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College of Management and Human Potential

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Abstract

Insurance Professionals' Use of Best Practices for Enterprise Risk Management

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MBA, University of Liverpool, 2013

BS, NARXOZ University, 1996

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The enterprise risk management framework might be a holistic response to strategic and operational risk management. However, a lack of integrity and silo-based traditions prevent the holistic approach to risk management practices. The problem was that although researchers had investigated this issue, there is a limited understanding of insurance professionals' use of best practices in enterprise risk management. The purpose of this qualitative multiple-case study was to investigate the insurance professionals' use of best practices like: (a) fit and proper regulatory requirements, (b) three lines of defense model, (c) risk culture, (d) link to strategy, and (e) risk appetite statements to manage enterprise risk. The theories undergirding this study included the general systems theory, the expected utility theory, the prospect theory, stakeholder theory, culture theory, groupthink, and agency theory. The study provided a system-based framework of risk management practices for better decision-making. This study collected data from 18 semistructured interviews with insurance professionals, triangulating the results with external and internal artifacts. Data analysis used pattern-matching logic. The study's results confirmed the lack of a holistic approach to risk management where insurers use traditional procedures to comply with regulatory requirements. The prevalence of the compliance-based culture over the risk-aware culture might lead to potential issues. The study's positive social change implication might be effective risk management practices in insurance organizations and the industry.

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Dedication

I am dedicating this work to my beloved family. Everything I do in my life, I do it with you in my mind. Specifically, I dedicate this work to the memory of my grandparents, who outlined my path as a primer of great intelligence, patience, and confidence. To my kids, Zhangirkhan, Damir, Diana, and Eldar, with the only purpose is to reveal that following the dream might be fascinating within a life journey.

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I am grateful for every moment, challenge, and success within this doctoral journey. It was an exceptional experience that fulfilled my life with the belief that I always could do more. This proves that human dreams can be a great driver for achievements.

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Chapter 1: Introduction to the Study

Insurance professionals worldwide seek instruments and tools to mitigate risks and achieve sustainability (Bednarek et al., 2021; Bhatnagar, 2021). The enterprise risk management (ERM) framework embedded into the regulatory requirements of insurers' practices might be a holistic response to strategic and operational risk management (Agarwal & Kallapur, 2018; Andersen et al., 2021; Ashby et al., 2019; Bohnert et al., 2019). However, insurers have trouble with the holistic approach to ERM (McShane, 2018) due to the lack of integrity and silo-based traditions among various practices used (Ai et al., 2018; Hoyt & Liebenberg, 2011; McShane, 2018; Ogutu et al., 2018). Furthermore, the recent studies on ERM practices either concentrate on quantitative measurement of risk management quality or provide a fragmented outlook on separate issues like risk culture, risk appetite, or three lines of defense model.

This qualitative multiple-case study explored the risk management best practices in insurance organizations to understand how the required holistic response addresses the needs of insurers. The social implication of this study illustrated how the ability of insurance professionals to improve their internal risk management practices might influence a lower probability of failures and, thus, sustainable development of the industry (Bohnert et al., 2019; Bryce et al., 2016; Hoskisson et al., 2017). The practices explored in this study included: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements.

Chapter 1 contains the introduction to the study, background, problem statement,

purpose, research question, conceptual framework, nature of the study, definitions, assumptions, scope, delimitations, limitations, the significance of the study, and a summary and transition.

Background of the Study

The goal of any business is value creation through sustainable competitive advantage (Barney, 1995). A sustainable organization begins with strategic risk management and control (Bednarek et al., 2021; Porter, 1979). Insurers worldwide contribute differently to national economies and sustainable development (Xie, 2022). Although there are disputes among academics and practitioners on the systemic importance of the insurance industry, several large insurers might cause systemic losses to the national economy (Kaserer & Klein, 2019). Considering the potential adverse spillover effects from failures and crises observed in the insurance industry (Eckert & Gatzert, 2019; Eckert et al., 2019), insurers must explicitly address their risk management practices.

Historically, the literature on insurers' risk management practices paid the most attention to insurers' capital adequacy (Chen et al., 2020; Fung et al., 2018; Müller, 2018). Many studies explored Solvency II, a new regulatory regime that emerged to shape the regulatory requirements for insurers in European and some non-European countries (Dina, 2018). The regulatory authority consists of a three-pillar system that provides requirements for an insurer's capital (Pillar I), risk governance (Pillar II), and disclosure and transparency requirements (Pillar III) (Agarwal & Kallapur, 2018). The

regulatory regime requires a solvency capital covering risks with a shortfall probability of $1/200 = 0.5\%$ on a one-year time horizon (Müller, 2018). Specifically, researchers have no consensus on the best model to be applied by insurers measuring and assessing capital budgeting. Some authors propose a stochastic approach, like in Solvency II, based on the value of a firm and sustainability argument (Clemente et al., 2015; Horakova et al., 2021; Shiu, 2011). Other researchers propose a deterministic approach (Ekheden & Hössjer, 2014; Wagner, 2014). However, capital-market imperfections, cash flow asymmetry, and inappropriate hedging strategies worsen the insurers' position (Froot, 2007). Effective decisions assume that insurers must carefully analyze the data, especially sensitivity and risk analysis (Oke & Conteh, 2020).

There needs to be more research on the qualitative Pillar 2 component which is the qualitative requirement in Solvency II. It establishes governance principles for internal control and risk management to promote the integrated management of risks and the Own Risk and Solvency Assessment (ORSA) guideline. Also, supervisors develop new competencies and mechanisms of action to enable insurers to anticipate and avoid possible situations of deterioration of their level of solvency. The supervisory authorities shall review and evaluate compliance with the system of governance and the ORSA, among others (Santomil & Otero-Gonzalez, 2020). Most qualitative studies have explored ERM as a phenomenon (Farrell & Gallagher, 2015; Hofmann & Scordis, 2018; Hoyt & Liebenberg, 2011; McShane, 2018) to describe insurers' risk management practices.

The current research reveals that Solvency II has positively impacted the implementation of ERM and the improvements in corporate governance among European insurers; however, the quality of ERM implementation and performance depends on the size, diversification of business, and the complexity of risks insurers encounter (Eckert & Gatzert, 2018; Santomil & Otero-González, 2020). Shareholders' value increase has been among the most frequent outcomes (Lechner & Gatzert, 2018). However, some experts and academics blame ineffective regulation for the failure of large financial institutions during the recent financial crisis of 2007-2008, specifically, the inability of supervisors to control risk management, corporate governance, and internal audit functions (Bryce et al., 2016; Eling & Pankoke, 2016; Eling & Schmeiser, 2010). Although insurers are the least vulnerable group (Eling & Schmeiser, 2010), the systemic crisis is an apparent concern for the insurance industry in its attempts to improve corporate governance and risk management practices.

Some of the works in the recent literature discuss the standard risk management practices of insurers, which involve the rules-based approach (Ashby, 2011; Eling & Schmeiser, 2010; Farhan & Alam, 2019). Insurers have well-written policies articulating risk appetites and guidelines on managing certain risks. However, some strategic and environmental risks go beyond the control of the policies and might not be addressed through rules and control (Kaplan & Mikes, 2012). Reputational, catastrophic, environmental, and strategic risks require a holistic approach to mitigate, embedding the risk management practices, routine activities, and strategy implementation (Tapang et al.,

2022). Silo-based methods in traditional risk management may need more integrity in the processes (Ai et al., 2018; Hoyt & Liebenberg, 2011; McShane, 2018; Ogutu et al., 2018). The systems thinking approach helps explore the issue of overcoming misfits, worse performance, and even failures (Bohnert et al., 2019; Bryce et al., 2016; Hoskisson et al., 2017).

There is a substantial body of literature confirming that the key elements of the ERM process are its alignment with strategy settings, the movement from the top, and its purpose of value creation (Altuntas et al., 2021; Beazley & Frigo, 2007; Hoyt & Liebenberg, 2011; Lechner & Gatzert, 2018; Otero-González et al., 2022). Recent research has also revealed the positive impact of ERM on different aspects of insurance operations, including the cost of capital (Berry-Shölzle & Xu, 2018), audit expenses and outcomes (Bailey et al., 2018), and the improvements in financial ratings (Ai et al., 2018). Generally, the ERM system can be integrated with performance metrics systems to control the strategic uncertainties of an insurance organization (Arena et al., 2011). Although researchers have investigated many components and determinants of insurers' ERM, the topic has not been explored holistically, studying best practices to manage enterprise risk (Andersen et al., 2021; Bednarek et al., 2021; Bohnert et al., 2019).

Few studies concentrate on qualitative components like risk culture, and human resources in risk management; even a few integrate systems thinking approaches to ERM. For example, Laffort and Dufour (2020) examined the operation of Luhmann's systems framework in fraud risk management, explaining how systems elements such as risk,

danger, confidence, and trust may help insurance professionals understand the mechanisms of mitigating the risk. Agarwal and Kallapur (2018) explored the issues with the risk culture of insurers in the UK. They found that cognitive risk culture based on systems thinking might be an answer to successful risk management practices. This body of research might contribute to developing the conceptual framework for further studies of systems thinking in insurers' risk management practices.

In practice, insurers need help implementing effective ERM systems (McShane, 2018). However, most ERM systems of insurers are still in their formative stage. Insurance professionals tried to develop and test basic concepts to create workable infrastructures. The issues that insurers encounter involve the model to use, and the necessity to improve business performance implies insurers have a closer look at the roles and responsibilities in the risk event occurrence with a high level of detail (Essert, 2020). To do so, insurance organizations need an approach that is treated as more integrated and systemic, allowing them to achieve individual and market sustainability.

Problem Statement

Organizational market sustainability depends on enterprise-wide risk management (Bednarek et al., 2021; Porter, 1979). However, risk management may not mitigate all scenarios (Kaplan & Mikes, 2012) and often remains a compliance issue (Hoffman & Scordis, 2018; Ozdemir, 2021). Based on investigating 300 global corporations worldwide, Deloitte (2013) claimed that only 13% of corporations rate their risk management practices as excellent, and 40% consider them inadequate. ERM might not

remove inefficiencies due to a lack of coordination between stakeholders, systems thinking, and organizational opportunities for performance improvements (Agarwal & Kallapur, 2018; Ashby et al., 2019; Bohnert et al., 2019; Farrell & Gallagher, 2015).

The general problem is the need for more organizational acumen to mitigate risks (Andersen et al., 2021). The specific problem is that although researchers have investigated this issue, there is a limited understanding of insurance professionals' use of best practices in enterprise risk management (Andersen et al., 2021; Bednarek et al., 2021; Bohnert et al., 2019).

Purpose of the Study

The purpose of this qualitative multiple-case study was to explore the insurance professionals' use of best practices like: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements to manage enterprise risk. ERM practices depend on strategic decision-making and how organizations interpret the risks (Andersen et al., 2021; Hoskisson et al., 2017). The basis of a case study is its tendency to explain the decision-making process, answering the questions of how and why (Yin, 2018). ERM is about decisions and their implementations; therefore, a multiple case study is appropriate for researching best practices by employing interviews and internal and external artifacts (Denzin & Lincoln, 2007; Yin, 2018). The target population of this study consisted of a purposeful sample of insurance executives involved in the ERM processes in Kazakhstan insurance organizations.

Research Questions

How do insurance professionals apply: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements in enterprise risk management?

Conceptual Framework

The theories grounding this study included the general systems theory (GST) (von Bertalanffy, 1956) and its six principles for investigating system operation, including congruence, adaptability, internal interdependence, emergence, equifinality, and feedback loops, and the expected utility theory, prospect theory, stakeholder theory, culture theory, groupthink, and agency theory. The GST is optimal for studying complex phenomena in times of uncertainty (Garavan et al., 2021). The approach helps understand the interrelationships to solve problems that traditional methods cannot solve (von Bertalanffy, 1972) by seeing change patterns (Senge, 2006). Furthermore, the systems thinking approach holistically explores problems (Kodrova et al., 2018). The research contains the conceptual framework based on the appropriate theories that influence the factors and components of the systems under investigation.

The Expected Utility Theory

The expected utility theory (EUT) is a foundation for much research in risk management and represents an economic-oriented approach that explains the decisions of individuals. Daniel Bernoulli contributed to the theory's roots in the 18th century by resolving the St. Petersburg paradox, which is the discrepancy between what people seem

willing to pay to enter the game and the infinite expected value. The EUT explains how individuals can decide without knowing the outcomes in its basics. It works well in situations with unknown circumstances and no immediate paybacks. However, the implication of the EUT is justified when decisions are considered rational. It ignores intuitive and irrational choices, behavioral, political, and psychological factors, and risks themselves (Schoemaker, 1982). No one theory can be applied in the real world as theories represent or determine the ideal state of things. The EUT is not an exception. The main limitation of the EUT is its consideration of individual decision-making. Individual personal decision-making impacts organizational risks, processes, and procedures (Starmer, 2000). However, the EUT works better by involving risk-neutral persons in the decision-making (Shoemaker, 1982). The EUT axioms developed by Neumann and Morgenstern (1944) also represent an ideal world. They include completeness, transitivity, independence, and continuity.

Prospect Theory

Tversky and Kahneman (1979) developed their prospect theory, explaining that people tend to make irrational decisions when facing uncertainties in real life (Buchanan & O'Connell, 2006). It assumes that people perceive losses and gains differently, such as the perceived benefits are valued more than perceived failures. It is also known as the loss-aversion theory. Generally, people are mostly risk averse; therefore, they tend to minimize potential losses to a reference point (Hoskisson et al., 2017) that includes expectations, aspirations, norms, and beliefs.

Cultural Theory

Culture does play a role in decision-making. Moreover, culture influences corporate investment decisions on an organizational or national level (Nash, 2013). The evolution of the cultural theory has taken more than 40 years. The thesis aims to create a framework to understand how individuals and groups interpret risks and manage them if possible. The main idea is that risks are perceived within a social context.

Moreover, the theory explains why some risks are politicized and emphasized while others remain silent (Tansey & O'Riordan, 1999). Every person has individual risk representation; therefore, personal risk representation can explain individual behavior. However, by working together, the emergence of shared risk representation may also develop (Specht et al., 2006). However, there is an argument that the cultural theory lacks empirical evidence, thus revealing a weak explanatory power (Sjöberg, 2005).

Stakeholder Theory

It is easier to overestimate the role of stakeholders other than shareholders and management in corporate strategy formulation and performance (Grillet, 1992). Stakeholder theory argues that managers should make decisions considering the interests of all stakeholders. The critical point is that an organization can only maximize its value by understanding and pursuing the interests of its stakeholders (Jensen, 2001).

The definition of ERM proposed by the Casualty Actuarial Society (2003) described the implication of the stakeholder theory to strategic risk management: "the discipline by which an organization in any industry assesses, controls, exploits, finances

and monitors risks from all sources to increase the organization's short and long-term value to its stakeholders" (as cited in Farrell & Gallagher, 2014, p. 626). Along with the rise in volume and complexities of modern risks, management and boards have changed traditional tools and techniques of risk management (Beazley & Frigo, 2007).

Stakeholders' expectations put pressure on organizations, their management, and boards. For instance, regulatory pressure can be considered a driving force for the insurance industry. At the same time, rating agencies recently started focusing on risk management and ERM insurers' systems within their financial reviews (Hoyt & Liebenberg, 2011).

Groupthink

Groupthink is a possible outcome of collective decision-making. Janis (1973) defined groupthink as a way of thinking that members of a cohesive group follow when their motivation to engage in that group overrides the realistic assessment of a situation (Choi & Kim, 1999). The potential pitfall is a poor group decision resulting from failure to understand the question in detail, wrong assumptions made, and often the desire to reach a quick consensus. Group decisions often require consideration of group dynamics (Buchanan & O'Connell, 2006).

Agency Theory

Agency theory explains the relationship between principals (mainly shareholders) and their agents (primarily executives) and identifies the ways of dispute resolution. Disagreements on methods and priorities often occur, especially in financial transactions. The issue is known as the *principal-agent problem*, and resolving the issue is called

reducing agency costs. Methods to minimize agency costs to achieve the balance involved performance-based compensation and ex-ante equity that align shareholders and management interests and control or monitoring mechanisms such as the board of directors (Eling & Marek, 2014). The roots of the principal-agent problem lie in the separation of ownership and control relevant to risk preference attitudes. Mitigating agency conflicts through maintaining shareholders' value is vital to corporate governance because, once successful, it leads to effective and efficient business activity (Kang et al., 2017). Worse-case scenarios, in turn, may influence the whole industry or economy (Eling & Marek, 2014). Risk management practices might serve as such controlling mechanisms.

Nature of the Study

The nature of this study was a qualitative multiple-case study. Yin (2018) defined a case study as investigating a phenomenon in a real-life context, specifically when the researcher has little control over the phenomenon and context. The primary condition of case study research is access to sufficient data, including interviews, documents or records, and observations (Yin, 2018). This study used the explanatory multiple case studies approach and 15 to 20 interviews until saturation to investigate the insurance organizations' current position and people's experience. The insurance industry in Kazakhstan includes 24 insurance organizations composed of life (7) and nonlife insurers (17). There is no objective to generalize the study results to a population but to obtain a wide range of insights into strategic risk management and strategic decision-making of

insurers. Thus, the sampling strategy to be applied is purposeful sampling, which assumes the data collection from individuals working for insurance organizations. The pool of participants involved board members, C-suite managers, risk officers, actuaries, and underwriters. There are currently 19 purposive sampling schemes. The scheme selection depends on the research goal, purpose, and questions (Onwuegbuzie & Collins, 2007). Therefore, the proposed sampling scheme was a multi-stage purposeful sampling where individuals will be selected purposefully at every study stage.

Definitions

Balancing feedback: Stabilize the stock at a given level. The balancing process can be referred to as goal-seeking or limiting due to a constraint (Rutherford, 2019).

Enterprise risk management (ERM): A process that commences from the board of directors and management as a higher echelon involved in the strategy settings and works across the entire organization, intending to identify, assess, and manage risks within the organization's appetite and to ensure that goals will be achieved (Beazley & Frigo, 2007).

Own risk and solvency assessment (ORSA): A part of the risk management system for insurers requires disclosure of processes and procedures employed to identify, assess, monitor, manage, and report short and long-term risks they face, ensuring their overall solvency is always met (Santomil & Otero-Gonzales, 2020).

Reinforcing feedback: In systems terms, actions reinforce whatever happens in the loop (Rutherford, 2019, p. 39). The critical issue with supporting feedback is the focus on the most visible symptoms of the problem, providing a short-term fix (Rutherford, 2019).

Risk appetite: The amount of risk the organization is willing to take. Risk appetite is the type and amount of risk an organization is willing to accept in pursuit of value (COSO, 2017).

Risk culture: The state of organizational culture directly reflects the attitude of an organization towards risk-taking. Risk culture influences corporate investment decisions on an organizational or national level (Nash, 2013). In other words, risk culture is a setting that impacts how organizations identify and manage risks.

Risk function: The organization's structural department usually reports to the board of directors and performs its responsibilities independently from its management.

Solvency II: The insurance regulatory regime in most European countries came into force in 2016. The pillars system provides quantitative requirements for an insurer's capital (Pillar I), risk governance (Pillar II), and disclosure and transparency requirements (Pillar III).

Strategic risks: The long-term risks affect the mission and strategic goals related to the external environment.

Operational risks: Risks that organizations face every day and short-term in nature.

Assumptions

Study assumptions include facts the researcher could not verify, such as the belief that participants are truthful, trustworthy, and honest and that the sample size is appropriate to address the research question (Prabhu, 2020). Therefore, the first

assumption was that all participants provided truthful and honest answers. The second assumption was that all participants understand the enterprise risk management process and the strategic direction of the insurance organization they work for in detail. The third assumption involved the absence of the fear of replying truthfully, as the participants may be afraid to discuss the issues and shortcomings of the existing risk management practices to avoid conflicts in the workplace.

Coping strategies involved careful selection for the qualitative personal interviews. Detailed instructions emphasized that the participation is voluntary and should be driven only by the objective of helping integrate the ERM system within an organization and stress the critical role of each participant. Also, the researcher must ensure participants' non-disclosure and confidentiality of the information and their right to quit the study at any time (Onwuegbuzie & Collins, 2007). The participants were given specific warranties to overcome the fear of responding honestly, including strict confidentiality and nondisclosure of the information.

Scope and Delimitations

Simon and Goes (2013) described the scope of the study as the parameters under which the study will be operating, including the research domain and other factors. This study will focus on the risk management best practices like: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements in the insurance market of one developing country. Thus, due to the implementation, the research is intentionally limited by the enterprise risk

management requirements imposed by one regulatory framework, such as Solvency II. The other risk management frameworks, such as ISO31000 and COSO, are beyond this study's scope.

The delimitations process should guide the systematic formulation of the research process, data collection, and analysis (Coker, 2022). The methodology of this study, being a multiple case study, also assumed some delimitations that included the purposeful sample and the specific selection of the participants. Time constraints do not provide an opportunity to conduct interviews with every employee of insurance organizations in the market that promotes enterprise risk management activities. The pool of potential participants will be created from specialists dealing with ERM, including top and middle management, as assumed to possess in-depth knowledge of the processes. However, several potential issues might still impact the study's results. Such cases might involve misunderstanding the questions, the need for more information available to participants, and honesty in responses. The pivotal research should reveal what participants might be excluded from the study due to the abovementioned issues.

Limitations

Limitations represent the potential weaknesses of the study that cannot be controlled by the researcher (Theofanidis & Fountouki, 2018). One of the potential limitations of this study is the need for an overall understanding of the topic by potential participants and their resistance. Additionally, the misunderstanding of the questions, the

need for more internal information available to participants, and honesty in responses might challenge this research.

Another limitation involves the potential issues with the dependability and transferability of this study. A modest scope is often considered a significant criticism of qualitative research, applying a limited ability to generalize the research findings (Prabhu, 2020). Several issues affect this threat to the research quality. Prabhu (2020) revealed that greater generalizability in qualitative research is possible even with a small sample size. Generalization can include limited data like: (a) sample-to-population extrapolation, (b) analytic generalization, and (c) case-to-case transfer (Prabhu, 2020). Therefore, in addressing transferability issues, I will rely on the GST's analytical generalizability (von Bertalanffy, 1956).

Since limitations are inevitable in many instances, the researcher must manage or eliminate the negative implications (Akanle et al., 2020). Comparative methods within several case studies provide a sound trade-off between internal and external validity (Agarwal & Kallapur, 2018; Dosek, 2020). Thus, the study will involve: (a) multiple studies instead of a single case study that might improve generalizability, (b) the use of comparative analysis as a tool to improve the validity, and (c) a detailed and in-depth literature review that will help to justify a sound conceptual framework. All these together will respond well to potential limitations in my research. Another opportunity is to explore meta-analysis, multicase, and multiparadigm research (Dooley, 2002).

Significance of the Study

The significance of this study explains its impact on the practice, theory, and potential implications for positive social change within the identified scope. This study might impact the insurance organizations in the country where the sample population is located to provide insights into better risk management practices. Furthermore, the study might offer an opportunity for performance improvements in insurance professionals' risk management where the traditional methods do not work.

Significance to Practice

Using best practices for enterprise risk management could reveal how organizations might improve financial performance (Bednarek et al., 2021). Moreover, the systems thinking approach, in contrast to the rules-based one, may facilitate the complex issues with human resource risk factors of insurers such as poor risk cultures (Agrawal & Kallapur, 2018), lack of competencies (Ozdemir, 2021; Royal et al., 2014), and lack of coordination between stakeholders (Ashby et al., 2019; Bohnert et al., 2019; Farrell & Gallagher, 2015) required to manage risks. Additionally, the study will provide insights into how insurers' management mitigating significant risks can protect or create shareholder value (Beazley & Frigo, 2007; Lechner & Gatzert, 2018). Regulators might gain insights from this study to adjust and strengthen qualitative requirements for insurers' ERM (Santomil & Otero-Gonzalez, 2020).

This study might assist insurance professionals in diving into the significant details of their roles and responsibilities in the risk event occurrence (Essert, 2020). In

turn, such a level of detail might provide a clear understanding that risk management is no longer an issue of compliance and internal audit function (Hoffman & Scordis, 2018; Ozdemir, 2021). Risk management practices are a system-integrated tool involving strategy setting and implementation (Andersen et al., 2021; Hoskisson et al., 2017; Slagmulder & Devoldere, 2018). Furthermore, systems thinking, or a holistic approach, might need more integration in the ERM of insurers blamed by several researchers (Ai et al., 2018; Hoyt & Liebenberg, 2011).

Significance to Theory

This study can extend the theoretical understanding of how the GST (von Bertalanffy, 1925) might inform strategic risk management and strategic decision-making of organizations under uncertainty. The study will provide the parallels in the development of the GST and other theories related to risk management to contribute to a deeper understanding of the phenomena. Boulding (1956) emphasized that systems theory provides a framework or structure of systems for better decision-making. Garavan et al. (2021) argued that the systems theory might provide a parsimonious model to address questions that academics and practitioners must answer. Using systems thinking studies, researchers relate new knowledge to previous knowledge and experience (Kodrova et al., 2018). Similarly, this study may offer the conceptual framework to investigate insurance professionals' ERM practices.

