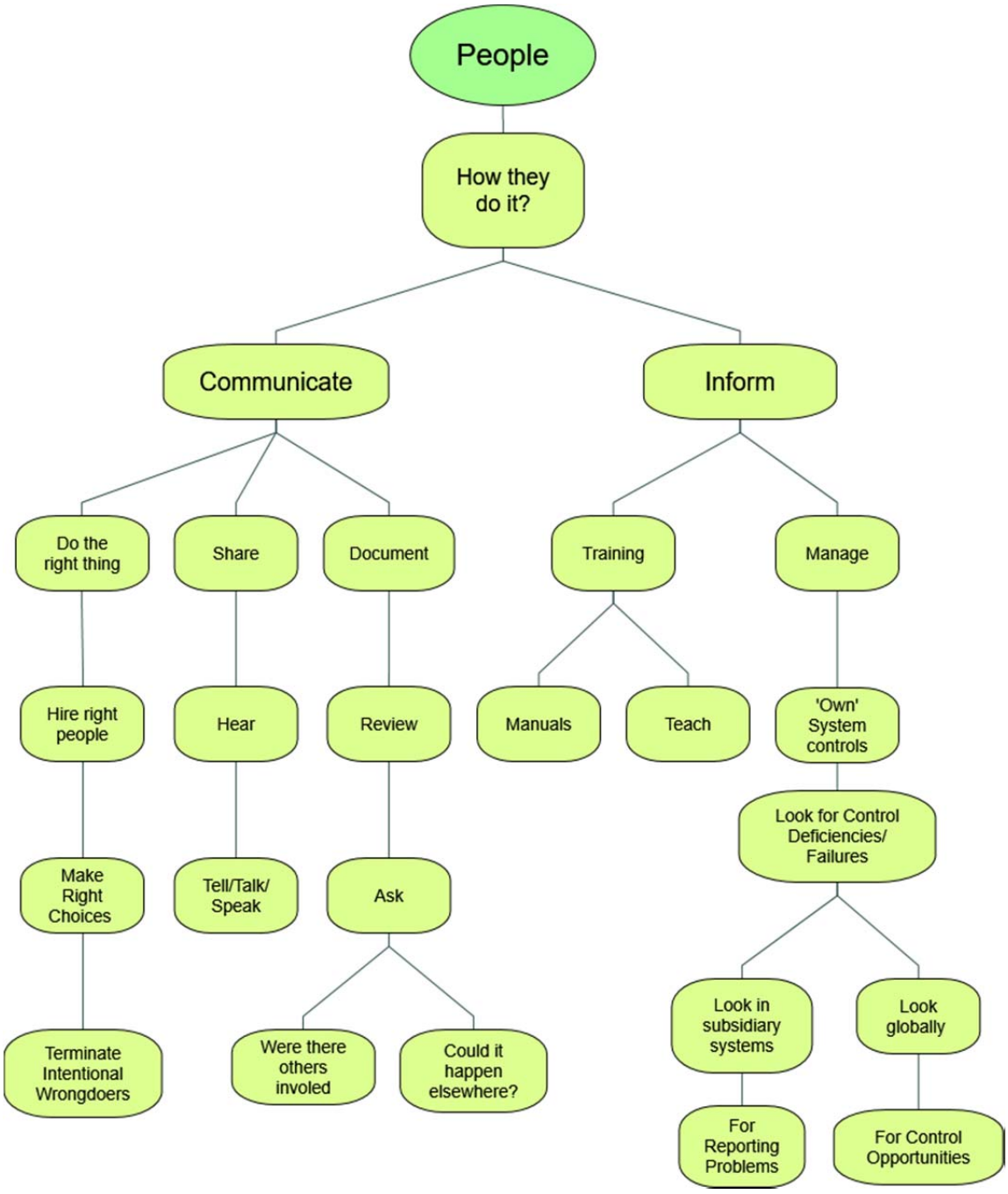
13. Compensation basis:

- Salary only
- Salary with incentive reward linked to organizational financial performance
- Salary with other incentive reward
- Hourly only
- Hourly with incentive reward linked to organizational financial performance
- Hourly with other incentive reward
- Fee based
- Other