Although qualitative research with a relatively modest sample conducted in a remote location might suspect the weak opportunity of transferability, this research might

be generalized in other areas. Achieving greater transferability includes case-to-case transfers and analytical generalization (Prabhu, 2020). There are two reasons for that. First, the study provided detailed insights into the global insurance industry with its connections, similarities, and patterns (Cummins & Venard, 2007). The study may not be used in other sectors as there is no evidence that the ERM practices are similar. However, second, the solid conceptual framework comprised of the best theories used to investigate strategic risk management and the GST (von Bertalanffy, 1925) as the foundation might shed light on common errors and omissions insurance professionals make in their practices. The conceptual framework also informed the research design that might be spread to other locations, potentially creating future research opportunities for other grounded theory studies for those the collected verbatim records may serve as a database (Yin, 2018).

Significance to Social Change

The potential positive social change in the market could be a practical understanding of the efficacy of strategic use of best practices in enterprise risk management (Acharyya & Brady, 2014). The potential social change in the market is inevitable if the responses to strategic risks are appropriate, timely, and efficient (Acharyya & Brady, 2014). Organizations might reduce or diminish the risk of failures by considering potential worst-case scenarios for extreme events by proactively evaluating economic, social, and environmental effects and preventive measures (Bhatnagar, 2021; Krishnaswamy, 2015). Therefore, positive social change comes with

appropriate and effective risk management practices in every insurance organization and industry.

Effective risk management practices can be challenging for a single insurance organization because the adverse spillover effects from crises, operational losses, and fraud events might affect the insurance industry (Eckert & Gatzert, 2019; Eckert et al., 2019). By predicting and removing negative consequences of substantial risks, insurers achieve market sustainability that contributes to overall economic sustainability (Kaserer & Klein, 2019; Xie, 2022). Sustainability is a vital strategic goal at every level of the organizational context and goes hand in hand with relevant strategic risk control and management (Porter, 1979); therefore, social change comes with appropriate and effective risk management practices.

Summary and Transition

The topic explored in this study was the use of best practices to manage enterprise risk. The general management problem was to control and manage insurance risks in uncertainty. There is a need for a system-based framework that can shape different risks. The specific management problem was that despite all efforts and investments in risk management, it remains a compliance issue due to the need for systems thinking in the insurers' risk management. This study explored the qualitative multiple case study research design to narrow the gap. The study sought to answer the research questions of how insurance organizations apply: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite

statements in ERM. The study contributes to understanding how insurance organizations can go beyond accounting and compliance issues to navigate their risk management practices. The implications for social change include the improvements in the insurance market sustainability that contribute to the overall economy. Chapter 2 will contain the literature review.

Chapter 2: Literature Review

The research problem is that although researchers have investigated this issue, there is a limited understanding of insurance professionals' use of best practices in their ERM (Andersen et al., 2021; Bednarek et al., 2021; Bohnert et al., 2019). The purpose of this qualitative multiple-case study is to explore the insurance professionals' use of best practices to manage enterprise risk, such as: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements. ERM is an effective tool for management to know, understand, and manage internal and external threats to the organization once a strategy is set. The key benefit of ERM is a framework for optimizing processes and performance in the rapidly changing world (IRM, 2018). Several studies reveal that only a relatively small percentage of organizations may reach mature levels of ERM and achieve the highest possible value (Farrell & Gallagher, 2014).

This chapter includes the relevant literature review on insurance professionals' ERM and systems thinking approach to the issue, including strategic decision-making process, regulatory framework applied to risk management, and practices insurers use to support the risk management processes. Furthermore, I described the conceptual framework to investigate insurance professionals' ERM practices as the parallels in the development of the GST and other theories related to risk management to contribute to a deeper understanding of the phenomena. The conceptual framework intended to follow the chronological development of the GST to shape the current knowledge on the systems

thinking application in risk management practices. The rest of the literature review is organized thematically, commencing from the broad strategic risk management approaches to the narrowed ERM practices widespread among insurers. The summary and conclusion outlining the literature selected for the review closed the chapter.

Literature Search Strategy

The keywords and databases searched included enterprise risk management, strategic risk management, systems thinking, risk culture, risk-taking, the insurance industry or insurance organization, and strategic decision-making. Database searches included CINAHL, PsycInfo, SocIndex, ScienceDirect, Academic Search, Education Source, IEEE Xplore, Emerald Insight, Directory of Open Access Journals, and Google Scholar.

The initial search of the last five years and peer-reviewed articles using keywords *enterprise risk management* AND *insurance* provided 45 articles. Adding the *systems* as a keyword provided an additional four results, with none of them relevant. Moreover, different combinations with the keywords *risk management*, *enterprise risk management*, and *systems thinking* revealed three relevant to similar banking sector results. Therefore, I searched the literature using different technical tools, including asterisks, quotation marks, Boolean operators, synonyms, and antonyms. A specific search for ERM regulation in insurance organizations provided 45 peer-reviewed articles for 2018-2022 with no independent research on qualitative Pillar 2 requirements. I also searched for the theories and theorists described in the conceptual framework.

An additional search using enterprise risk management and systems thinking or systems theory provided 153 articles; however, just a few are relevant. Because the topic of enterprise risk management of insurers is less addressed, the search strategy should be developed as a complex search. However, to meet the requirement of the university, two basic principles for the five years and peer-reviewed sources to ensure credibility (Ford, 2012) should be constant, at least at the initial stages of searching. Thus, the additional keywords for the proposed study's specific research included *strategic risk*, *strategic decision-making*, and *managerial risk-taking*. I intentionally excluded words like "management" because it is widely met and could lead to unnecessary crowded results. The different combinations are explored during searching.

Due to the complexity of the topic, I explored journals and databases to find the most relevant recent research. The journals I surveyed included the widely recognized *Strategic Management Journal*, *Harvard Business Review*, *Journal of Risk Finance*, *British Journal of Management*, *European Journal of Finance*, and *Journal of Risk & Insurance*. Additionally, several seminal books contribute to the explanation of the phenomena, including *Images of Organization* (Morgan, 2006), *The Fifth Discipline: The Art and Practice of the Learning Organizations* (Senge, 2006), *Thinking in Systems* (Meadows, 2008), *Introduction to Systems Theory* (Luhmann, 2013). The final literature review set comprises 200 articles, with 90% peer-reviewed and 75% within 2018-2022.

Conceptual Framework

The principal theory that shapes this study is the GST pioneered by von Bertalanffy (1925). The origin of this theory emerged from biological sciences aiming to explain the complexity of living systems. Von Bertalanffy argued that the laws of physics and chemistry did not explain the complex organization of living systems and their ability to maintain themselves in a far-from-equilibrium steady state (Hammond, 2014). Despite the tangible heritage of the scientific background, academics need more consensus on the systems thinking definition (Rutherford, 2019). The basic principle of a system is that it is something more than a collection of its parts (Meadows, 2008). Thus, forming a unified whole refers to a system consisting of interactions with a common purpose (Rutherford, 2019). Applying the systems concept is helpful in the research of risk management practices because it provides a *whole system* thinking approach, an appreciation for the human relational dimension, and a focus on facilitating collaborative decision-making processes in organizations (Hammond, 2014). GST is appropriate for studying complex phenomena in times of uncertainty (Garavan et al., 2021; Haywood et al., 2017). Thus, the GST is the leading theory that shapes the framework for studying insurance professionals' use of best practices in enterprise risk management.

Three seminal authors contributed to the field of systems thinking in management. Kenneth Boulding (1956) followed von Bertalanffy but was the first to present the applied systems theory to the management field. Boulding (1956) explained how lines of communication become limiting factors in the optimum size of an organization and how

emerging information and communication technologies have made unprecedented growth in the size and power of organizations (Hammond, 2014). Boulding emphasized the importance of considering the relationships between individuals and organizations, the consequences of increasingly stratified hierarchical organizational structures, the potential danger of oligarchical concentrations of power, and the psychological effects resulting from the individual's loss of autonomy (Hammond, 2014). These considerations are significant in risk management practices, such as three lines of defense, link to strategy, and risk appetite statement.

Gareth Morgan (1998) highlighted the open systems approach with its appreciation for the role of the environment and the inherent capacity for self-organization instead of mechanical terms, leading to bureaucratic systems emergence in the early 20th century. His famous view on organizations as physical prisons and instruments of domination recognized cultural and political dimensions and the role of conflicting interests and power structures (Hammond, 2014). However, Morgan also understood that organizations could be understood as information-processing systems with the capacity for learning and innovation (Hammond, 2014). The subsidiary themes include organization as organism metaphor, culture metaphor, and flux and transformation metaphor. Morgan (2006) explained the organizations as physical prisons metaphor as "people can become imprisoned in or confined by the images, ideas, thoughts, and actions" within organizational processes, being either conscious or unconscious (p. 207). The metaphor assumes that even a well-constructed social

organization can suffer from misunderstanding, conflicts, and poor performance. Morgan (2006) argued that the organization is not a machine but an open-system institution because of living people working there. Cultural metaphor stresses "the symbolic significance of almost every aspect of organizational life," shaping the shared vision, meaning, and beliefs (Morgan, 2006, p. 141). The flux and transformation metaphor emphasizes that organizations operate as complex systems. Thus, more flexibility is needed due to greater unpredictability, the understanding of the whole being more important than the parts, and the importance of the agents' interactions.

Senge (2006) popularized the concept of systems thinking through core principles like team learning, personal mastery, shared vision, mental models, and systems thinking as the way to understand the relationships between a part and the whole. The *personal mastery* discipline relates to individual learning and growth beyond the professional skills and competencies required daily. It is a unique requirement for continuous development. People characterized as having a high level of personal mastery learn continuously and admit they know few; however, they have a high level of self-confidence (Senge, 2006). However, more than personal mastery is needed in the organization if the management can build a *shared vision* by constructing shared mental models (Senge, 2006). There are internal images of every single person of how the world works. Senge (2006) explained them as mental models. Gaps could lead to wrong decisions and counterproductive activities because people tend to observe selectively (Aşcı et al., 2016). Because the inertia of the embedded models can suppress the best systems thinking, the mental

models must be continuously tested (Senge, 2006). These mental models shape people's sensemaking and identify actions taken. The issue with the mental models is the increasing gap between the stable, unexamined mental models and the changing environment.

The shared vision is an assertive discipline identifying the picture an organization will achieve or create. A shared vision connects all activities and brings a sense of commonality to the organization. There are two possible issues with the shared vision. The first is its genuineness when every employee truly shares the goals. The second is an aspiration when there are invisible solid connections between people inspired by such a shared vision. A learning organization is only possible with a shared vision; it facilitates learning, realizing the organization's weak sides, and creating ways of thinking and action (Senge, 2006). *Team learning* is the process of building the capacity of a group of employees to achieve the results they planned. The waste of energy characterizes the absence of team learning. Three critical components of team learning include: (a) seeing each other as colleagues with respect, (b) the presence of a team facilitator who holds the context, and (c) balancing dialogue and discussion. The main drawback to building effective team learning is personal defensiveness, which, if practical, makes complex issues even worse (Senge, 2006). *Systems thinking* is a discipline of "seeing the wholes" (Senge, 2006, p. 7). People tend to identify the parts of the system, try to solve the issues, and are disappointed when they still need to be resolved. Systems thinking is the reflection of the world currently created. Therefore, systems thinking requires individuals

and teams to be involved in the complex world and see the big picture without defensiveness (Senge, 2006).

Theories supporting the conceptual framework of this study also contribute to a more profound understanding of how insurers may use or may not use the best practices identified by different theories for ERM activities. Boulding (1956) explained it as an essential goal of the systems theory to provide the framework where other disciplines may contribute to a more excellent knowledge of a phenomenon and where professionals may find explanations from various scientific backgrounds. As such, the conceptual framework of this study will be based on six principles of system operation, including congruence, adaptability, internal interdependence, emergence, equifinality, and feedback loops.

Congruence

The logic of systems theory was eventually incorporated into a widely used congruence theory of organizational alignment by Nadler and Tushman (1980). Capabilities, resources, and strategy constitute a system of interdependent elements that jointly determine a firm's competitiveness. Competitive advantage is enhanced when the firm-level elements are vital and in alignment with each other and the external situation. However, critical aspects of that model were underdeveloped. Internally, the model's system of resources, tasks, and goals inside the firm must reference a business model, which must also align with the organization and its strategy (Teece, 2018).

Adaptability

The system instrumentalizes its external relations and attempts to achieve a state that creates satisfactory conditions between the design and the environment (Luhmann, 2013). Adaptability refers to the independent social and ecological components that form the complex system that could interact and change their behavior in response to external or internal disturbances and adapt accordingly (Haywood et al., 2017). The ability to adjust to the current environment is a source of sustainable competitive advantage (Reeves & Deimler, 2011; Meadows, 2008). In systems terms, adaptability concerns not only available resources and positioning but also the capabilities of the organizations to manage interconnected systems (Emblemsvåg, 2020; Reeves & Deimler, 2011). Such management is based on motivating multiple stakeholders, reading change signals, reacting quickly, and experimenting frequently and rapidly (Reeves & Deimler, 2011).

The Committee of Sponsoring Organizations of the Tradeway Commission (COSO) prescribed that organizations must adapt more to change. They must think strategically about managing the world's increasing volatility, complexity, and ambiguity, particularly at the senior levels in the organization and the boardroom, where the stakes are highest (COSO, 2017). Different stakeholders put pressure on insurers' ERM practices (Hoyt & Liebenberg, 2011). Thus, adaptability requires learning and change (Emblemsvåg, 2020). Within this study, I will consider how insurance professionals may overcome the issues of adaptability in practice, including stakeholders' management in: (a) risk appetite statement development, (b) the three lines of defense structure, (c) human resources and strategic risk management, and (d) risk culture improvements.

Internal Interdependence

Donella Meadows (2008) described the internal interdependency principle as interconnections or relationships that hold the elements of the systems together. These interconnections in the system are the physical flows that provide signals allowing one part to respond to another (Meadows, 2008). The risk of interdependency in a global world was clearly illustrated by the 2008 financial crisis, revealing how the combination of modest risks identified by traditional risk management in financial institutions collectively led to disaster (Emblemsvåg, 2020). Overlooking the interconnectedness of social systems can also be the product of ignorance and linear thinking (Emblemsvåg, 2020).

Emergence

Luhmann (2013) described the emergence of social systems as a methodological meaning related to shifting explanatory emphases from one level to another. Sociality arises only in synthesizing information, utterance, and understanding (Luhmann, 2013). An emergency arises from experience in that a system's behavior cannot be explained or predicted from knowledge of the parts; the consequence of the entire system's conduct must be recognized (Haywood et al., 2017). All complex risks are emergent; thus, organizations must be sensitive to many interactions of small elements that, in isolation, can be almost harmless, producing weak signals, but their interaction in sum at the right time can be cataclysmic (Emblemsvåg, 2020). Therefore, this study will attempt to shape

the framework to reveal how the best ERM practices might create a whole system, highlighting their interconnectedness and a common purpose.

Equifinality

Equifinality is characteristic of open systems that support widespread findings in the literature that the one-fits-all approach is a utopia (Bailey et al., 2018; Dina, 2018; McShane, 2018). Equifinality is a situation in which multiple plausible explanations exist for a single outcome; it is a challenge for system modeling if equifinality is ignored (Williams et al., 2020). Equifinality might also explain why organizations possessing equal dynamic capabilities may achieve different outcomes (Alves & Galina, 2022). However, every system is confined by spatial and temporal boundaries, influenced by its environment (unless it is closed), described by structure and purpose, and expressed by functioning that—in complex systems—can involve the acquisition of qualitatively new properties through the emergence and lead to continual evolution (Serrat, 2021).

Literature Review

ERM literature could be divided into four general lines of research: ERM adoption, determinants of ERM implementation, the effects of ERM adoption, and other aspects (Anton & Nucu, 2020; Crovini et al., 2021). Despite the vast array of ERM research in financial markets, it must be expanded (Anton & Nucu, 2020). Most research concentrated on physical and financial risks (McShane, 2018). Also, most ERM research is based on a few remarkable studies, including Hoyt and Liebenberg (2011), Arena et al. (2011), Wu and Olson (2009), and Farrell and Gallagher (2014). The literature review

section in this study is organized around the recent research in the ERM field of insurers. I started from a broader theme that includes the strategic importance of risk management in gaining the desired sustainability. Then, I examined all research on insurers' ERM, concentrating on the studies that shed light on the practices insurers exploit in their operations and activities to mitigate risks, such as: (a) fit and proper regulatory requirement, (b) three lines of defense model, (c) risk culture, (d) link to strategy, and (e) risk appetite. Finally, I concluded with the analysis of recent research on systems thinking approach in insurers' ERM that also justified a gap in the literature.

Insurers' Strategy and Risk Management

Generally, insurers worldwide successfully cope with many risks they face. However, a lack of strategic insights or leadership does not prepare them appropriately for deep uncertainty cases with emerging risks (Haywood et al., 2017). Traditional approaches to risk management need to provide better responses when dealing with uncertainty. They only create the illusion of control and distribute strategic inertia (Slagmulder & Devoldere, 2018). Furthermore, it is recognized that the financial services industry exploits sophisticated risk management approaches like Solvency II in insurance. However, failures still appear.

The main issue with insurers' risk management is the growing evidence that many business risks arise from complex events to observe, assess, and measure directly. Organizations fail due to poor communication, weak leadership, and stakeholder resistance (Schroeder, 2014). Some firms that have had financial distress recently include

AIG, Consec, Executive Life Insurance Company, and Penn Treaty Network America Insurance, among others in the USA. Some collapsed European firms include Horizon Insurance, Enterprise Insurance, Alpha Insurance, Qudos Insurance, and Gable Insurance (Kiptoo et al., 2021). The continued failures of insurance firms have motivated studies to examine the effectiveness of the various risk management guidelines and risk management practices adopted by insurance firms (Hoyt & Liebenberg, 2011; McShane et al., 2011; Nguyen & Vo, 2020). However, these studies' results are mainly controversial; there is a need to understand the extent of risk management practices contributing to those failures.

There is still a need for an integrated model to deal with strategic risk involving environmental, industry- and firm-specific uncertainties (Anton & Nucu, 2020). Uncertainty is the major obstacle for many organizations building and implementing their strategies. Using old-fashioned tools, skimming, and scanning the environment to identify strategic risks seems inappropriate. The linear cause-and-effect approach attributed to the traditional risk management process does not reveal known risks, with no chance to anticipate unknown risks (Bharathy & McShane, 2014; Emblemståg, 2020; Slagmulder & Devoldere, 2018). Thus, today's insurance organizations need sophisticated and complex theories, concepts, models, frameworks, and tools to establish strategic risk registers. The responses should be creative, non-linear, unordinary, and practical to manage risks.

Major Risks Insurers Encounter

As a result of the absence of feasible mechanisms to cope with unpredictability, an insurer must assess a wide range of potential risks and consequences that could damage the current and future financial condition. Insurers face many threats, including credit, market, liquidity, interest rate, operational, legal, regulatory, environmental, and reputational risks. However, three significant risks connect with the core activities of insurers: investment risk, underwriting risk, and catastrophe risk. The risk inherent in these three activities can disturb the organization's foundation. Combined with the other dangers stated above, it accelerates or exacerbates the company's decline and eventual destruction (Tapang et al., 2022). Property losses have increased with the intensification of natural catastrophes and weather-related events, partly due to climate change. These events also cause significant disruption to businesses and the market and climate-related migration, leading to lower property values and, therefore, associated revenues for insurers in the areas people are abandoning (Bhatnagar, 2021).

Risks that affect the financial performance of insurance organizations include credit risk, market risk, liquidity risk, firm size, and operational risk. Quantitative studies revealed the positive effect of risk management practices on insurers' financial performance, except for the negative impact of credit risk (Kiptoo et al., 2021). However, Nguyen and Vo (2020) discovered that insurers that adopted ERM experience a decrease in their solvency level, which may trigger their financial vulnerability in the case of unexpected shocks. Firm-specific characteristics such as leverage, ROA, combined ratio,

and business type significantly increase the EU insurers' solvency, whereas the impact of firm size and age is insignificant (Nguyen & Vo, 2020). Thus, the results in this field are controversial.

Finally, there are numerous risks that the insurance industry faces concerning human capital risk. For instance, one called a brain drain risk, meaning the departure of high-performing, talented employees, and overall unattractiveness of the insurance industry for younger generations (Kwon, 2014). Regulators may need to consider the significance of systematically incorporating human capital risk assessment into all aspects of the financial services industry to reduce ambiguity, especially in episodic uncertainty, due to the underlying HRM drivers that act as lead indicators in highlighting risk (Royal et al., 2014). Several theoretical perspectives might help explain the risks. For example, in the agency theory – the agent's self-interest, behavioral perspective – the employee's inappropriate actions/attitudes, and the resource-based view of the firm (Barney, 1995) – the employees lack knowledge, skills, or abilities. Once recognized, these risks can be mitigated by specific calculated strategies, such as corporate governance, performance compensation, and increased training and development efforts (Annett, 2019).

Strategies for Performance Improvements

Risk management assists in strategy setting—strategic objectives direct risk management to develop scenarios and countermeasures to overcome potential issues. The alignment of strategic risk management with a strategy framework allows management

and the board of directors to manage strategic risk and protect or create shareholder value (Beazley & Frigo, 2007). The most influential concept in strategic management is the resource-based approach (RBV) (Barney, 1985), which suggests that an organization must acquire, develop, combine, and manage physical, human, and organizational resources effectively to obtain a competitive advantage. Such resources should be valuable, rare, well-organized, and difficult for competitors to imitate. The dynamic capabilities theory designed by Teece (2018) is a natural extension of the RBV approach and aims to close the gaps of the RBV approach (Teece, 2019).

Generally, there is no line between strategic or operational decisions; however, those long-term decisions concern the mission and strategic goals achievement, and those that are outward-looking (related to the external environment) tend to be considered strategic. For example, strategic activities of insurance organizations might include: (a) analysis of the external environment to identify which factors may impact the strategic direction, (b) setting the mission and strategic objectives such as growth, profit, capital, and value, (c) implementation of strategic plans and financial budgets, (d) ensuring that all required resources are available to support strategic plans, (e) adjusting organizational structure to strategic goals, and (f) identification, assessment, and control of the risks to the strategy and performance.

Issues with Strategy and Performance

All risks and uncertainties are well-known and adequately managed in an ideal world. However, even successful organizations may encounter risks requiring a strategic

decision-making approach. In practice, strategic risks to insurers include: (a) inappropriate strategy selection that does not reflect the current economic situation, (b) performance failures, and (c) too high or low-risk appetite strategy. Arena et al. (2011) highlighted that risk management could support decision-making because it assists in informed and, thus, better decisions. In this context, ERM can be integrated with performance metrics systems to control the strategic uncertainties of an organization (Anton & Nucu, 2020). However, despite all efforts and investments in risk management, it is still considered a compliance issue (Ozdemir, 2021), with insurers focusing mainly on their solvency and regulatory risks (Essert, 2020). Due to the scale, strategic risk rules can only embrace some scenarios and potential outcomes; rules-based risk management will maintain failures (Kaplan & Mikes, 2012). Therefore, insurers need a holistic, integrated approach to control and manage strategic risks.

Enterprise Risk Management (ERM)

ERM system is a part of the corporate governance concept that is a part of more than 100 years of risk management traditions based on mathematician knowledge about risk. ERM is a part that stems from financial management mainly (McShane, 2018). The evolution of ERM started with the development of the COSO framework. COSO is an integrated framework for risk management stemming from international financial reporting standards but with a comprehensive strategic view of the risks. Five components of the COSO framework include: (a) risk governance and culture, (b) risk, strategy, and objective settings, (c) risk in execution, (d) risk information,

communication, and reporting, and (e) monitoring enterprise risk management performance (COSO, 2017). However, the COSO framework guides mainly compliance-based risk management (McShane, 2018). Moreover, McShane (2018) assessed the more than decades of development of ERM as an aspiration rather than a reality.

Regulatory Environment and Requirements

Regulation plays a crucial role in insurance as it influences the risk management decisions regarding the design of risk management systems and processes and the level of risk that insurers are willing to take. The essential rationale for risk management regulation in insurance is that regulators' risk perceptions may differ from those of individual insurance organizations. With financial stability as a core objective, regulators must be confident that no insurer possesses a significantly convergent approach to risk management. The purpose of regulation is to protect consumers' interests in the first place, specifically such vulnerable groups as households (Siri, 2017). In addition, regulators protect consumer welfare and save time finding appropriate financial services providers. The effectiveness is achieved through the power to enforce requirements and call for corrective actions (Llewellyn, 1999). Unlike many other industries, the insurance sector is heavily regulated.

In 2016, Solvency II, a new regulatory regime, emerged to shape the regulatory requirements for insurers in European countries. The three-pillar system provides quantitative requirements for an insurer's capital (Pillar 1), risk governance (Pillar 2), and disclosure and transparency requirements (Pillar 3) (Agarwal & Kallapur, 2018). The

components of the Solvency II framework have also been adopted in other non-European countries (Dina, 2018). The regulatory regime requires a solvency capital covering risks with a shortfall probability of $1/200 = 0.5\%$ on a one-year time horizon (Müller, 2018). The most recent research is about capital requirements and adequacy. The qualitative Pillar 2 component of insurance regulation like Solvency II is little known. The current study revealed that Solvency II positively impacted the implementation of ERM and the improvements in corporate governance among European insurers; however, the quality of ERM implementation and performance depends on the size, diversification of business, and the complexity of risks insurers encounter (Eckert & Gatzert, 2018; Santomil & Otero-González, 2020). Shareholders' value increase is among the most frequent outcomes (Lechner & Gatzert, 2018). However, many experts and academics blame insufficient and ineffective regulation for the failure of large financial institutions during the recent financial crisis of 2007-2008. The point is the inability to control financial organizations' risk management, corporate governance, and internal audit functions. Moreover, although insurers are the least vulnerable group (Eling & Schmeiser, 2010), the systemic crisis is an apparent concern for the insurance industry.

Benefits and Impact of ERM

Numerous studies confirm the positive impact of ERM on firm value in the insurance industry (Farrell & Gallagher, 2015; Hoyt & Liebenberg, 2011; Lechner & Gatzert, 2018; McShane et al., 2018). Major studies in the field are dedicated to examining the determinants of ERM that create value for the organization, and almost all

of them are quantitative, followed by a seminal article by Hoyt and Liebenberg (2011) (Anton & Nucu, 2020). Furthermore, ERM significantly affects insurers' performance, improving specific aspects, including profitability, costs, and capital (Ai et al., 2021; Tapang et al., 2022). Furthermore, academics found that ERM quality positively moderates the size scale and the diversification-revenue scope efficiency relationship, and, thus, ERM improves economies of scale and scope of revenues (Altuntas et al., 2021). An effective ERM means the insurance organization understands its strategic and operational risks and manages them appropriately.

Knowing and managing the risks appropriately means building a more vital organization with a sustainable competitive advantage. COSO (2017) identified that ERM allows for the creating of more vital organizations that exploit more opportunities for achieving strategic goals, thus increasing value. ERM provides a framework initially for the strategic goals setting and strategic decision-making of insurers (Ogutlu et al., 2018)—specifically, the improved ERM results from tools used in the ORSA model. Most companies (71.8%) believe that the ORSA provides excellent value to insurers because it encourages the risk culture and helps decision-making. However, 8.7% of insurers think that the ORSA added an excessive workload with the value it brings to the company (Santomil & Otero-Gonzales, 2020). However, there are also challenges within the ERM processes that insurers must consider.

Challenges with ERM Implementation and Performance

Effective risk management requires day-to-day activities corresponding to all the business operations at all levels of the organization using common management language (Ashby et al., 2019). Therefore, it is vital to understand how ERM impacts performance, and strategic decision-making is limited (Ashby et al., 2019). Thus, one of the approaches to assess the effect of ERM is to evaluate the process of corporate decision-making and strategy effectiveness (Anderson et al., 2021). It could be done through routine risk interpretations embedded in decision-making (Bednarek et al., 2021). Therefore, every aspect of risk management practices should be evaluated daily, taking a holistic or systemic view (Cyrus et al., 2018). Therefore, this study will examine the daily activities of insurers as one of the best practices of the ERM approach.

According to COSO's (2017) executive summary, *Enterprise Risk Management: Integrating with Strategy and Performance*, an organization may encounter several challenges while implementing ERM. Those challenges might involve the proliferation of massive data on risks, issues with artificial intelligence and automation, and high-risk management costs (COSO, 2017). However, empirical research in the field described challenges the insurers face differently. Hoffman and Scordis (2018) identified challenges impacting the effectiveness of ERM, including: (a) the holistic risk management system requires specific knowledge, (b) the risk mitigation of one risk may cause the other risks to occur, (c) while risk managers are prominent figures in a firm's risk management program, they are only a staff position, in reality, a CEO is the leading

risk officer, (d) the blurring distinction between risk management and risk-based auditing, thus, complicated and often tricky communications between functions.

Scarce research in the empirical literature revealed some paradoxical results despite the benefits of ERM. For instance, empirical research revealed a weak connection between strategy setting and ERM framework (Altuntas et al., 2021) despite their strong linkage prescribed by the insurance regulatory regime. Also, there is no relationship between ERM-level control and organizations' ethics (Krishna Govender & Hassen-Bootha, 2022). The surprising results of the study, however, provided insights into potential pitfalls the insurance professionals encounter like the weaknesses of a top-down approach to risk management practices, the neutral attitude to ethics of the risk management personnel, and the level of maturity of ERM quality (Krishna Govender & Hassen-Bootha, 2022). Further research on the causes of such contradictory results is needed.

Furthermore, studies that examined small insurance markets in Eastern Europe regarding the implementation of Solvency II identified the potential challenges articulated by the participants, including the lack of knowledge, IT obstacles, and relevant data shortage (Bešter, 2015; Morgunova & Bolkina, 2020). Nonetheless, there are also many adverse side effects of the Solvency II regime, such as bureaucracy, additional capital needs, complicated calculus, models and procedures, and over-demanding reporting that affect the efficiency of the risk management practices in the insurance industry (Bešter, 2015; Dzięcioł, 2017). Evidence found in different industries

other than insurance confirmed that most of the issues related to effective ERM implementation of insurers, such as centralized approach, control mechanisms, linear thinking, and unfocused on time as constraints emphasizing the role of human resources in ERM (Bakos & Dumitrascu, 2021; Liff & Wahlström, 2018). Thus, further research is worth considering the components of the ERM framework that might impact the effectiveness of the implemented ERM practices that insurance professionals exploit.

Best Practices in Insurance Professionals' ERM

The Pillar 2 of Solvency II framework for best practices includes five principal components: (a) the requirement for fit and proper risk management, (b) the collaboration of critical functions involved in risk management as three lines of defense approach, (c) the embedding of appropriate risk culture, (d) the link of risk management to strategy, and (e) the setting of risk appetite linked to risk philosophy upwards and to risk tolerance or limits downwards (Redmond & Shaughnessy, 2016). However, inconsistencies observed in different countries after implementing the Solvency II regulatory regime led to procyclicality (Murashko et al., 2021). Thus, intending to recognize the best practices insurance professionals use in their ERM systems, I concentrated on the qualitative research articles covering these components. The implementation of ERM can be better studied by decomposing its essential parts and categorizing two systems of risk management and risk governance (Lundqvist, 2015). However, the integrated framework of ERM combines traditional risk management with risk governance (Ogutur et al., 2018;

Santomil & Otero-Gonzalez, 2020). Therefore, the systems theory offers an appropriate lens for investigating the phenomenon.

Most studies covering insurance professionals' best practices in ERM are quantitative. For instance, to answer how insurers create value from the effective ERM and achieve economies of scope and scale, Altuntas et al. (2021) examined risk appetite, risk aggregation, risk allocation capital, performance measurement, incentive contracts, risk management culture, and risk audit practices—however, other studies concentrated on separate topics. Several researchers in the field of risk management undertook a case study method involving semistructured interviews with top managers practitioners. Liff and Wahlstrom (2018) explored the usefulness of ERM in two banks; Agarwal and Kallapur (2018) examined the risk culture of a British insurance company. These studies are similar in methodological approach (Agarwal & Kallapur, 2018; Liff & Wahlstrom, 2018; Ozdemir, 2021). Therefore, the proposed research explored five practices that insurance professionals use in their ERM frameworks, including: (a) fit and proper regulatory requirement, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements. These practices will also illustrate a holistic or systems-thinking approach to insurers' ERM.

Fit and Proper Requirement

The fit and proper requirement for risk management relates to the overall system of governance for insurance and reinsurance undertakings. Section 2 of Chapter IV of the Directive focuses on regulating the following main issues: general governance

requirements, fit and proper requirements, risk management, internal control, outsourcing, and prudent person principle. The prevailing conditions (art. 41) aim to implement an effective and proportionate system of governance, providing for sound and prudent management of the business, and setting out policy implementation concerning the functions of risk management, internal audit, and internal control (Siri, 2017).

Undoubtedly, the novel regulatory requirements emphasize the role of human capital in insurance organizations. Moreover, considering the perspective of the board members responsible for all information produced inside the insurance organization, knowledge management and its transmission paradigm are taking place within insurers' overall risk management and compliance system.

Knowledge management is a new paradigm evolving in the digital era, being, however, one of the most vulnerable elements of an organization across the globe. It is widely recognized that knowledge sharing is the most challenging process within the overall activity of any firm. Realizing good knowledge sharing within the digital workplace is even more difficult. However, a firm can succeed in the marketplace but demonstrate poor results in knowledge sharing, expressed in the common understanding of the company's strategic vision (Alrawi et al., 2013). Moreover, with the technology enhancement, strategic knowledge management became a tool for improving performance and gaining sustainable competitive advantage as a bright example of the interdisciplinary collaboration of economics, management, IT, and sociology in their desire to find ways to manage information effectively (Sousa & Rocha, 2019). Barriers to

knowledge sharing are hardly different from those in modern corporations within their operational activities. They include a low level of understanding, the quality of the transmitted information and transmission channels, face-to-face interaction, language barriers, and the context in which the knowledge has been shared (Alrawi et al., 2013).

Moreover, the critical threat to overall digitalization is the disclosure of information, especially those vulnerable regarding competitors, know-how, and firms' intellectual capital. In this regard, the digital era is the driver of development and growth unsafe. Furthermore, this is not only because of the danger of hackers' attacks or something of such nature, but with technology, knowledge is becoming accessible quickly and widely. The risk of cyber-attacks is increasing as these attacks become sophisticated. Such attacks are essential for identifying, mapping, and mitigating risks (Buntak et al., 2020).

It is widely recognized that narrow rule-based regulation approaches create inflexibility and can bring litigations or arbitrage. The principle-based approach, in that light, seems more appropriate. However, the excessive role of the boards and inappropriate inferences in culture and remuneration might harm the ordinal way the insurance organization conducts business. Regulators must actively ensure that insurance undertakings are processed with the proper governance and culture. However, it is not the regulator's duty to determine the culture, business strategy, or remuneration policy (Siri, 2017). New challenges for regulators include responsive, not intrusive regulation. Rich theoretical background and overwhelming practical experience might inform the future of

insurance regulation worldwide, including: (a) avoiding the proportionality approach, (b) developing the framework for risk culture, (c) creating the methodology for benchmarking, (d) remuneration approach; and (e) HRM in risk management.

Avoiding Proportionality Approach

Eling and Pankoke (2016) investigated regulatory costs and benefits at the industry and the company level. They established that there are better approaches than the proportionality principle in financial regulation, and they must be applied carefully. The proportionality principle means the intensity of regulation should depend on the size of a company and the complexity of the risk accepted. The Solvency II directive and the EIOPA Guidelines require a rigid risk management system that should develop an environment based on the one-size-fits-all principle, keeping a homogeneous approach to risk management. The process should consider the size differences and complexity (Siri, 2017).

Developing Framework for Risk Culture

As far as there are any discrepancies of opinions on the potentially universal approach to the regulation, there should be an instrument that plays a mediating role to adjust the regulatory requirements with the firm-specific context. Risk culture may play such a role. Moreover, regulatory authorities have a growing interest in the risk culture concept that should be embedded into the organizational culture of an insurer. However, the proposed methods to enhance risk culture include the more traditional approach to human resource management involving training, recruitment and selection, and

performance appraisal that might need to be revised. As highlighted below, an ongoing need exists to improve human resource management practices and embed human capital risk assessment, monitoring, and management into the overall strategic risk management framework.

Creating Methodology for Benchmarking

Siri (2017) recommended building up a rating system for the board's effectiveness, not only for a particular country but also a unified methodology that may be exploited across, for instance, the European Union. Benchmarking can seriously help improve corporate governance and risk management activities. They will be involved in comparative analysis and can extract best practices for coping with many issues. Finally, such techniques and assessment frameworks will develop regulators' necessary skills and mindset. Beyond the regulatory environment, it is worth it for insurers to consider ESG (environmental, social, and governance) risk investments in risk management practices. Insurers who consider ESG issues in decision-making and provide sustainability disclosures in line with regulatory requirements may expect higher returns compared to more traditional investments (Bhatnagar, 2021; Pugnetti et al., 2022). A proper assessment can help companies implement a systematic approach to business integrity risks to manage rapidly evolving reputational, financial, political, and legal consequences (Bhatnagar, 2021). However, inconsistencies and incomparability of the approach to ESG risk still raise confusion (Emblemsvåg, 2020).

Remuneration Approach

The governance of remuneration/incentive systems has often failed because negotiations and decisions are not carried out at arm's length. Managers and others have had too much influence over performance-based remuneration levels and conditions, with boards unable to exercise objective, independent judgment (OECD, 2009). Several theoretical perspectives to investigate are also helpful in considering remuneration issues within a regulatory framework. Several concepts explain the potential alignment of SHRM to an organization's corporate strategy. The fit and flexibility concept is helpful to understand maximizing organizational effectiveness. Organizations should seek their HRM systems alignment (or fit) to the corporate strategy (Wright & Ulrich, 2017). Organizational support theory (OST) identifies that employees form a generalized perception concerning how much the organization values their contributions and cares about their well-being (Kurtessis et al., 2017). The ability–motivation–opportunity (AMO) model (Appelbaum et al., 2000; Purcell & Hutchinson, 2007) is another famous concept in strategic human resource management (SHRM) built on the expectancy theory. The AMO model is about how HRM practices impact organizational performance and outcomes based on mediating roles of HRM practices on employees' abilities, motivation, and opportunities. The idea of the model is that the appropriate combination of different HRM practices rather than individual ones ultimately leads to high employee or workforce performance (Delery & Roumpi, 2017). The valuable concept in SHRM is the multiple stakeholder perspectives that argue that the accuracy in defining and

measuring organizational effectiveness is achieved through systems theory (Ackoff, 1970, 1974; Buckley, 1967) application. Treating an organization as an open system emphasizes that every stakeholder, including employees, has the power and opportunity to influence an organization. The stakeholder perspective implies the ability of employees to influence the achievement of objectives. SHRM should be flexible; employers should evaluate the relationships with employees and invest in such relationships depending on the power they reveal (Way & Johnson, 2005).

Human Resources in ERM

Senge (2006), in his seminal book, proposes the development of personal mastery as one of the solutions to learning organizations. *Personal mastery* (one of the fifth disciplines) identifies personal growth and learning inquiry. The idea, in brief, is that it is an ongoing learning process, but it is not about skill and competencies. It is about being self-confident and, at the same time, always asking a question about knowledge gaps. To develop this discipline, organizations must set up a shared vision and creative tension (Senge, 2006). Such a shared vision must include the learning process for the whole organization as an integral part. The creative tension assumes the slight shortage of knowledge that must always be present.

The other potential way is to organize learning in teams or units where people need each other to perform better because individual learning cannot be a way to organize one (Senge, 2006). A bright example of such team learning is the orchestra performance of a new piece of music. Team learning is admitted as highly effective (Koeslag-

Kreunen, 2018). However, teamwork is daunting; learning can improve or destroy a team's efficiency. Empowerment leadership assists in developing learning in teams (Wibowo & Hayati, 2019).

All the above requires outstanding leadership. In turn, great leaders learn and teach, as Finkelstein highlights: *If you are not teaching, you are not leading* (2019, p.54). Leaders are responsible for developing an organization's ability to learn in a capacity (Ibarra & Scoular, 2019). At the same time, leaders are accountable for teamwork and learning, ensuring a shared vision and motivation. Learning is a discipline that should be developed and earned, and leaders are in charge.

The only study to explore human capital risk in the insurance industry using the case studies approach was conducted by Royal et al. (2014). Its findings confirmed the gap between HR strategies and enterprise risk management framework. The data collection methodology included discussions and structured interviews with the regulator, nine major Australian insurers, and the Risk Management Research Committee of the Institute of Actuaries of Australia. The central point of the research involved aspects of human capital risk systems in the insurance industry and the insurers' knowledge of human capital.

Further research also found a solo study on risk culture as an essential component of human capital risk. Agarwal and Kallapur (2018) also used a case study to address risk culture issues in the UK. The authors used multiple sources of information to confirm that the insurer may successfully change from a compliance-based and defensive risk

culture to a cognitive risk culture by using a systems thinking approach. The external validity or credibility of the case study approach to human capital risk is also confirmed by research in the aerospace industry. Significant research was conducted with the National Aeronautics and Space Administration (NASA) setting. For instance, such an approach is justified by Lengyel et al. (2019), who explored knowledge transfer mechanisms, knowledge gaps, and risk frameworks to integrate the knowledge issues. Gerstein et al. (2016) further investigated the whole risk framework for NASA, including human capital risk within several case studies.

One research group worth considering within ERM studies is those dedicated to human resources (HR) development and management. The primary method provided in such research is the assessment of chief risk officers (CROs) as principal providers of risk management strategies and an executive responsible for all risk management processes in the organizations. The results of these studies are varied. The recent research by Bailey (2022) revealed the positive impact of the CROs' expertise on the ERM quality and higher levels of Tobin's Q, along with an MBA degree and internal promotion. Risk and actuarial expertise are associated with a higher return on assets (ROA) and firm value, which was particularly important during the financial crisis. Several attempts have been made to investigate CROs' competencies to provide the expertise required for a successful role performance (Ozdemir, 2021). These competencies might include a high analytical aptitude and a broad and sound understanding of risk, digital aptitude, the ability to lead innovation, strategic competencies, thought leadership, change leadership,

and the ability to attract, develop, and keep talent (Ozdemir, 2021). However, finding persons with such competencies in practice takes work.

The role of the CRO in the organizational hierarchy depends on the organizational structure. The CRO might be the head of a separate department that reports to the board of directors (the risk management committee, in particular); however, administratively, it is a direct subordinate of the organization's CEO. The other form involves the CRO as a member of the board coordinating the operations of risk managers (Arena et al., 2011). The differences in the hierarchical positioning of the CRO, as well as their dual reporting nature, might involve challenges (Arena et al., 2011; Ashby et al., 2019; Kaplan & Mikes, 2012). The CRO's general responsibility is to facilitate risk talk among the participants of the risk management process (Ashby et al., 2019). Kaplan & Mikes (2012) distinguished between several roles the CRO might perform, including an independent overseer, business partner, independent facilitator, and the above mix. Such a hybrid position might cause issues and disruption in the risk management organization and process.

Moreover, the competencies required to perform the CRO responsibilities might involve education or experience in process engineering. Thus, Bharathy and McShane (2014) emphasized that although the systems dynamic is rarely applied in the ERM process, a holistic approach to risk management can involve such modeling within the risk identification phase. Most risk management professionals come from accounting, finance, or insurance function; however, to realize the full potential of ERM philosophy,

an engineering background might break the silos down through causal modeling methodologies (Bharathy & McShane, 2014; McShane, 2018). Furthermore, the implication of modern software tools and models, even if they took place, still depends on employees involved in internal data input, competencies, and knowledge (Crovini et al., 2021). Otherwise, even sophisticated models and tools became challenging, time-consuming, and expensive processes.

Finally, effective risk management depends on efficient risk communication across the functions. Stoel et al. (2017) identified that neither existing research details the effectiveness of communicating risk information, particularly how the presentation of risk information impacts insurers' perceptions of the relevance, reliability, and quality of risk management effectiveness. Typically, it includes risk reporting based on a risk appetite statement provided and managed by the CRO (Stoel et al., 2017). A new agenda for implementing ESG risk into the ERM framework pressures risk managers and CROs to identify and assess those risks and communicate them across the organization for better decision-making (Pugnetti et al., 2022). However, one of CROs' primary functional responsibilities is establishing three lines of defense models to monitor and control the risks.

Three Lines of Defense Approach

The three-lines-of-defense approach is today's dominant model for risk governance among financial organizations and their regulators. Rare organizations exploit a pure three-lines-of-defense approach. Moreover, organizations need help with

its implementation (Ashby et al., 2019). The model generally involves three levels of administrative staff, where the first line includes those who own and manage risks (linear managers). The second line consists of those who oversee risks (risk and compliance officers). The third is represented by those who conduct independent assurance (internal audit) (Vousinas, 2021). There needs to be more academic research on three lines of defense practices in the insurance industry (Andersen et al., 2021). Despite the topic's importance, most studies are in the industrial enterprise risk management literature, not the financial markets.

The most specific part is the role of the first-line department managers who deal with the risk daily. They are the risk owners and would be blamed if a failure occurs (Andersen et al., 2021). The role of the second line, especially the risk management team, often needs to be clarified. The second line should include the development of the insurers' risk framework and measuring the risks. The second line must be the owner of the risk appetite statement (Vousinas, 2021). They perform the most complicated function by overseeing the risk-taking and control decisions of linear units and departments.

Nevertheless, the second line of defense is also responsible for ensuring that the decisions are consistent with strategy (Ashby et al., 2019). An internal audit involves regular checks and audits to provide the results of other lines of defense performance. That means that internal auditors must actively participate in the activities of the first and

second-line managers to manage risks. Improved communication within all three lines is the primary responsibility of internal audit teams (Vousinas, 2021).

One of the critical features of the three lines of defense model is that it focuses on defense. It operates well through each team member's role description and responsibilities if the risk is well-known and controlled appropriately. However, what if the emerging risk or opportunity is outside somebody's control or new threats or risks emerge? Thus, facing a new reality, insurers must change their internal risk management strategies (Essert, 2020), reinforce their roles and responsibilities, and redraw the lines of defense (Ashby et al., 2019; Bantleon et al., 2021). The three lines of the defense model assume risk ownership, robust risk management culture, and the emergence of a strategic relationship among all three lines. The model also encourages developing specified compensation plans to stimulate healthy risk management practices and avoid situations when short-term benefits exceed the long-term risk consequences (Potter & Toburen, 2016). However, once failures in insurance organizations happen, and not rarely, there could be potential issues with the three lines of defense approach in the literature.

Three Lines of Defense Model Issues

Even with the importance of the three lines of defense model implication in risk governance, the model is argued to be imperfect. Failures still happen (Vousinas, 2021). Thus, it is necessary to reformulate the model to develop a less segregated mode of accountability approach (Ashby et al., 2019). It is common in many organizations when department managers avoid auditors' scrutiny and follow the auditors' reports to adjust

processes or activities. Often, those patterns create an adversarial relationship (Zeier Röschmann et al., 2019). Potential conflicts, including the principal-agent nature, may develop biases toward others' decisions, and personal relationship conflicts may add to the issues (Hoskisson et al., 2017). Furthermore, the different attitudes to the risk may also be a source for disagreements between the lines. For instance, risk-averse people have different perspectives on risk than risk-takers. The potential problems with the three lines of defense model in insurance organizations discussed in the literature involve risk culture, incomplete integration, strategic misstatement, defensive nature, subjective biases, and groupthink.

The three lines of the defense model should operate cohesively to ensure the quality of all participants. Each organization applies its structure, role description, and responsibilities. Although there are no unique rules, some key elements should be provided, including clear communication and common risk language, for complete understanding (Kashyap & Iveroth, 2021). Some risks can be managed through all three lines; however, omit the other participants who are formally not part of the organization's three lines of defense structure. The recent critique of the three lines of defense model includes the need for a standard overview, effective control from the board of directors, and the model's incorporation into the overall governance systems (Vousinas, 2021).

The objectives of any approach, tool, or structure in risk management are identifying, assessing, and managing risks accompanying the strategy and its implementation. However, the most important reasons for value destruction "are

embedded in the possibility of the strategy not supporting the entity's mission and vision, and the implications from the strategy" (COSO, 2017). In other words, the risks significant to the organization's mission performance may need to be prioritized or added. Adhering to the principles of ERM could result in positive performance outcomes, but the ability to deal with operational and strategic exposures must consider basic processes to be genuinely effective (Andersen et al., 2021). Specifically, the divergence of operational and strategic risk management objectives led to recent failures in the financial markets (Vousinas, 2021). The critical point is the first line of defense (linear management) inability to align profit and risk targets (Vousinas, 2021).

Some authors recognized the weak side of the model that reflects only the risk element in risk management (Essert, 2020). The other component, an opportunity, needs to be included. Therefore, it is imperative for strategic risk management. As mentioned above, an integrated, less segregated, and long-term approach is required (Anton & Nucu, 2020; Ashby et al., 2019). It is still being determined how insurers can cope with those strategic risks that search out and address new emerging risks and opportunities, as well as those that choose disruptive technologies and other threats to business (Essert, 2020). ERM may be an answer in the case of a robust and well-communicated model. However, the three lines of defense model may need help even in that case. Shreve (2020) posited that the three lines of defense model might remind the soldiers to warn the first-line soldiers about the enemy approaching, while the second line pours the boiling oil down the castle walls and the third line reports to the king that the castle has been protected.

Subjective biases may influence risk perception, especially under uncertainty. For example, it may affect a decision-maker's ability or willingness to evaluate probabilities objectively. Although there is no best practice to overcome judgmental risk, successful risk management must control the potential outcomes of the risk (Goto, 2007). Moreover, there is a gender and race difference in risk perception, not in biological but in sociopolitical contexts (Finucane et al., 2000).

With the three lines of defense model, the situation may become more complicated due to the principal-agent problem described by the agency theory (Bantleon et al., 2021; Hoskisson et al., 2017). From the theoretical viewpoint, the different lines of defense reduce the information asymmetries between the principals and agents throughout the different hierarchy levels and minimize the risks of discretionary decisions from the agents (Bantleon et al., 2021). So, there is a great need to ensure agency conflicts are mitigated within the three lines of defense model. However, in practice, trade-offs needed to remove asymmetries suffer from the lack of coordination (Bantleon et al., 2021). Subjective biases might result from insufficient resources and the lack of knowledge across the lines of defense (Kashyap & Iveroth, 2021; Vousinas, 2021).

Although shared knowledge and common goals are vital to organizational success and collaborative efforts within the three lines of defense model operations, one potential threat can be groupthink. This situation is possible when a group is striving to achieve consensus quickly. Thus, the decision made on the shared risk is wrong or can lead to

dangerous consequences. Recognizing the pattern as early as possible is essential to mitigating it. For example, there might be an issue with groupthink within the three lines of defense once the uncertain risk outcomes are at the stage where no one line can propose an adequate solution.