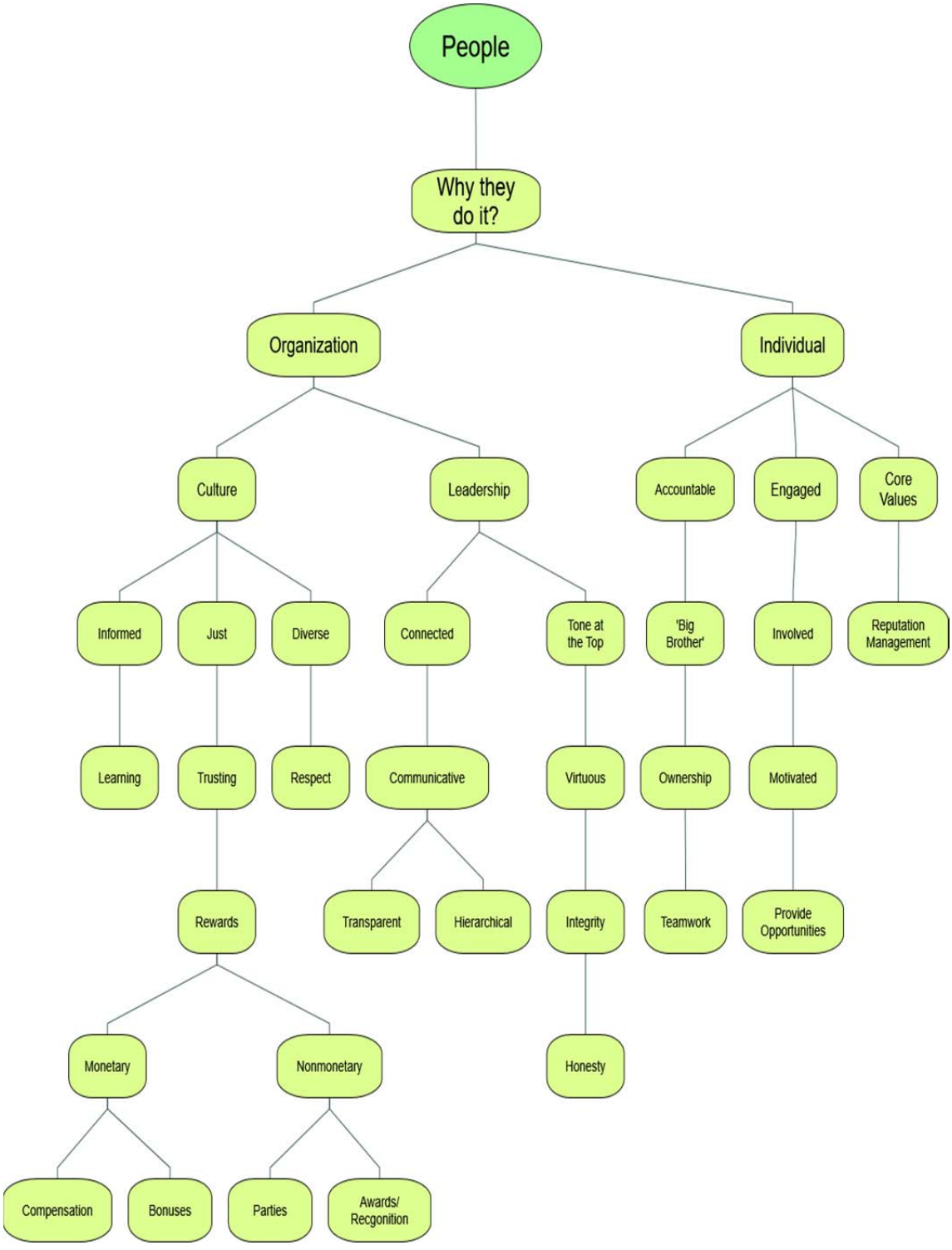
Appendix D: Mind Map for "What Do They Do?"



Appendix E: Mind Map for “How Do They Do It?”



Appendix F: Mind Map for "Why Do They Do It?"



Appendix G: Mind Map for “Who Are They?”