The three lines of defense model that should be constructed to allow quick adjustments, restructuring, and change is one of the most popular practices organizations use. Generally, the three lines of defense model is a good tool for insurance organizations to implement sound strategic management. However, it requires a thorough consideration of such aspects as strategy, integration, culture, and, especially, leadership and exclusive adjustment to the needs and design of a particular insurer. Several studies proposed adjustments and modifications or new approaches, such as the three modes of accountability (Ashby et al., 2019; Kashyap & Iveroth, 2021), should also evolve to overcome the potential pitfalls of the three lines of defense model in insurers' strategic risk management. The difference between the approaches is the overlapping in accountability distribution. Due to the need to enhance cooperation across accountabilities (used to be *lines*) and build trust among participants, several options are available, including: (a) hiring risk management specialists by the linear departments independently from the central risk management function, (b) combining risk and audit functions is a possible way to turn threats into opportunities, and (c) developing the one team approach that assumes higher collaboration (Ashby et al., 2019). Five lines instead of three (Vousinas, 2021), adding a regulator as the fourth line and the external auditors

as the fifth or layering additional line between the first and the second lines that assist in better communications between the lines (Agarwal & Kallapur, 2018). Sound practices are feasible when regulations mandate such improvements (Kashyap & Iveroth, 2021). However, regulatory imperfections might also play a role, as there is still a blurred line between operational and strategic risk management controls (Bantleon et al., 2021).

To deliver superior performance of the insurance organization's strategy, the model is a part of the overall risk management structure that brings insights and information to better strategic decisions. Second, the model must be fully aligned with the strategy and objectives for effective proceeding and fully integrated into the overall business process (Crovini et al., 2021). Such full integration means considering the interests of all stakeholders, cultural support, clear communication, and a portfolio-based approach rather than a rule-based one. Also, the ERM practices of insurers, including the three lines of defense model, should be considered dynamic capabilities that increase the value and improve performance (Andersen et al., 2021). Third, it needs a top-down approach across the organization to ensure that no one's role is omitted or ignored. Finally, strategic decision-making sets the context, mission, direction, and goals. Therefore, it is vital to have in-hand tools that recognize biases in decision-making, cultural patterns to risks, existing conflicts, threats to relationships within the team responsible for strategic risk decisions, and groupthink challenges. Change in risk culture might improve the operation of the three lines of defense model by systems thinking approach and enhance communications between the lines (Agarwal & Kallapur, 2018;

Kashyap & Iveroth, 2021). Overall, it leads to the risk culture challenges discussed further.

Risk Culture

Risk culture represents a component of risk management that may mediate in developing a sound strategic risk management system for insurers (Ring et al., 2016). Many experts emphasized the role of risk culture in the economic crisis 2008; thus, risk culture is a topic that has received substantial attention from academics and practitioners (Power et al., 2013). Furthermore, following the financial crisis, regulators embedded the concept of risk culture into their regulatory frameworks (Kunz & Heitz, 2021). There is relatively little academic research on risk culture in financial organizations, although there is a significant amount of research on organizational culture. However, research is beginning to emerge, specifically in the banking industry (Kunz & Heitz, 2021). Risk culture is hard to define. It is equally hard to assess and manage effectively. However, it has become very apparent that risk culture must be addressed. Organizations and their regulators spend significant time and money developing risk culture (Ashby et al., 2019). Risk culture is a fundamental risk management issue, specifically for insurers who deal with various risks today.

Therefore, it is vital to go to the roots and explore the essential theories that shape the concept of risk culture. The cultural theory of risk is based on the pioneering work of Douglas and Wildavsky (1982), who advanced the notion that risk selection is culturally constructed and reflects moral, political, economic, and power positions. These views act

as filters through which the world is perceived and risk-assessment decisions are made. Therefore, the successful management of risk depends on the cultural and social contexts in which the risk is placed (Wong Ching Ching et al., 2021). This holistic view of risk recognizes that every person has a unique view of the world, which will influence how they behave (White, 1995). The evolution of cultural theory has taken more than 40 years. The thesis aims to create a framework to understand how individuals and groups interpret risks and manage them if possible.

Culture does play a role in decision-making. Moreover, culture influences corporate investment decisions on an organizational or national level (Gaganis et al., 2019; Nash, 2013). The main idea promoted in the literature is that risks are perceived within a social context. It explains why some risks are politicized and emphasized while others remain silent (Tansey & O’Riordan, 1999). Every person has individual risk representation; therefore, individual behavior can be identified by personal risk representation. However, by working together, the emergence of shared risk representation may also develop (Specht et al., 2006). However, there is an argument that cultural theory lacks empirical evidence, thus revealing a weak explanatory power (Sjöberg, 2005). Such a soft power also explains the difficulties of designing a sound risk framework for cultural risks.

Fear and following defensiveness, anxiety, and resistance shape the corporate structure, culture, and processes. All these patterns are mainly expressed in attempts to avoid unknown or uncomfortable situations (Morgan, 2006). For example, Bion (1959)

described the teamwork dynamics and defensive behavior in groups using the allegory of war. He applied the idea that "as in war, the ability to create unity and a feeling of purpose often depends upon the ability to deflect destructive impulses onto the enemy" (cited in Morgan, 2006, p.223). The same goes for unresolved anxiety issues; they lead to cultures full of tension. All the above emphasize the critical question: Can culture be managed in the light of unconscious patterns (Morgan, 2006)? Therefore, unconscious patterns cannot lead to tangible actions to be undertaken immediately, for instance. Like a physical prison metaphor, they explain the phenomena and assist in critical thinking exercises; they do not give advice or solutions (Morgan, 2006). Unconscious patterns that organizations want to avoid are instead subject to different cognitive-behavioral treatments that allow individuals to overcome fear, anxiety, and stress (Ducharme, 2004).

ERM is an initiative that changes culture, promoting open discussions and considering stakeholders' ideas (Fraser et al., 2022). However, for some cultures, like autocratic ones, the implementation of ERM is complex due to the need for more transparency (Fraser et al., 2022). The purpose of risk culture in ERM is to establish context for decision-making (Bharathy & McShane, 2014; Wong Ching Ching et al., 2021). However, several studies claimed that the inability of organizations to embed organizational culture into ERM processes needs to have the risk-aware culture required for effective ERM practices (Ashby et al., 2019; Weston et al., 2018). Thus, studies of ERM effectiveness might involve understanding the risk-aware culture in a specific empirical context.

Link to Strategy

Risk is a potential danger or hazard and an opportunity (Andersen et al., 2021; Stoel et al., 2017). Everyday risk management practices involving centralizing, calculating, and prioritizing the risks are critical to sustainability (Bednarek et al., 2021; Tapang et al., 2022). Insurance organizations vary considerably in how they approach these practices; some prioritize risk transfer, while others prefer risk retention (Bednarek et al., 2021). Many depend on balancing risk as a threat and an opportunity, as many risks bear. However, organizations need robust strategies to deal with an unstable environment and uncertainty. When the risk is considered in formulating an organization's strategy and business objectives, ERM helps optimize outcomes (COSO, 2017). However, one of the most controversial issues in the recent literature is separating strategic risk management from ERM, even if ERM involves the whole portfolio of organizations' risks (McShane, 2018). The conventional wisdom dictates that effective ERM practices can only be effective if they are supported by appropriate strategy (Crovini et al., 2021). Strategic management and ERM should go hand in hand.

Acharyya and Brady (2014) explored an ERM framework. They highlighted that as far as most strategic risks are not easy to quantify, the inquiry should focus more on understanding and analyzing them in different scenarios. The main findings include four crucial points: (a) the lack of holistic view of the issues in SRM, (b) the theories in the field require transformation from individual to group level, (c) the necessity to identify factors influencing the dynamics of risk; and (d) the corporations' responses to crises

must be researched and embedded into the curriculum (Acharyya & Brady, 2014). The apparent strength of the research is its case study focus; these scenarios help identify potential strategies for proactive planning of the ERM systems and strategic risk management.

Strategic risks are dynamic; however, the factors influencing such a dynamic are not identified (Acharyya & Brady, 2014). However, one of the practical approaches to understanding the dynamic and the elements might be found through the prism of the resource-based view (RBV) on the strategy (Barney, 1995) and the concept of dynamic capabilities (Teece, 2018). Thus, three elements impacting strategic risks exploit the RBV approach: resources, capacity, and environment (Zhang et al., 2010). Finally, the most important are responses to strategic risks that insurance organizations may apply to deal with the high level of uncertainty. Three methods of strategic risk control include accumulating resources, setting up the barriers constructed of those resources, and keeping the flexibility of such resources (Zhang et al., 2010). One valuable tool in the TripleRM model (risk, resilience, and resources) is managing resources and developing appropriate responses (Krishnaswamy, 2015).

RBV concept (Barney, 1995) is the most effective approach to investigating ERM implementation challenges. Barney (1995) suggested that an organization must effectively acquire, develop, combine, and manage physical, human, and organizational resources to obtain a competitive advantage. Such resources should be valuable, rare, well-organized, and difficult for competitors to imitate. Although there is a critique of the

theory due to the need for more practical implications, in the absence of more rigorous approaches, it remains significant to explore strategies and practices (Delery & Roumpi, 2017).

However, strategic risks often are challenging to measure due to their nature and complexity. Stoel et al. (2017) considered quantitative and qualitative approaches to estimate and assess strategic risks and found that qualitative measures are preferable for managers. Consistent with this line of reasoning, the Strategic Risk Management Implementation Guide describes the link between strategy and ERM as complex, as the process involves longer-horizon considerations and views emerging strategic risks as potential opportunities rather than items requiring mitigation (RIMS, 2012).

Contradictory, the European Solvency II regulatory regime requires a more risk-averse approach to operational management, which may lead to an overall riskier business strategy in the long run (Müller, 2018). Such contradictions aggravate even more complex challenges to risk mitigation strategies of insurance organizations.

Strategies to mitigate significant risks of insurers found in the recent literature involve different opportunities. However, most emphasized the need for an integrated approach like ERM. Several authors proposed combining a holistic approach provided by ERM with diversification strategies (Ai et al., 2018; Mazzocchi & Naldi, 2020) to improve performance. Thus, ERM practices depend on strategy-making to attain effective risk outcomes and must be considered along with corporate strategy-making (Andersen et al., 2021). However, economic assumptions of risk-taking suggest that if the expected

values for the two strategies are similar and one is more uncertain, managers will choose the strategy with a specific outcome (Hoskisson et al., 2017). Many depend on how top management finds the balance between strategic opportunities and risk inherent; the risk appetite statement is a working tool to express their approach.

Risk Appetite

Integrating ERM within any organization is accepted as a path to improve governance and strategic or operational decision-making because its diligence helps create, preserve, and realize value. ERM enhances performance by aligning strategic and operational objectives with potential risks and opportunities. However, no one-size-fits-all approach is available for all organizations, and the outcomes vary from entity to entity (COSO, 2017). The risk appetite concept is a substantial part of ERM. Various definitions exist without a precise definition of risk appetite, leading to much confusion and disputes. *Risk appetite* is a concept that is poorly understood and applied or misused. Ashby and Diacon (2012) emphasized that risk appetite definitions involve either willingness or acceptability of risk. Aven (2013) identified that the risk appetite concept, suitably interpreted, is a crucial part of the risk management framework and may include risk seeking and risk acceptability. The other definitions of risk appetite have risk tolerance and risk capacity. Most of them are used interchangeably within the risk appetite concept.

The literature on the risk appetite statement of insurers is scarce and mainly involves research on the modeling of technical reserves and reinsurance undertakings

(Abass et al., 2021; Chi et al., 2020; D'Ortona et al., 2020; Zarina-Cīrule et al., 2022).

Research discussing capital and pricing modeling approaches can be found primarily in the actuarial professional literature. Further search on risk appetite in ERM provided several financial or banking industry studies confirming that robust governance should be based on an actionable risk appetite statement and linked to strategic planning (Fiol, 2019; Gontarek & Belghitar, 2018). However, the emphasis on balance sheet management and corporate governance (Hasenclever, 2019) contributes little to the systemic overview of ERM within financial institutions.

The diverse definitions need to be clarified because most organizations need to exploit the risk appetite definition alone but within the risk appetite framework. Developing an adequate risk appetite framework is an iterative and evolutionary process requiring continuous dialog across the organization (Financial Stability Board, 2013). However, misunderstanding and misconceptions of a risk appetite statement and risk appetite framework can be a reason for failures and shocks in the international financial services industry. Some experts argue that a weak understanding of the risk appetite statement is a reason for the 2008 financial crisis because this concept is a foundation for strategic risk management. Bennet and Cusick (2007) noted that in the absence of risk appetite, an organization might need more control and acceptance of undesirable risky positions or avoidance of acceptable risks and underperformance.

An effective risk appetite statement should: (a) include essential background information and assumptions that informed the financial institution's strategic and

business plans at the time they were approved, (b) be linked to the institution's short- and long-term strategic, capital, and financial plans, as well as compensation programs, (c) establish the amount of risk the financial institution is prepared to accept in pursuit of its strategic objectives and business plan, taking into account the interests of its customers (e.g., depositors, policyholders) and the fiduciary duty to shareholders, as well as capital and other regulatory requirements, (d) determine for each material risk and overall the maximum level of risk that the financial institution is willing to operate within, based on its overall risk appetite, risk capacity, and risk profile, (e) include quantitative measures that can be translated into risk limits applicable to business lines and legal entities as relevant, and at group level, which in turn can be aggregated and disaggregated to enable measurement of the risk profile against risk appetite and risk capacity, (f) include qualitative statements that articulate clearly the motivations for taking on or avoiding certain types of risk, including for reputational and other conduct risks across retail and wholesale markets, and establish some form of boundaries or indicators (for example, nonquantitative measures) to enable monitoring of these risks, (g) ensure that the strategy and risk limits of each business line and legal entity, as relevant, align with the institution-wide risk appetite statement as appropriate, and (h) be forward-looking and, where applicable, subject to a scenario and stress testing to ensure that the financial institution understands what events might push the financial institution outside its risk appetite and risk capacity (Financial Stability Board, 2013, p. 5).

Financial institutions that defined precise risk appetite statements enjoyed many benefits (Fiol, 2019). Initially, this helps them allocate scarce resources effectively and control their risk exposure, for example, capital allocation. Moreover, they can satisfy regulatory requirements and meet the rating agencies' expectations. The other stakeholders know what to expect from the insurance organization regarding risks. Based on these assumptions, agency theory assumes top managers should be compensated or monitored to achieve better outcomes (Hoskisson et al., 2017).

Furthermore, the risk appetite statement shapes the risk culture, including all its attributes, such as values, beliefs, and norms facilitating risk communication and control (Fiol, 2019; Riley & Willson, 2011). The risk appetite statement should operate as the organization's central nervous system and flow between employees to generate a common understanding across the entire entity (de Villiers Getz, 2018). If so, employees can balance risk and strategy when making decisions within their delegated authorities (de Villiers Getz, 2018). Such an approach to a common understanding of the risk appetite statement promotes healthier, more responsible, and faster growth within organizations.

The board of directors is primarily an entity that defines an organization's risk appetite. Therefore, there might be an argument that many depend on board members' composition, experience, and skills. Yap Kiew Heong and Teng (2018) confirmed the previous studies that the effectiveness of control by the board and their strategic willingness to take significant risks positively influence corporate profit. However, Abass et al. (2021) identified that only the organization size, not the board size and composition,

affect insurance companies' disclosure practices. The activities connected with the risk appetite statement, like articulation and monitoring, play a more significant role than the observable features of the board (Gontarek & Belghitar, 2018).

Practically, organizations need help in implementing risk appetite statements. The lack of integration and coordination adds complexity to routine operations related to risk appetite. Most tasks are disaggregated into different elements, often known as risk tolerances, that allow organizations to make only acceptable decisions within the risk appetite framework (Bennet & Cusick, 2007). According to the EUT and the prospect theory, individuals demonstrate different appetites for risks (Fraser et al., 2022; Muralidhar, 2018). However, the positive side of the risk, such as an opportunity to gain more benefits by taking a higher level of risk, is often ignored (Ashby & Diacon, 2012). Thus, ERM should enable management to make better decisions rather than narrow their range of choices (Ashby & Diacon, 2012, p. 8). Risk appetite and tolerance must be expressed relative to each strategic objective (Fraser et al., 2022).

How organizations address the issues with risk appetite and framework is reflected in the applied logic established by boards of directors. Such logic is usually a combined set of practices, assumptions, experiences, values, and beliefs defining individuals and organizations toward ERM. In other words, such institutional logic explains how board directors make sense of the complexity of managing risk (Huber et al., 2021). For instance, Ashby, Bryce, and Ring (2019) emphasized that boards need help reconciling competing organizational logics of risk as an opportunity and threat.

Many adopt a governance and compliance logic focusing on threat reduction, and few exploit strategic adventure concentrating on the options (Ashby et al., 2019). Thus, the research in the field found that organizations from the SME sector merely focus on two components of the COSO's Framework, including risk appetite and control environment, often ignoring the other parts (Yap Kiew Heong & Teng, 2018).

In contrast, large financial organizations, blaming risk management departments for their inability to manage complex risks, create specific ERM departments to address the firmwide risk identification, risk appetite setting, and monitoring firmwide risks (Hooper et al., 2019). Nevertheless, all of them are seeking to balance both approaches intended to be reflected in their risk appetite statements. However, questions beyond the risk appetite, its understanding, and its application logic still need to be answered. The volatility of approaches does not add value to the already poor risk appetite statements.

Systems Thinking in ERM Methodologies

Systems thinking takes a holistic, big-picture perspective and then goes to a level lower to identify the issues (Rutherford, 2019). Systems thinking helps fix complex problems such as unknown risks (Bharathy & McShane, 2014). Long-term solutions usually take time, effort, and sacrifice (Rutherford, 2019). Holistic ERM research requires broader agenda, including studies on qualitative explanations of complex risks, ambiguous operational and strategic risks, and foundational concepts like risk appetite, strategic view of risk, breaking down silos in ERM, and implementation of ERM (McShane, 2018).

Sweeney and Sterman (2007) provided a list of specific skills of systems thinking, including the following: understanding how the behavior of a system arises from the interaction of its agents over time (i.e., dynamic complexity); discovering and representing feedback processes (both positive and negative) hypothesized to underlie observed patterns of system behavior; identify stocks and flow relationships; recognize delays and understand their impact; identify nonlinearities; acknowledge and challenge the boundaries of mental (and formal) models. However, many researchers in the field of ERM warned about the ineffectiveness of the one-fits-all approach (McShane, 2018).

Rare research on systems thinking in insurance professionals' ERM practices written in the last five years (2018-2022) includes Haywood et al. (2017) and Agarwal & Kallapur (2018). I stepped further and found several critical studies that were developed earlier, such as Garavan et al. (2016), Bharathy & McShane (2014), Royal et al. (2014), and Huston et al. (2014). Bharathy and McShane (2014) explained systems dynamics as the background that can benefit ERM practices representing reality at different levels of detail. Furthermore, within such an approach, a graphical representation of relationships and mechanisms allows the audience to understand better information flows and sources, enabling the integration of multiple risks for better management (Bharathy & McShane, 2014).

Systems modeling tools enable organizations to contextualize their risk landscape better. These tools assist organizations in identifying vulnerabilities between social and ecological variables in the system within which they exist. Determining drivers of change

leading to system vulnerabilities can help understand the system's threshold limits, thus enabling the organization to build system resilience and sustainability (Haywood et al., 2017). Stoel et al. (2017) found that qualitative (quantitative) report information has a positive (negative) indirect association with managerial perceptions regarding strategic risk management activities. The controversial results in quantitative studies examining the ERM impact on financial indicators (Kiptoo et al., 2021; Nguyen & Vo, 2020) indicate a need for a system-thinking approach. Although most studies on best practices in ERM for insurance professionals highlighted the need for an integrated, holistic framework to improve performance (Anton & Nucu, 2020), most of them explored the fragmented approach to investigate parts rather than a whole system. The problem identified could be solved by breaking down functional silos existing in the ERM practices of insurers (McShane, 2018). Thus, this study attempts to represent the framework for understanding systemic ERM implementation issues within insurance organizations.

Qualitative case study as a research method is profoundly used and should be exploited in systems thinking research in ERM practices (Crovini et al., 2021; Emblemståg, 2020; McShane, 2018). Royal, Evans, and Windsor (2014) used a case study to investigate the human capital risks of insurers in Australia. Agarwal and Kallapur (2018) explored risk culture in a British insurance organization by exploiting a case study approach. Ozdemir (2021) examined the necessary competencies for risk executives, particularly CROs, to be influential and lead the evolution, including

analytical, digital, and strategic competencies using the case study method. Such research primarily aims to incorporate human capital risk systems in ERM practices. The significant findings included the understanding of the substantial gap existing in human capital risk systems of insurance professionals, such as lack of knowledge and skills limited by standard HR practices in parallel with systemic management of human capital risk (Ozdemir, 2021; Royal et al., 2014). More specific case studies found in the literature include Hopper (2019), who investigated risk appetite statement development in financial institutions using two cases: climate change risk and cyber risk.

Systems thinking is a skill set that can shed light on the roots of complex, systemic problems insurers encounter in their ERM practices to understand why they happen and where they can intervene to adjust outcomes in the desired way (Haywood et al., 2017; Rutherford, 2019). The holistic research in ERM requires an interdisciplinary approach and interactions to gain a more comprehensive perspective (McShane, 2018). Some researchers identify a lack of good qualitative research in risk management practices promoting mainly quantitative approaches involving questionnaires-based surveys (Crovini et al., 2021; Emblemståg, 2020; McShane, 2018). They argue that the theoretical framework plays a role in selecting the method to understand complex phenomena. Usually, a single theory is insufficient to explain the complexities of risk management implementation (de Sena Portugal Dias & Saizarbitoria, 2016). Qualitative approaches have the advantage of allowing human intuition, knowledge, and experience (Emblemståg, 2010). Finally, good case studies can contribute to theory development in

a mainly holistic way as it is the way to investigate multiple paradigms through cases and within one case (Dooley, 2002). Therefore, selecting a multiple case study as a method for the Ph.D. dissertation might provide a sound starting point for further investigations and the development of the researcher.

Summary and Conclusions

This chapter provided the approach to literature search strategy and conceptual framework based on the systems theory. Specifically, the conceptual framework explained the five principles of the systems theory, supporting theories, and their application to ERM. The literature review offered the background to the gap in ERM practices, including risks insurers encounter, strategic alignment and responses, and the importance of ERM for insurers. Also, this chapter explained the practices insurance organizations employ in their ERM based on regulatory requirements, risk management link to strategy, three lines of defense model, risk culture, and risk appetite. Chapter 3 will contain the methodology.

Chapter 3: Research Method

The purpose of this qualitative multiple-case study was to explore the insurance professionals' use of best practices to manage enterprise risk, such as: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements. ERM practices depend on strategic decision-making and how organizations interpret the risks (Andersen et al., 2021; Hoskisson et al., 2017). ERM is about decisions and their implementations; therefore, a multiple case study is appropriate for researching best practices by employing interviews and internal and external artifacts (Denzin & Lincoln, 2007; Yin, 2018). The target population of this study consisted of a purposeful sample of insurance executives involved in the ERM processes in Kazakhstani insurance organizations. This chapter explains the research design, rationale, and the researcher's role in this study. I describe the detailed methodology based on the conceptual framework to investigate ERM practices. I discuss the potential issues with trustworthiness inherent in the qualitative research tradition and specific issues surrounding the study.

Research Design and Rationale

The research question guiding the study was how insurance professionals apply: fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements in enterprise risk management. The central phenomenon of the research is best practices in ERM exploited by insurance professionals involving: (a) fit and proper regulatory requirements, (b) risk culture, (c)

three lines of defense model, (d) link to strategy, and (e) risk appetite statements. Case study research is appropriate to explore the phenomenon in-depth in a real-time bounded context (Burkholder et al., 2020). I selected multiple case study research because it is helpful to investigate a specific issue, such as best risk management practices in insurance organizations, due to the scarcity of good qualitative research in the field (Crovini et al., 2021; Emblemsvåg, 2020; McShane, 2018). The benefits of case study research include preventing unnecessary broadness, allowing an in-depth examination of the issue, and transferability (Burkholder et al., 2020; Dooley, 2002). Case study research originated from sociological studies in the early 20th century. The key contributors to the case study tradition are Guba and Lincoln (1985), Stake (2006), and Yin (2018). Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals (Creswell & Creswell, 2018). Cases are bounded by time and actions, and researchers collect detailed information using a variety of data collection procedures over a sustained period (Creswell & Creswell, 2018). The philosophical underpinning of case study research includes postpositivist and constructivist orientations (Burkholder et al., 2020).

Philosophical orientations lead a researcher to adopt different worldviews when studying a phenomenon. Postpositivists hold a deterministic philosophy. Thus, postpositivists identify and assess the causes that influence outcomes and reduce the ideas into discrete tests, basing the results on verifying laws and theories that govern the world

(Creswell & Creswell, 2018). A researcher begins with a theory, collects data that either supports or refutes the theory and then makes necessary revisions and conducts additional tests (Creswell & Creswell, 2018). Social constructivists believe that individuals develop subjective meanings of their experiences. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing definitions into a few categories or ideas. Thus, constructivist researchers often address the processes of interaction among individuals. They also focus on the specific contexts in which people live and work to understand the participants' historical and cultural settings (Creswell & Creswell, 2018). Combining the two philosophical views makes a qualitative case study research the most appropriate to investigate insurance professionals' use of best practices in managing enterprise risks by looking at the parts and the processes.

Epistemological orientations lead a researcher to develop a different methodology for examining a phenomenon. Therefore, it is essential to address why I did not select phenomenology, grounded theory, or ethnography. Phenomenology is a method to explore people's perceptions of a specific phenomenon under study (Burkholder et al., 2020). Phenomenological research is a design of inquiry in which the researcher describes the lived experiences of individuals about a phenomenon as described by participants (Creswell & Creswell, 2018). Phenomenological research could be less effective in investigating insurance professionals' best practices because human perception is only a part of the insurers' ERM systems. Phenomenological research is

appropriate to study experiences, perceptions, and interpretations (Burkholder et al., 2020). Systems thinking and risk decision-making, as central concepts of this study, assume a variety of outcomes and choices, thus, cannot be a subject of phenomenological study.

Grounded theory is a research tradition used to develop a theory inductively from empirical studies (Burkholder et al., 2020). Grounded theory is a design of inquiry in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in participants' views and involves multiple data collection refinement phases (Creswell & Creswell, 2018). The grounded theory approach is not appropriate for this study because the research of this study, in contrast, is based on the rich theoretical background of systems theory, strategic management theories, and risk management theories. Although, due to the nature of the grounded theory research, emergent ideas and connections might be found during the data analysis (Burkholder et al., 2020), I will not exclude the emergence of a new concept applicable to ERM practices.

Ethnography is a design of inquiry from anthropology and sociology in which the researcher studies the shared patterns of behaviors, language, and actions of an entire cultural group in a natural setting over time. Data collection often involves observations and interviews (Creswell & Creswell, 2018). Ethnography might be appropriate to investigate risk culture as a single phenomenon and, therefore, is unsuitable for in-depth research of a part of the system, not a holistic overview. Furthermore, ethnography requires a long-term data collection phase and researchers' commitment, which are both

limitations to this study. Also, the narrative design explores participants' lives and provides stories about them (Creswell & Creswell, 2018). Thus, narrative research is also not appropriate for this study

Role of the Researcher

The role of the researcher is vital in a case study as an instrument of data collection (Burkholder et al., 2020; Maxwell, 2013). As an instrument for data collection in this case study, my key responsibilities were to conduct interviews, analyze internal and external artifacts, and provide observations from the field. Rubin and Rubin (2012) emphasized the need for the researcher to keep confidentiality promises and not harm the interviewees. However, my biases as the researcher might be the main obstacle to a successful interview. The ability of the researcher to establish a dialogue directly impacts the creation of a trustful environment, as trust is a vital component of any qualitative research. Strategies to avoid biases might involve: (a) creating the dialogue in a trustful environment, (b) avoiding excessive emotions and keeping neutrality, and (c) demonstrating engagement (Roulston, 2018). Therefore, the preparation stage is as vital as the interviewing process.

Interview preparations can be compared to the journey of a well-informed traveler who did his homework but needed a local guide and inside knowledge (Witzel & Reiter, 2012). Before the interview, as the researcher, I asked myself, "What am I going to know?" and "How can I achieve good results?". Preparations included both technical facilities as well as interview questions design. Regarding technical facilities, the place,

time, invitation letter, and recording devices must be ready and tested to avoid interruptions and noise. Generally, nothing should destroy the process of asking the research questions. Rubin and Rubin (2012) noted that interview questions should be focused on details and in-depth. In this light, the researcher performs different roles; however, the research question is the crucial element that should guide the travel.

As a qualitative researcher, I must be mindful of my biases (Ravitch & Carl, 2021). However, often, the researcher's identity and experience might provide a vital perspective incorporating the researcher's subjectivity (Maxwell, 2013). Based on my experiences in several insurance organizations in Kazakhstan, my identity might present a bias. Therefore, I will take notes on each situation where biases are possible and then explain how to overcome them in the data analysis. The critical point is to include a description of the nonintervention strategy to keep it as neutral as possible in the study's results and the data analysis (Witzel & Reiter, 2012).

Methodology

The critical question in case study research is identifying specific and bounded cases to investigate (Burkholder et al., 2020). The nature of this multiple case study is to research insurance organizations' risk management systems in the Kazakhstaniaan insurance market, using three to five cases. These case studies will be selected from employees of 24 insurance organizations licensed in Kazakhstan. The sampling strategy is purposeful; collecting data from professionals involves board members, C-suite managers, risk officers, actuaries, and underwriters for these insurance organizations and

triangulating the findings with their respective organizations' internal and external artifacts.

Participant Selection Logic

There are currently 19 purposive sampling schemes. The scheme selection depends on the research goal, purpose, and questions (Onwuegbuzie & Collins, 2007). The research purposeful sampling will identify participants who could provide insights into the phenomenon under study regardless of the general population (Burkholder et al., 2020). Purposeful sampling is selected because participants possess specific knowledge and are located at a particular place and time, offering relevant context-rich and in-depth data to answer the research question (Ravitch & Carl, 2021). This purposeful sampling strategy might present two areas for improvement, including: (a) the researcher's biases with no control in selecting units of analysis and (b) the inability to predict variations among sampled units (Van de Ven, 2013). Each case will comprise several participants working within similar functionality.

The selection logic was based on the involvement of the professionals who deal with the ERM system in an insurance organization. The purposeful sampling criteria include: (a) five years of experience in the insurance industry and (b) engagement in risk management strategic planning or risk management architecture. No restrictions in terms of age, gender, or ethnicity will be applied. Corporate governance structure might be a guiding tool for selecting participants. The effectiveness of the ERM system also depends on the transparency and coordination between its parts (functions), including risk

management, compliance, internal control, audit, and actuarial (Santomil & Otero-Gonzales, 2020). These functions are also parts of the risk management three lines of defense model that might provide insight into participant selection.

Saturation is one of the tools to confirm the quality of the research. However, there need to be specific guidelines on the scope of the information collected and the number of interviews sufficient to derive significant results (Creswell & Creswell, 2018). According to Mason (2010), data saturation occurs when new data collection does not impact the research results. In qualitative research, data saturation occurs mainly during twelve interviews (Guest et al., 2006). The research methodologist proposed four to five case studies (Creswell & Creswell, 2018). I targeted up to five cases, with individual interviews in each case. However, the number of interviews depends on saturation, when information is repeated, and there are no new insights (Creswell & Creswell, 2018; Smith, 2018). The other possible reason to include more participants is to achieve the highest possible credibility; however, it can be done by the more straightforward and less time-consuming method – random stratified or cluster sampling, as identified above.

Instrumentation

Yin (2018) recommended triangulating the data. As with any case study research, multiple data collection instruments will be exploited, including (a) interview protocols, (b) audiotapes, and (c) archival data involving internal and external artifacts. Data in this study was collected in two stages. The first stage included the documentation, involving internal and external artifacts. The second stage involved personal interviews. I used the

problem-centered interview (PCI) approach, described as a systematic but flexible way to explore the research problem or question by disclosing and understanding the participants' perspectives (Witzel & Reiter, 2012). Such a two-fold approach allows data triangulation.

Interview Protocol

Rubin and Rubin (2012) identified three types of interview questions, including: (a) main questions, which enable the answer to different parts of a research question, (b) probes that provide details and examples, and (c) follow-up questions allowing in-depth elaboration on critical concepts, themes, ideas, or events. Fifteen to 20 interviews, or until saturation is reached, were proposed to be conducted with the C-suite managers responsible for risk management and decision-making. There was no prescribed order for the interviews; they were conducted upon the availability of the study participants. The interviews were recorded and transcribed. Transcription and field notes were primary data tools prepared and translated if needed for further coding.

Based on the literature review in Chapter 2, five key trends evolved within the research, including: (a) fit and proper regulatory requirement, (b) three lines of defense models, (c) risk culture, (d) ERM link to strategy, and (e) risk appetite statement will shape the interview questions. Thus, the list of main interview questions will reflect each trend as follows:

1. How do you estimate the readiness of the insurance market in Kazakhstan to meet the fit and proper requirements of the upcoming Solvency II regulatory regime?
2. How do you estimate the operation of the three lines of defense model in your risk management practice?
3. How would you describe risk culture in the insurance market? Include any specific issues, examples, or best practices.
4. How do risk management is embedded into strategic decision-making?
5. How risk appetite statement is set, articulated, and communicated throughout the organizations?

Each interview question will seek responses through probes and follow-up questions to allow thick descriptions as they cover the main concerns about a particular topic. With semistructured interviews, the researcher has a specific topic to learn about, prepares a limited number of questions in advance, and plans to ask follow-up questions (Rubin & Rubin, 2012). Semistructured interviews have several advantages, including maintaining control over the interview and a narrow focus on the planned items to answer the research question (Rubin & Rubin, 2012). The follow-up questions that might be asked include:

Question (a):

1. How is the process of risk knowledge sharing organized?
2. Are there any barriers to risk knowledge sharing in the organizations?

3. How is risk management training conducted?
4. What is the role of the Chief Risk Officer in the organization's decision-making process?

Question (b):

1. How could you estimate the communication process between departments?
2. What is the role of the risk management department in the three lines of defense model?
3. Are there any conflicts of interest between the three lines? How are they resolved?

Question (c):

1. Does the board blame the culture that operates at any level of the organization?
2. Does the organization acknowledge and live the values it publishes at every level in everything they do?
3. Risk culture requires time and investment. Does the board invest consistently and wisely to develop and maintain an influential communal culture?
4. Is a standard set of terms or accepted organizational language frequently used within the organization over and above the terminology common to the insurance industry?

Question (d):

1. Are identifiable values commonly referenced and shared within the organization?
2. Is there a robust set of published values regularly referenced, taught to new joiners, and reinforced by management?
3. What is the link between risk management and corporate strategy?
4. How is the HRM strategy linked to risk management?

Question (e):

1. Has the board fully articulated the organization's risk appetite?
2. How information to develop the risk appetite statement is collected?

The complete interview protocol is revealed in Appendix A.

Internal Artifacts

The following documents may compose the background to identify the ERM system in action: risk management philosophy, risk appetite statement, organizational structure, three lines of defense model, and stress tests. The data collection might include multiple sources for the last three years (2020-2022) to answer the research question, including published interviews, websites, regulatory reports, and other shared documents. First, collecting the existing documentation on risk management, organizational structure, and function was requested. It included risk management philosophy or policy, risk appetite statement, risk registers, business process description, decision-making hierarchy, corporate strategy, and HR policies.

External Artifacts

External artifacts involved primarily financial statements and risk management reports to the regulator. These documents are provided monthly to the regulator. However, I used the annual reports for three consecutive years since 2020 for this study. All the instrumentation used in the study will be combined in a separate case study protocol, as Yin (2018) recommended. The critical aim of the case study protocol is to answer the research question of using best practices by insurance professionals to manage enterprise risks in a separate case. Furthermore, the case study protocol facilitated the cross-case analysis and established context-specific issues that might contribute to the divergence and generalization of the results.

Pilot Study

A pilot study offers a way to test the tools and instruments the researcher will use in the interview phase of the study. The main goal of the pilot study was to examine the interview questions against their clarity, simplicity, and answerability (Maxwell, 2013). The pilot study aimed to stimulate the interview process by assessing the length, questions appropriateness, and recording and reporting facilities. Furthermore, the pilot study aimed to determine any shortcomings in the interview process, questions, and follow-up questions to ensure that the collected data is meaningful, offering a detailed description when interviewing the study's participants. I asked one insurance professional who previously dealt with the risk management process in insurance organizations and met the general criteria of the study's sampling for an interview. However, this pilot

participant interview data was not involved in the primary research to avoid subjectivity, and the results were separate from the data. As with the main study, the invitation letter, the consent form, and the interview protocols were used. The participant was given the warranties of confidentiality and nondisclosure and the assurance of recording privacy and protection. The results of the pilot study assisted in the interview documents' clearing.

Procedures for Recruitment, Participation, and Data Collection

Yin (2018) recommended adhering to three overriding principles for the data collection process in case study research: (a) use multiple sources of evidence, (b) create a case study database, and (c) maintain a chain of evidence. Three steps are essential to the data collection phase, including: (a) setting the boundaries for the study through sampling and recruitment, (b) collecting information through interviews and documents, and (c) establishing the protocol for recording information (Creswell & Creswell, 2018). The invitation to participate in the study was sent to insurance organizations licensed in Kazakhstan employees according to a specific list designed to identify risk management process participants. The study aimed to interview 15-20 participants until saturation is reached.

Most case studies in risk management practices in insurance organizations involved different pools of participants, such as board members, chief risk officers (CROs), actuaries, heads of linear departments, and internal control (Agarwal & Kallapur, 2018; Ozdemir, 2021). The data obtained from participants within persons of

similar functionality comprised a unit of analysis or a case that should be distinct from data collection units (Yin, 2018). Upon the participants' agreement and consent by replying to the email, I asked for a convenient time and place for interviews. All participants were provided with confidentiality assurances and nondisclosure warranties. No names and relationships to the organizations or their ERM process were disclosed in the study.

As the researcher is the only data collection instrument in this study, the length of data collection was around six months. However, there are no location obstacles as almost all potential participants are in one city. Furthermore, if it is more convenient and appropriate for participants, face-to-face interviews were replaced by an online facility such as Zoom or Microsoft Teams. There was no prescribed order to conduct interviews. Thus, they were performed depending on the availability of participants. The environment should be quiet, friendly, and trustworthy. I asked the participants to select a time and venue in the invitation letter. The main principle I explored is to respect the site and disrupt it as little as possible (Creswell & Creswell, 2018). Each participant had a right to exit the study at any time. Data was recorded using a digital voice recorder and the researcher's notes. Data storage is organized in a USB, protected by passwords, and stored in a locked safe. Data will be stored for at least five years after the final study publication.

Data Analysis Plan

Pattern-matching logic was applied to identify patterns in the case with system archetypes if they exist (Yin, 2018). This study represented the framework for investigating systemic ERM implementation issues within insurance organizations. The results of the study, thus, can be expressed in systems archetypes. Systems thinking is a discipline for seeing wholes, so systems archetypes are the power of systems thinking (Senge, 2006). Systems archetypes are a tool to identify system interrelations that lead to a particular behavior (Clancy, 2018). Systems archetype can be represented as a causal chart identifying the reinforcing and balancing loops. Every diagram associated with the archetype reveals the issue under consideration as a structure (Vera et al., 2019). The main components of any system archetype as a structure are elements, interactions (links), polarities, loop labels, and feedback. There is no influence from the external environment, i.e., each archetype can be generated in different contexts (Clancy, 2018). The archetypes being rigid structures simultaneously are dynamic; thus, they can be modified, changed, and adapted (Vera et al., 2019). Furthermore, due to the dynamic nature of archetypes, the intervention in the process can cause a change in any other part of the system, leading to dynamic complexity (Haywood et al., 2017; Senge, 2006).

Data analysis involves several stages: description, interpretation, conclusions withdrawal, and significance determination (Burkholder et al., 2020). A primary case description involves understanding who, what, when, and where under the study situation (Burkholder et al., 2020). The descriptive part of the data analysis involves several

readings and reviews of the collected data, including documents, interviews, observations, and other sources (Burkholder et al., 2020). Filed notes recorded are an essential part of the data analysis process.

Data analysis is conducted through coding, categorizing, and summarizing common patterns. So, as coding is the assigning a meaning to the data (Ravitch & Carl, 2021, p. 263), categorizing is the process of sorting, combining, and clustering (Ravitch & Carl, 2021; Rubin & Rubin, 2012; Saldaña, 2016). Themes are a summarized explanation of common concepts (Rubin & Rubin, 2012) and the overall process of the practical advances of data analysis and research (Williams & Moser, 2019). Thus, with every consequent stage, the researcher climbs from one level to another to generate broader ideas and theories.

Through the research interaction with the raw data, the initial patterns, themes, or categories tend to emerge (Burkholder et al., 2020). The initial stage was open coding, which means the researcher is open to what the data are saying without bringing in any preexisting codes. The codes also were derived from the conceptual framework and literature review. The following data analysis involved thematic analysis to identify the critical themes and categories. Then, the emerging themes were triangulated with internal and external artifacts derived from the obtained documentation and reports. Triangulation allowed the researcher to define the convergence of the data collected from multiple sources and estimate the strength of a case study finding (Yin, 2018).

Further analysis was based on the concept coding. Concept coding extracts big-picture ideas from the data (Saldaña, 2016). Conceptual processes consist of more minor observable actions that add to a bigger and broader scheme (Saldaña, 2016). Concept coding is also an appropriate method when the analyst wishes to transcend the local and particular of the study to more abstract or generalizable contexts (Saldaña, 2016). Thus, the systems theory studies might be successfully investigated through concept coding. Concept coding is appropriate for all types of data, studies with multiple participants and sites, and studies with a wide variety of data forms (for example, interview transcripts, field notes, journals, documents, diaries, correspondence, artifacts, and video) (Saldaña, 2016).

Finally, data analysis was based on cross-case analysis as it can emphasize common issues. I used a case-based approach to maintain the integrity of the entire case and then compare or synthesize any within-case patterns across the cases (Yin, 2018). A qualitative data analysis computer program can facilitate the data analysis process. For instance, the HyperQual editor will allow data identification, retrieval, isolation, grouping, and regrouping for analysis (Creswell & Creswell, 2018). Also, the study's results could be contrasted with the existing theories and literature (Creswell & Creswell, 2018), as scientific inquiry involves a repetitive interplay between theoretical ideas and empirical evidence (Van de Ven, 2013). Therefore, a single pass in making sense of data is insufficient (Van de Ven, 2013). Numerous iterations are required (Van de Ven, 2013).

Issues of Trustworthiness

The ongoing debate on trustworthiness versus validity in scientific inquiry often needs more consistent use of the terms (Jordan, 2018) and sometimes incompatible approaches (Porter, 2007). Using validity in quantitative research and trustworthiness in qualitative studies is common. There are also scientific analogs of each term used; for instance, internal validity in quantitative analysis is like credibility in qualitative research, external validity to transferability, reliability to dependability, and objectivity to neutrality (Schwandt et al., 2007). Although criticized widely in qualitative research, the trustworthiness of a study reflects the validity and reliability challenges in the qualitative strand (Shenton, 2004). The potential issues with trustworthiness in the proposed research and face-to-face interviews might involve: (a) honesty of participants, (b) personal relationship biases, (c) researcher biases, (d) resistance to cooperating, and (e) translation issues.

The external validity or credibility of the case study approach to human capital risk is also confirmed by research in the aerospace industry. Significant research was conducted with the National Aeronautics and Space Administration (NASA) setting. For instance, such an approach is justified by Lengyel et al. (2019), who explored knowledge transfer mechanisms, knowledge gaps, and risk frameworks to integrate the knowledge issues. Gerstein et al. (2016) further investigated the whole risk framework for NASA, including human capital risk within multiple case studies.

To deliver high-quality research, the researcher must consider several considerations that include: (a) the method of data collection, (b) the types of data collected, the sample of data collected, (c) the appropriate research question, and (d) enough participants involved (Burkholder et al., 2020). Many critiques surround qualitative research's trustworthiness because the concept of the research's validity, which is widely accepted, cannot directly be applied to qualitative research. However, the framework to ensure trustworthiness in qualitative research does exist (Shenton, 2004). This framework was developed by Guba (1981) and included four main components: credibility, dependability, transferability, and confirmability (cited in Shenton, 2004).

The quality of research can be assured through trustworthiness testing. For instance, Shenton (2004) identifies fourteen strategies to test the study's credibility. The following strategies to ensure the trustworthiness of this research will be exploited: (a) prior acknowledgment of the culture of participating organizations and (b) triangulation – the combination of different data sources, including individual interviews, research papers, and documentation. Triangulation allows researchers to compare results from different sources and to support the main idea once the robust features of reality emerge (Van de Ven, 2013, p. 68). Examination of previous research, thick description of theoretical background, and peer reviews or member checks are vital parts of qualitative research and bring actual trustworthiness to a study (Van de Ven, 2013).

Credibility

Numerous strategies can assist the researcher in achieving the study's credibility (internal validity). The following methods can help mitigate some of the issues for the proposed research. Early familiarity with the sites was selected as the qualitative strand, and prolonged engagement, as Lincoln and Guba (1985) recommended. However, excessive inquiries and visits might also cause participants to abstain from the cooperation. Early preparations and a structured approach to interactions should achieve the balance of time spent within the settings and the number of inquiries. Triangulation is another strategy to obtain appropriate credibility. The multiple data collection tools will assist the researcher in preparing in advance before any personal interaction with participants. Tactics to help ensure honesty in informants include the opportunity to reject participation in the study, confidentiality warranties, iterative questions, and the independent status of the research emphasis (Shenton, 2004).

Transferability

The lack of transferability is the main critique of qualitative studies, as the results cannot be applied in other contexts, situations, or locations. Making such a transfer feasible and solid requires sufficient information about the fieldwork sites (Shenton, 2004). The strategy to achieve transferability (external validity) in qualitative research includes a thick description. Thick description involves the explanation of: (a) the number of organizations taking part in the study and their location, (b) any restrictions on the type of people who contributed data, (c) the number of participants involved in the

fieldwork, (d) the data collection methods that were employed, (e) the number and length of the data collection sessions, and (f) the period over which the data was collected (Shenton, 2004). Insurance is recognized as a global industry with similar regulation approaches, such as Solvency II. Also, the study is based on the COSO framework (2017), one of the international standards for risk management practices; thus, it proposes higher transferability.

Dependability

Dependability (the qualitative counterpart to reliability) in this study will be achieved through audit trails and triangulation. Triangulation is a crucial instrument used throughout the study to confirm the credibility and dependability of the study. With this aim, examining supporting material like internal and external documents and reports might provide a background to and help explain the attitudes and behavior (Shenton, 2004). Another form of triangulation via data sources involves many participants (Creswell & Creswell, 2018; Shenton, 2004). The study will include people with different backgrounds, occupations, genders, and ages but with common strategic orientations toward effective risk management practices.

Further verification of various viewpoints and experiences against each other in a similar case and comparison with other cases will provide in-depth insights. Audit trails involve detailed methodological description that enables the reader to determine how far the data and constructs emerging from it may be accepted (Shenton, 2004). The audit trail

in this study can be represented in a diagram to trace the course of the research step-by-step via the decisions made and procedures described.

Confirmability

Confirmability (the qualitative counterpart to objectivity) is one of the primary researcher's responsibilities. Reflexivity is a way to achieve confirmability. The excellent standard of qualitative research involves the researcher's reflection on their role in the study, personal background, culture, and experience (Creswell & Creswell, 2018). Such reflexivity shapes interpretations of the themes and provides meaning to the data (Creswell & Creswell, 2018). Furthermore, qualitative researchers try to develop a complex picture of the problem or issue under study, reporting multiple perspectives (Creswell & Creswell, 2018; Van de Ven, 2013), providing as holistic a picture as possible. Finally, reflexive research involves careful interpretation and reflection; both aim to be sensitive to the viewpoints of those whose interests are being served in a study (Van de Ven, 2013). In turn, this leads to the responsibility of the researcher to provide ethical research.

Ethical Procedures

Ethical research involves a set of general principles and codes promoted by institutional review boards of universities on treating any study involving human beings. These principles include such mechanisms as informed consent, duty to avoid conflicts of interest, responsibility for data confidentiality, and no plagiarism (Van de Ven, 2013). These mechanisms ensure that the proposed research and the researcher do not intend to

harm participants. APA Manual (2020) defines the requirements for the researcher to protect participants' rights and welfare, including the following measures: (a) obtaining informed consent using language that the participants will understand, (b) avoiding physical, emotional, or psychological harm, (c) eliminating exploitative relationships application of the researcher's power, authority, and (d) taking appropriate steps to prevent unauthorized access or release of participant data to the public (American Psychological Association, 2019).

The requirement to not harm the participants is central to qualitative research. It can have many forms, including pressure, deceit, distress, and the absence of sensitivity to participants' circumstances and feelings (Ravitch & Carl, 2021). The other issue is data protection. The researcher is often prohibited from disclosing confidential information concerning research participants unless they provide written consent. Researchers can provide confidentiality by disguising some data of participants' identity; however, they can do this only if such data is not essential to the phenomenon under investigation and cannot lead the readers to false conclusions.

Finally, respect for participants is achieved by concentrating on their needs, time constraints, and relationship importance. Ravitch and Carl (2021) prescribe the appropriate planning and creating the conditions that enable participants to feel positive, be engaged, and enrich their experience. Researchers must be reflexive by clarifying which perspectives and interests they protect while doing the research. The research

should provide careful interpretation and reflection or, in other words, be sensitive to the viewpoints of others (Van de Ven, 2013).

The study should comply with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2019), including informed consent, participant protection, committee oversight, and an Institutional Review Board (IRB) overview. Although the minimal risk to participants is represented in the study, IRB approval must be gained before taking any actions. No research will be done without written approval by the IRB. Once such permission is obtained, I will email the insurance organization members to invite them to participate in the study. Data protection measures include personal computer employment without third-party access, passwords, and independent server backups.

The evidence of the ethical treatment of human participants included written consent forms and detailed instructions to participants enclosed in the final work. Further, the researcher should continually evaluate their sampling designs and procedures for ethical and scientific appropriateness throughout their studies accurately and sufficiently. According to Onwuegbuzie and Collins (2007), ethical research will involve participants' complete information about risks and potential consequences for participants. Appropriate research practices will also include providing guarantees, avoiding deception, ensuring that participants have the right to withdraw from the study at any time, being responsible for being mindful of cultural, religious, gender, and other significant differences within the research population, and avoiding the research

techniques that might have negative social consequences (Onwuegbuzie & Collins, 2007).

Summary

Chapter 3 contained this study's research design and rationale, explaining why the multiple case study is the most appropriate method. The role of the researcher was described as a part of the reflexivity exercise and potential bias mitigation. Chapter 3 also provided the methodology details, including data collection and analysis methods, the discussion on potential threats to validity, and tools to support trustworthiness. The critical idea was to collect as much information as possible on each unit of analysis and provide thick descriptions of the themes and systems archetypes that emerged. Then, I triangulated the results inside and across the cases and themes. Additional member checks and audit trails assisted in gaining a higher-quality study. Finally, the chapter explained this study's ethical concerns and procedures. Chapter 4 describes the study results.

Chapter 4: Results

The purpose of this qualitative multiple-case study was to explore the insurance professionals' use of best practices like: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy; and (e) risk appetite statements to manage enterprise risk. ERM practices depend on strategic decision-making and how organizations interpret the risks (Andersen et al., 2021; Hoskisson et al., 2017). However, ERM might not remove inefficiencies due to the lack of coordination between stakeholders, systems thinking, and organizational opportunities for performance improvements (Agarwal & Kallapur, 2018; Ashby et al., 2019; Bohnert et al., 2019; Farrell & Gallagher, 2015). Thus, the specific research problem addressed in this study was that although researchers had investigated this issue, there is a limited understanding of insurance professionals' use of best practices in enterprise risk management (Andersen et al., 2021; Bednarek et al., 2021; Bohnert et al., 2019).

The research question for this study was how insurance professionals apply: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements in enterprise risk management. The multiple-case study was adopted for this research because it could explain the decision-making process, answering the how and why questions (Yin, 2018). In answering the research questions, I explored the external artifacts in Kazakhstan's insurance market and the personal experience of the insurance professionals working in the industry for more

than five years, asking them five principal questions relating to each practice. Eighteen insurance professionals participated in the semistructured interviews.

Chapter 4 explains how I conducted the pilot study to prepare for the formal interview process, the study settings, the participants' demographics, and the data presentation. This chapter also provides evidence of trustworthiness, followed by a chapter summary and a transition to Chapter 5.

Pilot Study

The fundamental goal of the pilot study was to examine interview questions and the conversation's clarity and answerability. Technically, the pilot interview tested the length, recording, and reporting tools, including a member check procedure. I conducted the pilot study with an insurance professional with 15 years of experience in the insurance industry. The results of the pilot interview are not included in the study results, avoiding any potential subjectivity. As with the main study, I used the invitation letter, the consent form, and the interview protocols. I provided warranties of confidentiality, non-disclosure, and recording privacy and protection to the participant. The pilot study aimed to refine interview questions and avoid unnecessary pauses. Furthermore, the pilot study helped recognize the appropriate time requirements for each interview, when in the interview process, ask probing and follow-up questions.

The pilot interview identified a crucial challenge surrounding the interview process, including creating a friendly and trustful environment to overcome the fear of participants providing wrong answers. Also, the pilot study revealed a limited number of

English-speaking insurance professionals and those willing to be interviewed in English. Thus, I developed specific translation procedures to facilitate the interested parties' willingness to participate in the study. There were no more issues with the pilot interview, so the data collection and analysis methods remained unchanged.

Research Setting

This qualitative multiple-case study collected data from semistructured interviews with insurance professionals and external artifacts such as annual audited reports, rating outlooks, websites, and publicly available risk management policies and strategies in the insurance organizations in Kazakhstan. The researcher was the sole data collection instrument. I emailed the invitation letters to the potential pool of participants consisting of 185 professionals involved in the ERM processes and possessing at least five years of experience in the insurance industry. Respondents who expressed willingness to participate emailed their consent and the selected time and venue. I received a total of 18 consents to participate in the interviews. Among them, 16 participants were selected to interview via online Zoom meeting, and two opted for a face-to-face format.

The standard procedures at the beginning of the interviews involved a brief presentation of the study, its purpose, the interview structure, and the confidentiality warranties described in the interview protocol. The interviews lasted from 32 to 65 minutes, averaging 45 minutes. After the interviews, the standard procedures involved checking the recordings, transcribing audio, translation, and maintenance at a secure place for five years.

Participation in the interviews was voluntary. Personal or organizational conditions did not influence the participants or their experience in the ERM process at the time of the study. Although many respondents highlighted the leading role of actuaries in risk management processes, I still needed to receive consent from the actuaries I invited to participate in the interviews. A similar situation was observed with human resource specialists, as there are many concerns about the teamwork and professional development of the employees in risk management and compliance. I intentionally included human resource managers in the pool; however, no one responded with consent.

Most respondents talked about their corporate experience, and they naturally desire to show off and embellish the situation. At the beginning of each interview, the brief description and the interview structure were presented, and all participants agreed to follow the proposed structure. Therefore, the location, the topics, and the anticipated length of the interview did not influence the decision to participate or change the process. Thus, no personal or organizational conditions influenced participants and their experience at the time of the study.

Demographics

The eligibility criteria for the study's participation involved: (a) at least five years of experience in the insurance industry and (b) engagement in risk management practices within the insurance organizations. There were 18 interviews for two months since the end of April 2023. The average age of the participants was 48 years, split between males and females as 50/50, and the average experience in the insurance industry was 21 years.

Seven participants worked for life insurance, and 11 worked for general insurance organizations, which generally corresponds to the ratio of the life and non-life insurers in the market. i.e., seven life insurers and 17 non-life have licenses in the market. Table 1 presents the participants' demographics and characteristics summary.

Table 1

Demographics of Participants

No.	Participant	Age	Gender	Role	Experience
1	A1	48	F	Compliance	8
2	A2	43	M	Underwriter	17
3	A3	48	F	Underwriter	26
4	A4	48	F	Underwriter	19
5	A5	42	M	Claims	18
6	B1	54	F	Lawyer	25
7	B2	42	F	CEO	23
8	C1	62	F	CEO	24
9	E2	42	M	Deputy CEO	21
10	F1	50	M	CEO	27
11	F2	59	M	Internal Audit	35
12	G1	50	F	CEO	20
13	G2	33	F	Underwriter	15
14	H1	57	M	Compliance	22
15	J1	36	M	CEO	16
16	K1	40	F	Compliance	12
17	L1	44	M	CEO	22

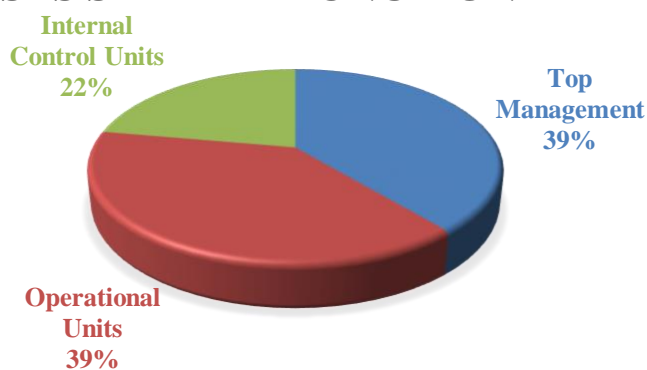
18	M1	39	M	Sales Director	13
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The units of analysis or cases emerged from the function performed by the participants during the interview. Thus, in line with the three lines of defense model, I comprised three cases depending on the position and function of each participant. These cases involved *top management*, including CEOs, their deputies, and board members; *operational management*, including underwriters, salespersons, and claims adjusters; and *internal control* units, including compliance and internal audit. Therefore, the split between participants was as follows: seven out of 18 were in top management, seven were in the first line of operational management, and four were in the internal control category.

Figure 1

Cases Split by Functionality

CASES SPLIT BY FUNCTIONALITY



Data Collection

The data collection started after the IRB approval. The IRB approval number was 04-17-23-1042561, dated 17 April 2023. I initially contacted the potential participants by accessing the names of the insurance industry companies and their representatives from colleagues known to these insurance risk management professionals. I obtained additional lists of specialists from online research and contacted insurance risk management professionals by telephone and email. I sent invitation letters to 185 specialists in insurance organizations. If participants agreed to participate in the study, they were instructed to respond to the researcher's email with the words, "I consent." Initially, I received 18 consents.

Interviews

The initial data collection began with semistructured audio-recorded face-to-face or web-based interviews following the participants' preference for a place where the participants' privacy could be maintained. Participants received a consent form to inform them about the details of the research study. Once I received their consent, I emailed each participant to ask for a convenient time, based on their schedule and their preference for web-based or face-to-face with a location that they deem private. The interviews were held from 24 April 2023 to 5 July 2023 for two and a half months. I conducted 18 individual interviews; 16 were held online via Zoom meeting, two of which were face-to-face. Most of the interviews were conducted outside the working time and at a location that was convenient and not distractible for the participants, where others could not

overhear the discussion. At the beginning of each interview, I made a notice about the recording and reminded again about confidentiality. No participant rejected the recording procedures.

Member Checking

Although the transcription of the interviews offers adequate assurances for the accuracy of results, I conducted additional member-checking. After each interview, the raw audio data were transcribed and sent to the interviewees for member-checking. Although all participants were provided with the warranty of complete confidentiality via the consent form, no private or sensitive information was asked or collected for this study. Therefore, the process of member-checking was completed quickly. All participants confirmed the accuracy of the presented transcripts. Only two participants were willing to add some responses in writing, which they did in their transcriptions. Then, the audio and transcript files were saved on a password-protected USB drive, and encrypted files will be maintained for five years, as required by the university, after which they will be destroyed.

Internal and External Artifacts

I used the publicly available research on the risk mitigation topic from the insurance companies and the industry to triangulate with the aggregate findings from the interviews. This study's critical challenge was collecting the documentation supporting the insurers' ERM system. The available internal artifacts included annual reports and audited financial statements of the insurers for the last three years, rating agencies'

outlooks available on their websites, published mission, vision, and strategies, and interviews with insurance professionals. External artifacts included the regulator's legislative norms and documents. Collecting internal and external artifacts was an ongoing process during the data collection phase. I changed the initially described approach to collecting internal and external artifacts as there is a limited number of available sources. Although the regulator strictly requires the disclosure of the information, many insurers consider the publication of extensive reports excessive due to the close interest from the competitors.

Reflective Field Notes

I made field notes on the printed interview protocol within each interview, which was preliminarily encrypted for each participant. No unusual circumstances were observed during the data collection phase of the study. These printed interview protocols will also be kept in a private safe box for five years.

Data Analysis

Saldaña (2018) warned of the potential omission of vital information or discrepancies cases within the coding process. Therefore, I started the coding with complete extracts of the interview questions answers and applied open first-cycle initial coding (Saldaña, 2018), where the entire sentences and key phrases were derived. I intentionally split the answers and codes between cases to provide further cross-case analysis. The second-cycle initial coding entailed 20 emerging themes in each interview question. To derive these 20 themes in each interview question, I used the keywords from

the literature review of the five best risk management practices, including: (a) fit and proper regulatory environment, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statement described in Chapter 2. Pattern-matching logic was used for further thematic coding to arrive at five themes in each interview question. Finally, the concept coding is based on analyzing the themes and the conceptual framework designed for this study.

The thematic coding for this study was based on the observed and constructed patterns found in the literature (Saldaña, 2018). I matched the descriptive codes derived from the initial cycle coding with extended phrases from the literature. Therefore, the themes are mostly the extended phrases of two or three words that briefly express the idea the respondents delivered during the interview. The results of the concept coding, referred to as *analytic coding*, revealed in the study results section below, identified the idea of the themes at a macro level (Saldaña, 2018). The concepts in this study reflect the ideas from the conceptual framework to find the patterns prescribed by the general systems theory (von Bertalanffy, 1956) and other supporting theories.

Interview Question 1

Interview question 1 related to the fit and proper risk management requirement under Pillar 2 of the Solvency II regulatory regime and included knowledge-sharing practices, training activities, approach to remuneration, and the role of risk managers in the process. Interview question 1 was: How do you estimate the readiness of the insurance industry to meet the fit and proper requirements of the upcoming Solvency II

regulatory regime? The probing questions included: (a) How is the risk knowledge-sharing process organized? (b) Are there any risk knowledge-sharing barriers in insurance organizations? (c) How is risk management training conducted? (d) What is the role of the Chief Risk Officer in the decision-making process?

Overall, the insurance professionals admitted that the insurance industry in the country is still being prepared for Solvency II implementation. Five meta-themes emerged: rule-based regulation instead of a risk-oriented approach, compliance-based culture, proper risk assessment system, risk knowledge sharing and accessibility, and human capital factors. The answers to the probing questions provided an in-depth understanding of how these themes emerged. Table 2 illustrates the initial codes and themes for interview question 1.

Table 2*Fit and Proper Regulatory Requirement (Interview Question 1)*

Participant	Second Cycle Initial Codes	Themes
Top Management Case		
B2	Methodology issues Weak automation Shortage of specialists' Regulatory skills and mindset Rule-based regulation Reporting function Risk Profile Risk-based assessment Staff turnover Access to risk information Strategic planning committee BOD meets and intervenes Formal reports Encourage employees to study risk information Risk appetite	Rule-Based Regulation vs. Risk-Oriented Approach Human Capital
C1	Regulators skills and mindset Rule-based regulation Punishment system Common sense System of governance Reporting function Stress-testing Proper risk assessment Level of understanding Ask what can go wrong question Informal risk management Fear to identify risk Warning system Torture people with formalities Knowledge transfer mechanism	Rule-Based Regulation vs. Risk-Oriented Approach Knowledge Sharing and Accessibility
F1	Stringent regulatory requirements Reporting function Strategic competencies Reputational, financial, political, and legal risks Modeling risk identification phase Governance framework Fixing all the risks Risk records Digital aptitude Top management decisions on risks Information exchange Cloud-based solution Synchronizing actions Operational risks control Process engineering	Compliance-Based Culture Proper Risk Assessment
G1	Methodological issues Regulator enforcement Formal reporting Reporting function Training Regulatory requirements Management experience Process engineering One-size-fits-all Balancing processes Few are engaged in real RM Rule-based regulation Inflexibility Proper risk assessment RM and actuarial expertise Disinterest in RM	Rule-Based Regulation vs. Risk-Oriented Approach Compliance-Based Culture Proper Risk Assessment
L1	Training Human capital Quality of transmitted information Framework for developed countries Effective and proportionate system of governance Shot in the dark Unsafe environment Decision-making is collective Information transmission Decision-making Confusion Disjoint Process Every stakeholder has the power and opportunity to influence an organization Personal growth and learning inquiry Narrow focus	Human Capital Knowledge Sharing and Accessibility

Participant	Second Cycle Initial Codes	Themes
J1	Proper risk assessment Disclosure of information Risk-oriented supervision One-size-fits-all General governance requirements Rule-based regulation RM must have influence Digital aptitude Lack of specialists' Top management ignores RM recommendation Motivation Compliance-based culture Performance-based remuneration Human capital	Proper Risk Assessment Rule-based regulation vs Risk-Oriented Approach Human Capital Compliance- Based Culture
E2	Constant changes Regulator's enforcement Problems with implementation Gradual transition needed RM self-awareness Lack of forecasting abilities Formal reporting Face-to-face interactions Digital aptitude Automation issues Human factor Gaps in information delivery, assimilation and application Lack of consistency Training are not effective Mundane level of risk detection	Compliance-Based Culture Human Capital Knowledge Sharing and Accessibility
Operational Units		
A2	Premature now Stringent requirements Customers costs	Rule-Based Regulation vs Risk-Oriented Approach
A3	Regulator's rule-based regulation Strict enforcement ERM process procedures BOD accountability Control requirements Reporting function Risk manager's competencies Training Inform the risks Lack of understanding Fail to see Fear for Punishment Treating Mistakes Motivation Provide consolidation, feedback, and analysis	Rule-Based Regulation vs. Risk-Oriented Approach Human Capital Compliance- Based Culture
A4	Fear for punishment Motivation Self-confidence issues Lack of communication Compliance-based culture Regulator's push Unclear prescriptions Human capital Mentoring Reporting function Ambivalence and ambiguity Knowledge sharing and accessibility Proper risk assessment Modeling risk identification Absence of feedback	Compliance-Based Culture Human Capital Knowledge Sharing and Accessibility Proper Risk Assessment
A5	Knowledge sharing and accessibility Communication channels Regulatory requirements Improper risk level Face-to-face interactions Experience exchange Human capital Orchestra performance Role of risk manager is blurring Lack of competencies Understanding the risk perspective	Knowledge-Sharing and Accessibility Human Capital Proper Risk Assessment
B1	Regulator's enforcement and push Knowledge gaps Compliance-based culture BOD is responsible for all information produced Training Information exchange Lack of competencies Reporting function Knowledge gap Risk-	Compliance-Based Culture Human Capital

Participant	Second Cycle Initial Codes	Themes
	oriented oversight Preventing rather than managing consequences Shortage in HR resources Robust governance framework Disjoint rather than unifying work BOD meets regularly and intervenes if necessary Ongoing learning process but in the AML field only	Knowledge Sharing and Accessibility
G2	Level of understanding Methodology for benchmarking Rule-based regulation System of governance Risk engineering Training Gap between HR strategies and ERM Ongoing learning process Knowledge management Mentoring practices Proper risk assessment	Rule-Based Regulation vs. Risk-Oriented Approach Knowledge Sharing and Accessibility Human Capital
M1	Methodology for benchmarking Regulatory framework Formal reporting RM competencies Regulators skills and mindset Post factum reporting Accountability to BOD Lack of resources Information exchange Risk culture Face-to-face interactions Top management responsibility Lack of training	Rule-Based Regulation vs. Risk-Oriented Approach Compliance-Based Culture Proper Risk Assessment Human Capital Knowledge-Sharing and Accessibility
Internal Control Units		
A1	Compliance Responsibility Professionalism Requirements Human Factors Performance inconsistencies Knowledge sharing BOD accountability Keeping the Board informed Conduct training Effective ERM Explanatory activities Risk identification, assessment, and monitoring programs Teamwork Concentration of power Reluctant to share	Human Capital Proper Risk Assessment
F2	Step by step implementation Define minimum objectives Set realistic deadlines Knowledge sharing Training One-size-fits-all RM qualification Embed HR in ERM Inflexibility Stakeholders perspective Internal control disjoint	Knowledge-Sharing and Accessibility Human Capital
H1	Compliance-based culture RM needs transition Full-fledged implementation Process engineering One-size fits-all Human factor Lack of responsibility Stakeholders perspective Question of relevance and priority Performance-based remuneration Reporting function Formal approach Proper risk assessment Automation Motivation CRO as a provider of RM strategies Inspirational leadership Self-defeating	Compliance-Based Culture Human Capital

Participant	Second Cycle Initial Codes	Themes
K1	Transition period Interaction between risk controlling functions Reporting function General governance requirements Embed HR in RM Training basic Top management is RM provider Irregularities Risks based on reports Matter of time Compliance-based culture General governance requirements Information flow inconsistent Lack of understanding Information exchange	Compliance-Based Culture Human Capital Knowledge-Sharing and Accessibility

The participants described the organization of the risk knowledge-sharing process as poor. The key indicators to support this understanding include interaction on risks, prescribed criteria, action plans on mistake elimination, internal policies, lack of time dedicated to risks, management directives, lack of specific knowledge, disjoint somewhat unifying work, formal nature of the risk reports, the depth of risk assessment and many participants claimed that the risk management system is existing in the form prescribed by the regulator and the internal policies and reports that are required by legislation.

Table 3*Top 20 Emerging Themes in Fit and Proper Regulatory Requirement*

No.	Emerging Themes	Top Management	Operational Units	Internal Control Units	Total
1	Stringent regulatory requirements / enforcement	0	7	5	12
2	Rule-based regulation vs. risk-oriented approach	0	4	6	10
3	Reporting function	4	4	9	17
4	RM competencies (regulatory as well)	3	6	4	13
5	Training vs mentoring practices /personal growth inquiry	4	9	5	18
6	Lack of understanding the risk perspective	3	4	3	10
7	Motivation / inspirational leadership	3	2	3	8
8	Compliance-based culture / governance framework	4	5	5	14
9	Human capital	2	4	6	12
10	Knowledge sharing and accessibility	2	4	1	7
11	Modeling risk identification / process engineering	3	4	6	13
12	Gaps in information exchange and transmission / disclosure	3	9	13	25
13	Methodology for benchmarking gradual	7	4	5	16
14	Automation / Digitalization / Digital aptitude	1	0	6	7
15	Strategic competencies	2	4	4	10
16	Top management decisions on the risk vs collective DM vs BOD RM	5	5	5	15
17	Performance inconsistency	4	1	4	9
18	Effective and proportionate system of governance *one-size-fits-all*	3	0	4	7
19	Unsafe environment / fear for punishment	0	5	7	12
20	Lack of responsibility / disjoint	5	1	4	10

Table 4*Themes in Interview Question 1*

	Top Management	Operational Units	Internal Control Units	Total
Rule-Based Regulation vs Risk-Oriented Approach	4/7	4/7	0/4	8/18
Compliance-Based Culture	4/7	4/7	2/4	10/18
Knowledge-Sharing and Accessibility	3/7	5/7	2/4	10/18
Human Capital	4/7	6/7	4/4	14/18
Proper Risk Assessment	3/7	3/7	1/4	7/18

Table 3 provides the frequency of 20 emerging themes in the participants' answers. Table 4 summarizes the number of calls of each meta-theme in responses to interview question 1. A consensus was achieved among participants on human capital issues such as competencies of risk managers, training and mentoring practices, personal growth inquiries, strategic competencies, and performance inconsistency. Compliance-based culture and knowledge-sharing patterns might also be considered vital themes that affect the effectiveness of risk management practices.

Interview Question 2

Interview question 2: How do you estimate the operation of the three-line defense model in your risk management practice? Overall, insurance professionals estimate that the work of three lines of defense is higher in quality than any other component of the risk management system. The probing questions included: (a) How could you estimate

the communication process between departments? (b) What is the role of the risk management department in the three lines of defense model? (c) Are there any conflicts of interest between the three lines? How are they resolved? Table 4 demonstrates the initial codes and themes for interview question 2.

Table 5

Three Lines of Defense Model (Interview Question 2)

Participant	Second Cycle Initial Codes	Themes
Top Management Case		
B2	Balancing the customer-oriented solutions and the law compliance Potential conflicts Prioritized or added risks significant to mission Tights to 1st line Implication in risk governance 2nd line actively participate in operational activity Effective control from BOD Divergence of operational and strategic RM objectives Quick consensus Complete understanding	Potential Conflicts Principal-Agent Nature
C1	Risk culture Clear communication Complete understanding Imperfect model Standard overview Divergence of operational and strategic RM objectives Control of potential outcomes of the risk Adhering the principles of ERM Ability and willingness to evaluate probabilities objectively Insufficient resources	Clear Communication Across Accountabilities Risk Culture / Defensive Nature
F1	Imperfect model Potential conflicts Incomplete integration Departments managers adjust processes based on auditors' reports Complete understanding Accompanying strategy and its implementation Prioritized or added risks significant to mission Control of potential outcomes of the risk Difference in risk perception Improved communication within all 3 lines Quick adjustments, restructuring and change	Potential Conflicts Clear Communication Across Accountabilities
G1	Skipping the line might cause a problem Existing conflicts Internal auditors must actively participate Lack of knowledge Overcome judgmental risk Subjective biases Avoid auditors' scrutiny Ability and willingness to evaluate probabilities objectively Clear communication Avoid internal auditors' scrutiny	Potential Conflicts Clear Communication Across Accountabilities Lack of

Participant	Second Cycle Initial Codes	Themes
		Knowledge / Information Asymmetries
L1	Imperfect model Different structures, role description and responsibilities Regulator mandates improvements Avoid internal auditors' scrutiny Potential conflicts Subjective biases Internal audit must actively participate Different attitudes to the risk Source for disagreements between the lines Integrated, less segregated and long-term approach	Principal - Agent Nature Potential Conflicts Risk Culture / Defensive Nature
J1	3 modes of accountability Different structures, role description and responsibilities Principal-agent nature Implication in risk governance Regulator mandates improvements Regulatory imperfections Lack of knowledge Potential conflicts Control of potential outcomes of the risk Clear communication	Principal - Agent Nature Clear Communication Across Accountabilities Lack of Knowledge
E2	Internal auditors must actively participate Principal-agent nature Compensation plans Rule-based approach Tights on the 1st line Avoid auditors' scrutiny Top-down approach Discretionary decisions Mitigate agents' conflicts Not supporting the mission and vision and strategy implications	Principal - Agent Nature Potential Conflicts Risk Culture / Defensive Nature
Operational Units		
A2	Tights of the 1st line Potential conflicts Implication in risk governance Source for disagreement between the lines Prioritized or added risks significant to mission Ability to deal with operational exposures Reflects only the risk element in RM One team approach to higher collaboration Combining risk and audit functions to turn threats Department managers adjust processes based on auditors' reports	Principal - Agent Nature Potential Conflicts
A3	Complete understanding Avoid auditors' scrutiny Tights on the 1st line Biases toward other decisions Potential conflicts Less segregated mode of accountability Subjective biases Department managers adjust processes based on auditors' reports Enhance cooperation across accountabilities Top-down approach	Principal - Agent Nature Potential Conflicts Clear Communication Across Accountabilities
A4	Tights to 1st line Clear communication Different structures, role description and responsibilities Subjective biases Principal-agent nature Incomplete integration	Principal - Agent Nature Potential Conflicts Clear Communication Across

Participant	Second Cycle Initial Codes	Themes
	Clear communication 3 modes of accountability Difference in risk perception	Accountabilities Risk
	Enhance cooperation across accountabilities	Culture
A5	Internal auditors must actively participate Different structures, role description and responsibilities Healthy RM practices Trade-offs Potential conflicts avoided	Principal - Agent Nature Potential Conflicts
	Incomplete integration Enhance cooperation across accountabilities Complete understanding Short-term benefits exceed the long-term consequences Defensive nature	Risk Culture
B1	Balancing the customer-oriented solutions and the law compliance Trade-offs 3 modes of accountability Tights to 1st line Potential conflicts Different attitudes to the risk Common risk language Lack of knowledge Strategic misstatement Groupthink	Principal - Agent Nature Potential Conflicts Risk Culture Lack of Knowledge
G2	Complete understanding Potential conflicts avoided Accompanying the strategy and its implementation Implication in risk governance Robust and well-communicated model Control of potential outcomes of the risk Potential conflict avoided	Potential Conflicts Clear Communications Across Accountabilities
M1	Tights on the 1st line Potential conflicts Principal-agent nature Different structures, role description and responsibilities Information asymmetries Overcome judgmental risk Ability and willingness to evaluate probabilities objectively Critical point to align profit and risk targets (1st line) Subjective biases Defensive nature Risk culture	Principal - Agent Nature Potential Conflicts Risk Culture Lack of Knowledge
Internal Control Units		
A1	Implication in risk governance Control of potential outcomes of the risk Overseeing the risk taking and control Complete understanding Incomplete integration Rule-based approach Avoid auditors' scrutiny Potential conflicts Less segregated mode of accountability Effective control from BOD Tights of the 1st line	Lack of Knowledge Potential Conflicts Principal - Agent Nature
F2	Clear communication Model incorporation into overall governance system Implication in risk governance 3 mode of accountability Positive performance outcomes Robust and well-communicated model Control of potential outcomes	Clear Communication Across Accountabilities Principal - Agent Nature Risk Culture

Participant	Second Cycle Initial Codes	Themes
	of the risk Overseeing risk-taking and control Healthy RM practices Top-down approach	
H1	Cultural patterns to risks 3 modes of accountability One team approach to higher collaboration Top-down approach Principal-agent nature Compensation plans Build trust among participants Clear communication Overlapping of accountability distribution Improved communication within all 3 lines	Risk Culture Principal - Agent Nature Clear Communication Across Accountabilities
K1	Complete understanding Potential conflicts avoided Principal-agent nature Internal auditors must actively participate Regulator mandates improvements External auditors as a 5th line Regulator mandates improvements Potential conflicts avoided Top-down approach Quick consensus	Potential Conflicts Principal - Agent Nature

Although the three lines of defense are considered a robust and well-communicated meta-theme identified as significant in interview question 2, some challenges exist. They involve a principal–agent nature, potential conflicts, lack of knowledge, clear communication across accountabilities, and risk culture. Principal–agent relationships are observed across all lines with specific emphasis on the tights on the first line or operational units and the inactive position of the second and the third line. Potential conflicts mainly involve different structures, role descriptions, responsibilities, a lack of understanding of the functionality of the three lines, and communication issues. Subjective biases, judgmental risk, and defensive culture might be significant sources of such conflicts. Table 6 provides the frequency of 20 emerging themes in the participants’ answers. Table 7 summarizes the number of calls of each meta-theme in responses to interview question 2.

Table 6*Top 20 Emerging Themes in Three Lines of Defense Model*

No.	Emerging Themes	Top Management	Operational Units	Internal Control Units	Total
1	Tights to the first line	1	6	2	9
2	Potential conflicts	3	8	6	17
3	Robust and well-communicated model	4	3	4	11
4	Complete understanding	2	3	2	7
5	2nd line and Internal audit must actively participate avoiding scrutiny	3	3	8	14
6	Subjective biases / judgmental risk		6	6	12
7	Top-down approach / Discretionary decisions	4	1	6	11
8	Clear communication across accountabilities	3	6	4	13
9	Different structures, role description and responsibilities		3	2	5
10	Principal-agent nature	3	2	4	9
11	3 modes of accountability or 5	5	4	1	10
12	Short-term benefits exceed long-term consequences		3	1	4
13	Different attitude to the risk / perception		2	2	4
14	Lack of knowledge / information asymmetries		2	3	5
15	Risk Culture / Cultural patterns to risks / Defensive nature	1	4	1	6
16	Accompanying the strategy and its implementation		2	4	6
17	Control of potential outcomes of the risk	7	3	3	13
18	Regulator mandates improvements	3		3	6
19	Integrated, less segregated and long-term approach needed	1	2	6	9
20	Quick adjustments, restructuring, consensus, and change / trade-offs	1	4	3	8

Table 7*Themes in Interview Question 2*

	Top Management	Operational Units	Internal Control Units	Total
Principal Agent Nature / Different Structures, Roles, and Responsibilities	4/7	6/7	4/4	14/18
Potential Conflicts / Subjective Biases / Judgmental Risk	5/7	7/7	2/4	14/18
Lack of Knowledge / Information Asymmetries	2/7	2/7	1/4	5/18
Clear Communication Across Accountabilities	4/7	3/7	2/4	9/18
Risk Culture / Defensive Nature	3/7	4/7	2/4	9/18

Interview Question 3

Interview question 3: How would you describe risk culture in the insurance market? Include any specific issues, examples, or best practices. The probing questions included: (a) Does the board blame the culture that operates at any level of the organization? (b) Do the organizations acknowledge and live the values they publish at every level in everything they do? (c) Risk culture requires time and investment. Does the board invest consistently and wisely to develop and maintain an influential communal culture? (d) Is a standard set of terms or accepted organizational language frequently used within the organization over and above the terminology common to the insurance industry? Table 8 demonstrates the initial codes and themes for interview question 3. Table 9 provides the frequency of 20 emerging themes in the participants' answers. Table

10 summarizes the number of calls of each meta-theme in responses to interview question

3.

Table 8

Risk Culture (Interview Question 3)

Participant	Second Cycle Initial Codes	Themes
Top Management Case		
B2	Risk culture is average Most people need help in understanding Fear and defensiveness, anxiety and resistance shape the corporate structure, culture and processes Risk selection reflects moral, political, economic, and power position Avoid unknown and uncomfortable situations Risk culture plays a mediating role in developing a sound SRM system Individual risk representation Teamwork dynamics and defensive behavior Common vibe going top to bottom and vice versa	Fear and Defensiveness, Anxiety and Resistance Cultural and Social Context
C1	Risk culture is weak Cultural and social context Purpose of risk culture to establish context in ERM for decision-making Fear and defensiveness, anxiety and resistance shape the corporate structure, culture, and processes Culture full of tensions Compliance-based culture Avoid unknown and uncomfortable situations Difficult to assess and manage Autocratic cultures make ERM implementation complex Regulators embedded the concept of risk culture	Compliance-Based Culture Cultural and Social Context Fear and Defensiveness, Anxiety and Resistance
F1	Culture full of tensions Risk culture plays a mediating role in developing a sound SRM system Avoid unknown and uncomfortable situations Compliance-based culture Shared risk representation Cognitive-behavioral treatments to overcome fear, anxiety and stress Risk selection reflects moral, political, economic, and power position Unconscious patterns Teamwork dynamics and defensive behavior Risk-aware culture required for effective ERM	Culture Full of Tensions Compliance-Based Culture Cultural and Social Context Fear and Defensiveness, Anxiety and Resistance
G1	Risk culture is weak Risk-aware culture required for effective ERM Compliance-based culture Risk selection reflects moral, political, economic, and power position Risk culture plays a mediating role in developing a sound SRM system Individual risk representation Fear and defensiveness, anxiety and	Compliance-Based Culture Cultural and Social Context Fear and Defensiveness,

Participant	Second Cycle Initial Codes	Themes
	resistance shape the corporate structure, culture and processes Avoid unknown and uncomfortable situations Culture full of tensions Difficult to assess and manage	Anxiety and Resistance Culture Full of Tensions
L1	Risk culture is chaotic Culture full of tensions Unconscious patterns Risk selection reflects moral, political, economic, and power position Cultural and social context Difficult to assess and manage Avoid unknown and uncomfortable situations Purpose of risk culture to establish context in ERM for decision-making	Culture Full of Tensions Cultural and Social Context Risk-Aware Culture Required
J1	Cultural and social context Risk selection reflects moral, political economic and power position Significant amount of time and money to develop risk culture (investing) Risk culture varies from insurer-to-insurer Risk culture is weak Many needs help in understanding Cultural and social context Individual risk representation Fear and defensiveness, anxiety and resistance shape the corporate structure, culture, and processes Irrelevant topic	Cultural and Social Context Fear and Defensiveness, Anxiety and Resistance
E2	Risk culture varies from insurer-to-insurer Fear and defensiveness, anxiety and resistance shape the corporate structure, culture and processes Avoid unknown and uncomfortable situations Risk selection reflects moral, political, economic, and power position Culture full of tensions Individual risk representation Autocratic culture make ERM implementation complex Compliance-based culture Difficult to assess and manage Cultural and social context	Fear and Defensiveness, Anxiety and Resistance Culture Full of Tensions Compliance-Based Culture Cultural and Social Context
Operational Units		
A2	Risk culture varies from insurer to insurer Difficult to assess and manage Fear and defensiveness, anxiety and resistance shape the corporate structure, culture and processes Management investing in it moderately Cultural and social context Shared risk representation Risk-aware culture required for effective ERM Values presented but not always shared Most people need help in understanding Collective means comfortable	Fear and Defensiveness, Anxiety and Resistance Cultural and Social Context
A3	Difficult to assess and manage Values presented but not always shared Risk culture is absent Nobody invest in risk culture Irrelevant topic unconscious	Compliance-Based Culture Cultural and Social Context

Participant	Second Cycle Initial Codes	Themes
	patterns Autocratic cultures make ERM implementation complex Avoid unknown and uncomfortable situations	
A4	Risk culture is weak Most people need help in understanding defensiveness, anxiety and resistance shape the corporate structure, culture and processes Management investing moderately Risk selection reflects moral, political, economic, and power position Values presented but not always shared Avoid unknown and uncomfortable situations Culture full of tensions Risk-aware culture required for effective ERM Purpose of risk culture to establish context in ERM for decision-making	Fear and Defensiveness, Anxiety and Resistance Risk-Aware Culture Required Culture Full of Tensions
A5	Fear and defensiveness, anxiety and resistance shape the corporate structure, culture and processes Risk culture is weak Individual risk representation Avoid unknown and uncomfortable situations Values presented but not always shared Cultural and social context Management investing in risk culture moderately	Fear and Defensiveness, Anxiety and Resistance Cultural and Social Context
B1	Risk culture is weak Risk culture plays a mediating role in developing a sound ERM system Fear and defensiveness, anxiety and resistance shape the corporate structure, culture and processes Management investing in risk culture moderately Risk-aware culture required for effective ERM Avoid unknown and uncomfortable situations Values presented but not always shared Cultural and social context	Fear and Defensiveness, Anxiety and Resistance Risk-Aware Culture Required Cultural and Social Context
G2	Risk culture varies from insurer-to-insurer Compliance-based culture Risk culture is average ERM changes culture promotes open discussion and considers stakeholders' ideas Values presented but not always shared Friendly corporate culture Teamwork dynamics and defensive behavior Cultural and social context Cognitive-behavioral treatments to overcome fear, anxiety, and stress	Compliance-Based Culture Cultural and Social Context
M1	Individual risk representation Risk selection reflects moral, political, economic, and power position Culture full of tensions Cultural and social context Teamwork dynamics and defensive behavior Difficult to assess and manage Compliance-based culture Avoid unknown and uncomfortable situations	Compliance-Based Culture Cultural and Social Context Culture Full of Tensions

Participant	Second Cycle Initial Codes	Themes
	Pseudo system Fear and defensiveness, anxiety and resistance shape the corporate structure, culture, and processes	
	Internal Control Units	
A1	ERM changes culture, promotes open discussion and considers stakeholders' ideas Difficult to assess and manage Avoid unknown and uncomfortable situations Compliance-based culture Teamwork dynamics and defensive behavior Individual risk representation Autocratic cultures make ERM implementation complex Management trust Controversial regulatory requirements Shared vision	Compliance-Based Culture Fear and Defensiveness, Anxiety and Resistance
F2	Risk culture is weak Compliance-based culture Purpose of risk culture to establish context in ERM for decision-making Values presented but not always shared Cultural and social context Risk selection reflects moral, political, economic, and power position	Compliance-Based Culture Cultural and Social Context
H1	Cultural and social context Culture full of tension Difficult to assess and manage Risk selection reflects moral, political, economic, and power position Culture of sacred reserves Avoid unknown and uncomfortable situations Management investing in risk culture moderately Unconscious patterns Cognitive-behavioral treatments to overcome fear, anxiety, and stress Culture full of tensions	Culture Full of Tensions Cultural and Social Context
K1	Risk culture is weak Cultural and social context Risk culture varies from insurer-to-insurer Compliance-based culture Values presented but not always shared Many people need help in understanding Regulators embedded the concept of risk culture Fear and defensiveness, anxiety and resistance shape the corporate structure, culture, and processes Difficult to assess and manage Management investing in risk culture moderately	Fear and Defensiveness, Anxiety and Resistance, Cultural and Social Context Compliance-Based Culture

Table 9*Top 20 Emerging Themes in Risk Culture*

No.	Emerging Themes	Top Management	Operational Units	Internal Control Units	Total
1	Risk culture varies from insurer to insurer	1	2	2	5
2	Difficult to assess and manage	3	5	5	13
3	Fear and defensiveness, anxiety and resistance shape the corporate structure, culture, and processes	1	5	5	11
4	Management investing in it moderately	3	4		7
5	Cultural and social context	3	5	5	13
6	Individual vs Shared risk representation	1	3	5	9
7	Risk-aware culture required for effective ERM		3	2	5
8	Values presented but not always shared	2	6		8
9	Most people need help in understanding	1	2	2	5
10	Avoid unknown and uncomfortable situations	3	7	7	17
11	Risk culture is weak	2	5	4	11
12	Unconscious patterns	1	1	2	4
13	Autocratic culture makes ERM implementation complex	1	1	2	4
14	Risk selection reflects moral, political, economic, and power position	2	2	6	10
15	Culture full of tensions	2	2	5	9
16	Purpose of risk culture to establish context in ERM decision-making	1	1	2	4
17	Risk culture plays mediating role in developing a sound ERM system		1	3	4
18	Compliance-based culture	6	2	5	13
19	ERM changes culture promotes open discussion and considers stakeholders' ideas	1	2	1	4
20	Teamwork dynamics and defensive behavior	1	2	2	5

Table 10*Themes in Interview Question 3*

	Top Management	Operational Units	Internal Control Units	Total
Fear and Defensiveness, Anxiety and Resistance	6/7	4/7	2/4	12/18
Cultural and Social Context	7/7	6/7	3/4	16/18
Risk-Aware Culture Required for Effective ERM	1/7	2/7	0/4	3/18
Culture Full of Tensions	4/7	2/7	1/4	7/18
Compliance-Based Culture	4/7	3/7	3/4	10/18

Overall, the participants discussing the question of risk culture declared that the average level of risk culture observed within the insurance industry in Kazakhstan could be more robust. Rare shareholders, board of directors, and management invest in risk culture and its elements. For many participants, the concept of risk culture needs to be clarified with organizational or corporate culture, and most respondents admit that it is easier to assess and manage if the regulator prescribes it. Interviewees also noticed that the cultural and social context is vital to developing a sound risk culture within organizations and the insurance industry. One of the critical features of the current risk culture described by the participants involves a defensive nature, fear of identifying risks, anxiety about the potential punishments for mistakes, and resistance to change.

Interview Question 4

Interview question 4: How is risk management embedded into an organization's strategic decision-making? The probing questions included: (a) Are identifiable values commonly referenced and shared within the organization? (b) Is there a robust set of published values regularly referenced, taught to new joiners, and reinforced by management? (c) What is the link between risk management and corporate strategy? (d) How is the HRM strategy linked to risk management? Table 11 reveals the codes and emerging themes derived from the participants' responses. Table 12 provides the frequency of 20 emerging themes in the participants' answers. Table 13 summarizes the number of calls of each meta-theme in responses to interview question 4.

Table 11

Link to Strategy (Interview Question 4)

Participant	Second Cycle Initial Codes	Themes
Top Management Case		
B2	Decision-making should involve as many units as possible discuss Modeling outcomes of the decisions factors influencing the dynamics of risks to strategy CEO is a mailbox for RM Staff is a vital resource Few specialists Formal reporting People afraid of requirements Consider people as assets	Resources, Capacity, Uncertainty, and Environment Strategy is Formality Mandated by Regulator
C1	SRM is a SWOT analysis Distinguish between strategic and operational levels Strategic is a big picture Risk is a threat and opportunity Strategy is built based on values Competencies and personalities HR has many risks HR cannot be a final recruiter	High HR Risks Strategic Risk Must Be Analyzed in Different Scenarios
F1	Strategic risks are dynamic Strategic risks should be understood and analyzed in different scenarios HR resources are vital to achieve strategic goals Mindset to	Strategic Risk Must Be Analyzed in Different

Participant	Second Cycle Initial Codes	Themes
	understand and realize strategic goals Risk culture is a rare and valuable resource Strategic risk control include accumulating resources, setting up barriers and keeling the flexibility of such resources Lack of communication Formal approach to communication Informal communication Balancing threats and opportunities	Scenarios Strategy is a Formality Mandated by Regulator
G1	Insurers vary considerably in approaching RM and strategy practices is mandatory Focus on risk assessment system Operational risks are primary Some risks are not reflected in risk map BOD is responsible for such issues and RM connection issues are always brought up by RM People are capital Competence is vital Few competent specialists Strategy is fashionable Much formalism Words and actions didn't go together Supporting and creating corporate culture Team is a resource for success	Strategy is a Formality Mandated by Regulator High HR Risks
L1	Strategy is mandatory RM position is considered Risk exposure is considered Vulnerability insurers job is risks Ig is imperative that RM participate Based on RM analysis insurers adjust strategy Team effort Once a year strategy discussions Decisions made where to move, what to change Compliance strains the RM's job High uncertainty Restriction on democracy means anarchy	Strategy is a Formality Mandated by Regulator Resources, Capacity, Uncertainty, and Environment High HR Risks
J1	Companies refrain from involving managers in the development of strategic objectives Strategy is developed by the executive and approved by Board, Board initially explains the interests HR brand plays an important role to attract engaging, talented personnel Retain people is a matter of corporate culture Clear rules of the game Necessary to communicate Create appropriate environment Team harmonious Right policies = right personnel High turnover Competencies and personalities Constant professional development 1Reduce the risk of errors = reduce operational risk Internal business processes work = internal control works = Minimal impact of external risks	High HR Risks Strategic Risk Must Be Analyzed in Different Scenarios
E2	Incomplete understanding High level of uncertainty Robust strategy to deal with unstable environment and uncertainty Strategic goals contain market share indicator although not always relevant Limited engagement by specialization Competencies and personalities Groupthink at underwriting committees	Resources, Capacity, Uncertainty, and Environment High HR Risks

Participant	Second Cycle Initial Codes	Themes
	Professionals burn out Resources planning is weak Growth is a threat and should ne planned carefully High turnover new personnel increases the risks	
Operational Units		
A2	RM provides strategically essential information BOD make decisions and control strategic direction RM is a strategic activity Reports are tools to collect strategically important information RM evaluate risks, weigh them, and makes some forecasts or evaluations RM is always listened to RM are prescribed by law RM is overloaded with reports	Strategy is a Formality Mandated by Regulator Strategic Risk Must be Analyzed in Different Scenarios
A3	RM is not involved in strategic planning RM is ignored often BOD is responsible for strategic decisions RM participation in product development is obligatory Reporting function Accountable to BOD HR and RM is no connection	Strategic Risk Must be Analyzed in Different Scenarios
A4	Situational approach to strategic decision-making Unsafe environment Strategic risk should be understood and analyzed in different scenarios High level of uncertainty HR should set the mood Professional personnel is needed Open communication HR is a communicator between management and employees Risk appetite statement is a working tool to express	Resources, Capacity, Uncertainty, and Environment Strategic Risk Must Be Analyzed in Different Scenarios Quantitative Information
A5	High level of uncertainty Unsafe environment Everyday RM practices involve centralizing, calculating, and prioritizing the risks critical to sustainability Strategic risks are measured in quantitative terms HR resources are rare	Resources, Capacity, Uncertainty, and Environment Quantitative Information
B1	Insurers vary considerably in approaching strategy development practices Lack of holistic view of the issues in SRM Separating ERM and SRM HR risk are high Difficulties to find highly qualified specialists Competencies and personalities Strategic risks should be understood and analyzed in different scenarios High level of uncertainty with HR	High HR Risks Strategic Risk Must Be Analyzed in Different Scenarios
G2	High level of uncertainty Insurers vary considerably in approaching RM practices Published strategies exist Strategies are revised based on external and internal conditions Regulatory changes affect the strategy Emerging risks do not	Resources, Capacity, Uncertainty, and

Participant	Second Cycle Initial Codes	Themes
	appear promptly in the strategy Risk appetite is a working tool to express strategy Incomplete understanding Limitations of engagement by specialization professional development and training plans based on strategic direction	Environment Quantitative Information
M1	No correlation of RM and HR strategy HR managers are not reflecting the real purpose Artificial intelligence Insurers vary considerably in approaching these practices ERM helps optimize outcomes RM is valuable and rare resource Resources, capacity and environment Setting up barriers constructed of those resources and keeping the flexibility of such RM is not a conductor of RM values and strategy Reporting function	Resources, Capacity, Uncertainty, and Environment High HR Risks
Internal Control Units		
A1	Everyday RM practices involve centralizing, calculating, and prioritizing the risks critical to sustainability Strategic risk are measured in quantitative terms Management is seeking the balance between strategic opportunities and risks inherent Risk appetite statement is a tool Unsafe environment and uncertainty Strategic risk should be understood and analyzed in different scenarios HR resources are rare HR strategies are weak	Quantitative Information Resources, Capacity, Uncertainty, and Environment Strategic Risk Must Be Analyzed in Different Scenarios
F2	Lack of holistic view of the issues in SRM Strategic risks should be understood and analyzed in different scenarios Strategic decision making is only possible with the appropriate identification, assessment and analysis of risks Values are shared RM and corporate strategy go hand in hand HR is directly related to RM HR is vital resources Risk owners 3LoD Qualification and experience HR is rare and valuable Communication	Strategic Risk Must Be Analyzed in Different Scenarios High HR Risks
H1	Insurers vary considerably in approaching these practices Strategy is often a formality mandated by regulator Digitalization is an issue RM is listened through the prism of numbers HR is rare and valuable resource High level of uncertainty Resources, capacity and environment Separating ERM and SRM psychological fatigue and burn out of employees Balancing threat and opportunities	Strategy is a Formality Mandated by Regulator Resources, Capacity, Uncertainty, and Environment High HR Risks
K1	Insurers vary considerably in approaching these practices Strategy is often a formality mandated by regulator Digitalization is an issue RM is listened	Strategy is a Formality Mandated by Regulator

Participant	Second Cycle Initial Codes	Themes
	through the prism of numbers HR is rare and valuable resource High level of uncertainty Resources, capacity and environment Separating ERM and SRM psychological fatigue and burn out of employees Balancing threat and opportunities	Resources, Capacity, Uncertainty, and Environment High HR Risks

Although the participants described corporate strategy development as a process of a regular course within insurance organizations, most admit that the regulator prescribes it. Since strategy requires strong competencies, a limited number of specialists are involved in strategic planning and control. Some respondents highlighted the limited time frame of the strategic planning horizon as two or three years due to the uncertainty of political and economic situations inherent to developing countries. The role of the risk management function is limited mainly by the quantitative information provided to the board of directors and management for strategic decision-making that emphasizes the general separation of ERM practices and strategic risk management. Finally, participants noticed the need for more risk management practices within the development of HR strategy despite significant HR risks such as high turnover, burn-out, and high loading due to the gap in automation and digitalization, among others.

Table 12*Top 20 Themes in Link to Strategy*

No.	Emerging Themes	Top Management	Operational Units	Internal Control Units	Total
1	RM provides strategically essential quantitative information	4	4	2	10
2	BOD make decisions and control strategic direction Management is seeking the balance between strategic		4	3	7
3	opportunities and risks inherent	2	0	6	8
4	Risk appetite statement is a working tool to express strategy	2	3		5
5	Unsafe environment and uncertainty Strategic risk should be understood and analyzed in different	2	6	8	16
6	scenarios	3	2	1	6
7	HR strategies are weak	2	6	2	10
8	RM is reporting function		6	1	7
9	Communication Open Insurers vary considerably in approaching strategy	2	1	4	7
10	development practices	1	3	2	6
11	Lack of holistic view of the issues in SRM	1	1		2
12	Separating ERM and SRM	2	2	4	8
13	HR risks are high / Turnover / Burn out	1	1	6	8
14	Competencies and personalities	3	6	9	18
15	Limitations of engagement by specialization	1	1	3	5
16	Resources, capacity, and environment	1	3	3	7
17	Team harmonious	1		6	7
18	Strategy is often a formality mandated by regulator	4	6	9	19
19	Risk culture is rare and valuable resource Strategic decision-making is only possible with the appropriate identification, assessment, and analysis of the	1		5	6
20	risks	3	3	6	12

Table 13*Themes in Interview Question 4*

	Top Management	Operational Units	Internal Control Units	Total
Quantitative Information / Maximum Net Retention	0/7	2/7	1/4	3/18
Strategic Risk Must Be Analyzed in Different Scenarios	4/7	3/7	2/4	9/18
High HR Risks	5/7	2/7	3/4	10/18
Resources, Capacity, Uncertainty, and Environment	3/7	4/7	3/4	10/18
Strategy is a Formality Mandated by Regulator	3/7	1/7	2/4	6/18

Interview Question 5

Interview question 5: How is the organization's risk appetite statement set, articulated, and communicated? The probing questions included: (a) Have the boards fully articulated the organization's risk appetite? (b) How is information to develop the risk appetite statement collected? Table 14 reveals the codes and emerging themes derived from the participants' responses. Table 15 provides the frequency of 20 emerging themes in the participants' answers. Table 16 summarizes the number of calls of each meta-theme in responses to interview question 5.

Table 14*Risk Appetite (Interview Question 5)*

Participant	Second Cycle Initial Codes	Themes
Top Management Case		
B2	Net retention Working groups Conservative approach Satisfy regulatory requirements Common sense Robust governance based on actionable risk appetite statement Actuarial theme Dialog across the organization Make sense of the complexity of managing risk governance and compliance logic Requires expertise Information exchange	Maximum Level of Risk Willing to Operate Satisfy Regulatory and Rating Agencies Requirements Human Capital
C1	Net retention Actuarial theme Risk criteria Logic established by BOD Emphasis on balance sheet management and corporate governance Disaggregated into different elements Satisfy regulatory requirements Top management responsibility Alignment to strategic and operational objectives Lack of integration and coordination	Maximum Level of Risk Willing to Operate Logic Established by Board Satisfy Regulatory and Rating Agencies Requirements Lack of Integration and Coordination
F1	Shareholders vision Conservative approach Logic established by BOD Alignment of strategic and operational objectives Top management responsibility Link to short-term strategy Emphasis on balance sheet management and corporate governance Shareholders decision Top management parachute Expertise	Logic Established by Board Human Capital
G1	Top-down approach Bottom-up rare BOD primary defines risk appetite Open communication Shareholders vision Human capital Informal communications BOD's composition, experience and skills Internal audit participate Robust governance based on actionable risk appetite statement	Human Capital Logic Established by Board
L1	Top management responsibility Expertise Poorly understood, applied, or misused concept Subjective opinion Quantitative measures Portfolio analysis Control exposure Post factum Understand consequences Control risk exposure	Maximum Level of Risk Willing to Operate Logic established by Board Lack of Integration and Coordination
J1	Misunderstanding and misconception Allocate resources Linked to strategic planning	Lack of integration and coordination

Participant	Second Cycle Initial Codes	Themes
E2	Top-down approach Lack of integration and coordination Misunderstanding and misconception Lack of communication Subjective opinion Human capital issues BOD's composition, experience and skills Limited information and background Top management responsibility Risk is opportunity	Lack of integration and coordination Human Capital Logic Established by Board
Operational Units		
A2	Control risk exposure Quantitative measures Teamwork Leadership Misunderstanding and misconception Dialog across organization Risk tolerance Common understanding Risk criteria Modeling of technical reserves and reinsurance undertakings	Maximum Level of Risk Willing to Operate Lack of Integration and Coordination
A3	Linked to strategic planning Risk communication Top-down approach Formal training Risk criteria Blame risk management units Lack of integration and coordination Ignorance Misunderstanding and misconception Motivation	Logic Established by Board Lack of Integration and Coordination
A4	Poorly understood, applied, and misused concept Net retention Conservative approach Lack of integration and coordination Lack of discussion Shareholders vision Avoidance of acceptable risks Logic established by BOD Top management is liaison Only acceptable decisions within the risk appetite framework	Maximum Level of Risk Willing to Operate Lack of Integration and Coordination Logic Established by Board
A5	Lack of discussion Situational approach Lack of integration and coordination Linked to strategic planning Market volatility Weak strategic planning Lack of communication BOD primarily defines risk appetite	Logic Established by Board Lack of Integration and Coordination
B1	BOD primarily defines risk appetite Logic established by BOD Top-down approach Shareholders vision Control risk exposure Follow interests of customers Satisfy regulatory requirements Regulator's interventions Working groups Avoid claims	Logic Established by Board Satisfy Regulatory and Rating Agencies Requirements
G2	Actuarial theme Satisfy regulatory requirements Net retention Meet rating agencies expectations Risk is opportunity Linked to short-term strategy Amount of risk in capital terms Working groups Quantitative measures Make sense of the complexity of managing governance and compliance logic	Satisfy Regulatory and Rating Agencies Requirements Maximum Level of Risk Willing to Operate

Participant	Second Cycle Initial Codes	Themes
M1	Poorly understood, applied, and misused concept Emphasis on balance sheet management and corporate governance Little contribution to systemic overview Misunderstanding and misconception Blame RM department Lack of integration and coordination Common understanding	Lack of Integration and Coordination Human Capital
Internal Control Units		
A1	Blame risk management unit Logic established by BOD Making sense of the complexity of managing risks Follow interests of customers BOD composition experience and skills Misunderstanding and misconception Dialog across the organization Linked to strategic planning Quantitative and qualitative statements Risk communication	Logic Established by Board Maximum Level of Risk Willing to Operate Human Capital
F2	Net retention Maximum level of risk willing to operate	Maximum Level of Risk Willing to Operate
H1	Healthier growth Uncertainty of outcomes Intuitive decisions Different language Satisfy regulatory requirements Economic factors affect Misunderstanding and misconception Common understanding High-risk exposure Subjective opinion	Satisfy Regulatory and Rating Agencies Requirements Human Capital
K1	Risk-oriented approach Maximum level of risk willing to operate Risk tolerances Emphasis on balance sheet management and corporate governance Confusion with definition Making sense of the complexity of managing risk governance and compliance logic Risk culture Undesirable risky positions or avoidance of acceptable risks and underperformance Risk appetite framework	Maximum Level of Risk Willing to Operate Lack of Integration and Coordination

Table 15

Top 20 Emerging Themes in Risk Appetite

No.	Emerging Themes	Top Management	Operational Units	Internal Control Units	Total
1	Net retention/Maximum level of risk willing to operate	6	5	3	14
2	Logic established by BOD	1	8	9	18
3	Making sense of the complexity of managing risks governance and compliance logic	2	1	2	5
4	BOD composition, experience and skills	1	1	2	4
5	Misunderstanding and misconception	5	7	3	15
6	Dialog across the organization /Teamwork	1	4	2	7
7	Linked to short-term strategic planning	1	4	5	10
8	Satisfy regulatory/rating agencies requirements	1	5	3	9
9	Economic factors affecting/ market volatility/customers interests	4	2	1	7
10	Risk tolerances/Subjective opinion	3	1	2	6
11	Emphasis on balance sheet management and corporate governance	1	2	2	5
12	Risk culture	1	0	0	1
13	Undesirable risky positions or avoidance of acceptable risks and underperformance	2	4	2	8
14	Control risk exposure	2	1	2	5
15	Risk criteria	0	3	6	9
16	Lack of integration and coordination and communication	2	13	8	23
17	Risk is an opportunity	0	1	1	2
18	Robust governance based on actionable risk appetite statement	0	0	2	2
19	Top management responsibility	0	1	5	6
20	Human capital	1	3	7	11

Table 16*Themes in Interview Question*

	Top Management	Operational Units	Internal Control Units	Total
Maximum Level of Risk Willing to Operate	3/7	3/7	3/4	9/18
Logic Established by Board	5/7	4/7	1/4	10/18
Satisfy Regulatory/Rating Agencies Requirements	2/7	2/7	1/4	5/18
Lack of Integration and Coordination and Communication	4/7	5/7	1/4	10/18
Human Capital / Dialog / Misunderstanding	4/7	1/7	2/4	7/18

Although the concept of risk appetite statement is well-known by the participants, most considered risk appetite as only a monthly assessment and declaration of net retention for the accepted risks, like the maximum amount that insurers are willing to operate with every single underwritten policy. Many respondents confirmed that the risk appetite statement is considerably a logic established by the board of directors and a regulatory requirement. As such, most participants experienced difficulties explaining whether qualitative statements are used to declare the risk appetite statements, specifically for such strategic risks as reputational or catastrophic. The risk appetite statement is primarily expressed in quantitative measures. Finally, there is an apparent lack of integration and coordination of the risk appetite statement as a tool to manage risks among the organizations; the participants emphasized the lack of competence to

deal with the statement and limited participation of different specialists in its forming, setting, and declaring.

Audit Trial

Manual and automatic coding approach. Initially, I planned to use automatic computer-based HyperQual software. However, due to the size of the raw data, I changed the approach for initial, thematic, and concept coding and proceeded with manual coding. NVivo 14 was used for further data analysis, including triangulation with external and internal artifacts, literature, and conceptual framework. Figure 2 represents the diagram of the step-by-step procedure used for the data analysis. Figure 3 demonstrates the results of the word query emerging themes stemming from the NVivo 14 applied to the second cycle codes.

Figure 2

Data Analysis Procedure

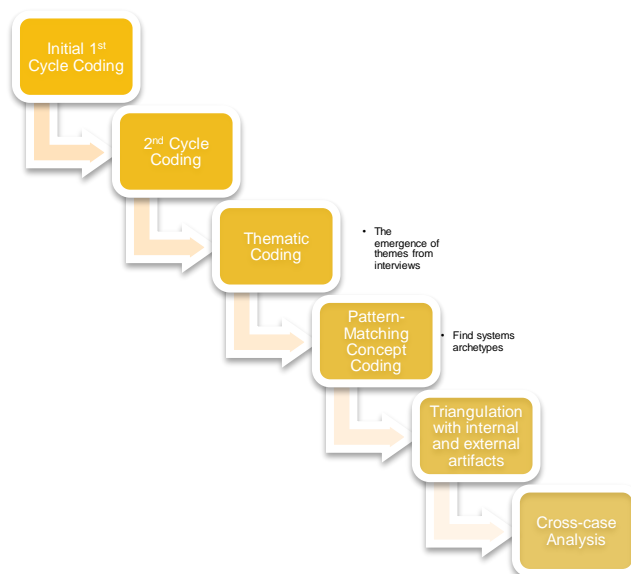


Figure 3

NVivo Thematic Analysis



Evidence of Trustworthiness

Internal and external validity characteristics applied in qualitative studies include credibility, transferability, dependability, and confirmability (Shenton, 2014). To confirm this study’s trustworthiness, I used several strategies and tools such as extensive preparations, enough interviews for higher credibility, a thick description of the data collection procedures, themes and cases for higher transferability, triangulation with

external and internal artifacts, and audit trail for better dependability, and reflexivity for higher confirmability—each of the instruments described below.

Credibility

As was discussed in Chapter 3, there are numerous strategies to ensure the credibility (internal validity) of qualitative studies. The following steps were included: (a) engagement in the industry, (b) extensive preparations, (c) triangulation of the multiple data collection tools, and (d) confidentiality warranties as recommended by Shenton (2014) to ensure the credibility of this study. I noticed that my involvement in the insurance industry helped organize the data collection quickly and effectively. Although I informed the participants in the consent form that they might know me as an insurance broker, my role in this study was separated from my professional activity. I collected the participants' consent relatively quickly and from one touch point by email. Most of them expressed a willingness to support academic research that is rare in the country. These actions eliminated the need for excessive and additional interactions while collecting consent and proved this study participation's voluntary nature.

Extensive preparations involved the thorough and detailed collection of the names and email addresses of the potential participants in creating a pool of insurance professionals involved in the risk management practices and insurance organizations' ERM systems. Thus, I collected the pool of 185 professionals to whom the invitation emails were sent and 18 participants for the semistructured interviews. Triangulation with

available external and internal artifacts provided the general outlook before the interview process started and, in many instances, confirmed the study's results.

Transferability

To ensure higher transferability of this study, I relied on the existing international framework, including European Solvency II, COSO framework, and the understanding that insurance is a global industry with similar practices. The current research in the study confirms that a transfer is feasible and solid if sufficient information about the fieldwork sites is provided (Shenton, 2004). The strategy I used to achieve transferability (external validity) in qualitative research included a thick description. A thick description of this study involved the explanation of (a) the number of organizations taking part in the study and their location, (b) any restrictions on the type of people who contributed data, (c) the number of participants involved in the fieldwork, (d) the data collection methods that were employed, (e) the number and length of the data collection sessions, and (f) the period over which the data was collected (Shenton, 2004). I also used thick descriptions to explain each emerging theme and concept, exploring extensive literature review and theoretical background.

Dependability

Dependability (the qualitative counterpart to reliability) in this study is achieved through audit trails and triangulation. Triangulation is a crucial instrument used throughout the study to confirm the credibility and dependability of the study. With this aim, examining supporting material like internal and external documents and reports

provided a background and helped explain the attitudes and behavior (Shenton, 2004). The study included people with different backgrounds, occupations, genders, and ages but with common strategic orientations toward effective risk management practices. I provided an in-depth description of various viewpoints and experiences against each other in a similar case and a comparison with other cases. I explained the methodology in detail, enabling me to proceed on the path to construct emerging themes and identify the concepts.

Confirmability

Confirmability (the qualitative counterpart to objectivity), one of the primary researcher's responsibilities, was achieved through reflexivity. Where possible, I reflected on my role in the study. Shaping the interpretations of the concepts, I provided the meaning of data based on my background as a professional working 25 years in the insurance industry. I tried to develop a complex picture of the problem or issue under study, reporting multiple perspectives (Creswell & Creswell, 2018; Van de Ven, 2013) and providing a holistic picture as possible.

Study Results

The research question for this study was how insurance professionals apply: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements in enterprise risk management. I used multiple data sources to answer the research question, including extensive semistructured interviews with 18 insurance professionals involved in the risk management processes.

Aiming for methodological triangulation and the support of the findings from the individual interviews, I explored external and internal artifacts about the risk management system in the insurance organizations in Kazakhstan and reflexive notes. The study's results led to the 25 themes that emerged, five main themes in each of the risk management practices exploited in this study. Table 17 demonstrates the significant themes, concepts, and application of theories in the conceptual framework. A thick description of the emerging concepts organized the study's results.

Table 17

Themes, Concepts, and Theories

Themes	Concepts	Theories
1	Fit and Proper Requirements	
Rule-Based Regulation vs. Risk-Oriented Approach	Compliance-Based Culture	Systems Theory
Compliance-Based Culture	Compliance-Based Culture	Systems Theory
Knowledge-Sharing and Accessibility	Poor Risk Knowledge Exchange	Knowledge Management
Human Capital	Human Capital	Resource-Based View
2	Three Lines of Defense	
Principal – Agent Nature	Human Capital	Agent Theory
Potential Conflicts	Human Capital	Human Capital Groupthink
Lack of Knowledge	Poor Risk Knowledge Exchange	Knowledge Management
Clear Communication Across Accountabilities	Risk-Aware Culture	Systems Theory Groupthink
Risk Culture	Compliance-Based Culture	Cultural Theory

Themes	Concepts	Theories
3	Risk Culture	
Fear and Defensiveness, Anxiety and Resistance	Human Capital	Expected Utility Theory Prospect Theory Theory
Cultural and Social Context	Human Capital	Prospect Theory Systems Theory
Risk-Aware Culture	Risk-Aware Culture	Cultural Theory
Culture Full of Tensions	Compliance-Based Culture	Cultural Theory
Compliance-Based Culture	Compliance-Based Culture	Systems Theory
4	Link to Strategy	
Quantitative Information	Proper Risk Assessment	Expected Utility Theory Prospect Theory
Strategic Risk Analysis in Different Scenarios	Proper Risk Assessment	Expected Utility Theory Prospect Theory
High HR Risks	Human Capital	Human Capital
Resources, Capacity, Uncertainty, and Environment	Proper Risk Assessment	Resource-Based View
Strategy is a Formality Mandated by a Regulator	Compliance-Based Culture	Agency Theory Stakeholder Theory
5	Risk Appetite	
Maximum Level of Risk Willing to Operate	Proper Risk Assessment	Expected Utility Theory Systems Theory
Logic Established by Board	Proper Risk Assessment	Stakeholders Theory Prospect Theory
Satisfy Regulatory / Rating Requirements	Compliance-Based Culture	Systems Theory
Lack of Integration and Coordination	Risk-Aware Culture	Systems Theory Agency Theory
Human Capital	Human Capital	Human Capital Resource-Based View

Concept 1: Compliance-Based Culture

The study results confirmed the compliance-based risk culture existing in the insurance industry. Although Solvency II regulatory requirements require a risk-aware approach, the participants proved the opposite: compliance-based culture. Thus, insurance organizations in Kazakhstan are likely to follow the regulatory requirements and prescribed rules rather than common sense and risk awareness in their risk management practices. The risk management function is described as a unit involved in regulatory mandatory reporting based on quantitative indicators and risk criteria. Some clue codes indicate the prevalence of rule-based regulation: *regulator imposes, stringent requirements, strong push, strict enforcement, forced to switch, prudential norms, procedural rules, and regulatory punishment*. Regulation on risk management called Rules on Formation of Risk Management and Internal Control System for Insurance Organizations in the Republic of Kazakhstan No. 198 was introduced on 27 August 2018 (Rules 198) and is mandatory for all insurance organizations licensed in the country. Participants explain the regulatory approach:

A3: “There is such a strong push in the market over the last few years, as the regulator has started to impose requirements under 198 regulations, we have a regulation on risk. Moreover, at the same time, it is very strictly enforcing it.”

A4: “At the moment, we are seeing much tightening of controls, which is not always sufficiently justified and does not always lead to any good result because many of the actions the regulator takes are done to get away with it. We had some prescriptions

and fulfilled them, but what is behind them, in general, is unclear. If an insurance company complies with all prudential norms and some requirements on equity capital, reserves, and everything else that concerns the monetary digital parameters, then perhaps insurance companies should have more freedom in everything else.”

B2: “That is all very well regulated at the level that the regulator has issued. This is Regulation 198, where the risk manager prepares certain reports monthly, quarterly, and annually. There are many of them, and he regularly reports on the risk status, risk appetite, and risk map. Then, there is another component, like the risk profile. All insurance companies independently fill it in at the beginning of each year”.

C1: “Our regulator needs much help in consulting in the transition to Solvency II because there is no understanding of Solvency II in the market. The regulation that the regulator imposes even very often contradicts Solvency II”.

G1: “I think we are only treating risk assessment now to fulfill supervisory or legal requirements; it needs to be more in-depth and the way they should be the way the risk assessment should go now.”

G2: “Our regulator has set certain limits within which the company's authorized divisions can decide about entering into a particular insurance or reinsurance contract.”

Cross-case analysis revealed that top management is mostly warning about the forthcoming Solvency II regulation as it may impose difficulties due to unclear methodology and contradictions in the Solvency II approach and the rule-based approach applicable today for insurance organizations' risk management and internal control

system. Although today, the implementation of Solvency II is not an issue for top managers, the current implementation of the IFRS17 might serve as a benchmark for how the lack of knowledge might lead to the failure of performance. Many respondents highlighted the unclear methodology, high costs, and zero readiness for the standard already introduced to the market.

The strategic purpose of risk management needs to be recognized within the existing practices. Participants identified the mandatory nature of the strategy development and noticed that insurance organizations mostly take strategy for granted. Internal control units admitted that they are not involved in strategic decision-making with the sole responsibility to inform the board of directors about the risks and inconsistencies. Operational units identified that risk management is not embedded into the strategy development and that values are not reflected in the strategy. Top management and the board of directors are responsible for strategic decision-making as the regulation prescribes it. However, as a case, top management jointly highlighted that they listened to risk and linear managers, and they created teams to discuss the strategic directions. However, several aspects could be improved with strategic decision-making. First is the constant desire of the shareholders and the boards for growth despite an obvious challenge with the strategic planning horizon in the country due to its political and economic instability and vulnerability. Second, only some respondents emphasized the role of the values and related to them risks being embedded into the strategy.

B2: “We have a young, professional team of like-minded people. We want everyone to participate; they have a voice. We do not limit anyone. If someone is against the project, he/she speaks out, and we make a collegial decision”.

C1: “A strategy is always a large-scale vision, and it is a bird's eye view; it is detailed already in particular activities and tasks, where you already say, I will do this way to implement this strategy. What can go wrong for me? However, at the level of strategic vision, your risk management is a SWOT analysis”.

F1: “So with that, it is more of a mindset thing to work with. However, the foundation, when you have these strategic objectives, then the extra arguments go away because we have all agreed that we are all working to diversify the business. So, you cannot say I like it or do not like it. You only must be able to suggest how to make it better or worse. Well, there you go. Moreover, it also turns out that it is always a work of thinking because everyone seems to agree but tries to think within their internal attitudes”.

G1: “It is mandatory, at least not for all risks, but we indeed focus on a risk assessment system. There are risks like catastrophes and so on. It is all more formal. Now, these are primarily operational risks. We have many investment components, and we always have this issue because we have seen and experienced this risk, which the risk manager should have assumed. Moreover, it was not reflected in the risk map. That is why, so far, we do not see, and of course, it is up to the board to deal with these issues”.

L1: “The company's risk exposure is considered even when choosing a strategy. That is how vulnerable it is. These things are mandatory, but we can't because we work with risk; we have more risk than others because we accept them. We live with them, sleep with them, eat with them, etc. So, the risk is our everything, and underwriters are our everything. Without them, what are we? That is why it is imperative that risk managers participate and not just participate, but based on their analysis, we adjust our strategy. However, once a year, it is a team effort. The risk manager, the board of directors, the actuaries, the underwriters, the actuary, and the management board are involved. All these bodies are involved in such things. Then, decisions are made. Where to move, what to change?”

J1: “In my practice, insurance companies refrain from engaging risk managers to develop strategic objectives and strategies. The executive developed the strategy and approved by the board of directors. However, beforehand, the board describes what areas we are interested in. Therefore, the strategy of the executive body is developed within the framework of those directions announced by the board of directors. That is, risk managers and compliance are by no means involved in the development itself. However, they are involved. They take part in adapting that strategy. We check how legitimate it is, how feasible these or those initiatives are, and so on”.

E2: “Well, the next problem is the planning horizon. Building a planning horizon for three to five years in Kazakhstan is challenging, even if you are the general manager. If you have the full support of the current shareholder, everyone is looking at short-term

results, whether your portfolio has grown over the previous six months or not. How much did you profit from your core or investment business?”

M1: “Actually, strategy is driven by top management. The rest of the values, you know, they are declared, hanging in the air, but in essence, we are those men who, until the thunder rumbles, do not cross. Moreover, when we talk about the values of, let us say, risk management, they sound somewhere on the periphery. I have yet to see this in my practice. The values should be fundamental and permeate the company horizontally.”.

Participants also highlighted the challenge of avoiding the proportionality approach, i.e., when one-size-fits-all. They recognized a need for a differentiated regulatory approach to large and medium-sized organizations, to life and non-life insurers. Furthermore, some of them indicated that simple transfer of the regulatory methodologies that were designed for the developed countries do not fit the reality of the developing countries, potentially leading to the issue of compliance-based nature of risk management and the lack of strategic orientation:

M1: “The problem of the third world countries, in general, is that they are copying a specific path of the countries of the old and new world. Accordingly, all those external processes the third world country receives are de facto a kind of tracing. Moreover, often, it can be called with the prefix pseudo”.

J1: “Questions are still not just about unification but probably about individualizing capital requirements. For example, for companies engaged only in personal insurance, particularly health insurance, the current requirements are probably

excessive for their business. That said, it is not the first year or several years in a row that the issue of applying individual requirements to personal insurance companies has been discussed”.

The analysis of the documented strategies published on websites and in the annual reports revealed that insurers are similar in their approach to developing mission, vision, strategy, and values, promoting customer care and satisfaction, as well as high-quality insurance protection. Figure 4 represents the word cloud derived from the strategies published. I explored the strategy statements of seven insurers published on the websites and the annual reports. The word cloud generally makes no sense in the overall strategic direction toward values such as reliability, quality, professionalism, and transparency.

Figure 4

NVivo Insurers' Strategies



Concept 2: Human Capital

Despite the clear understanding that the qualification of the personnel plays a strategic role in any insurance organization's success, most participants declared the interconnection between risk management and HR strategies. Almost all the participants emphasized the gap in high-qualified specialists in every area of the insurance

organization, including the board of directors, risk managers, operational departments, actuaries, HR managers, etc.:

A1: “That is why the lack of staff and good competent specialists significantly affects the company's activity, especially the strategy because the same underwriters are off the market. They are also very few. That is, there are no competent specialists. Moreover, even today, there is a big problem with HR specialists. They sit everywhere nominally, and consequently, there is no HR, and there is no strategy, no human resources strategy, as development in this direction and weak, then, accordingly, the staff needs to be stronger”.

A2: “I have never seen HR turn in a risk report. They may do, too. It may not be publicly available, but the risks associated with personnel the risks associated with underwriting, including, for example, underwriting errors. Reports lend themselves to structural units where risk is assessed. However, based on those reports, the risk managers do their kind of report where there are assumptions on the mistakes and what kind of damage can be done. It happens. However, departments make reports and submit them to a risk manager; the risk managers make their reports and give them to the management. All these reports are prescribed by law. Our risk managers are overloaded with these reports”.

A4: “First of all, because there are only a few professionals, the universities trained, ready-made people. In other words, if a person who occupies a leading position leaves, his replacement will be generally complex because, for example, finding the same

good underwriter requires time. It takes months to find a person and, then again, months of training. When discussing risks, we cannot ignore that not all our company employees have a professional education. There are very few universities that train professional insurers. Moreover, the insurance company generally employs people from different industries”.

A5: “Here is the risk of loss, the risk of losing key employees, the risk of high turnover. It is a significant risk, even though many companies may need more attention. Not all companies have sufficient incentives to retain key employees, even though probably almost every company declares it. At least, I have seen over the years that there are no irreplaceable people”.

B1: “The company generally recruits qualified personnel. However, as far as I have encountered some difficulties; it is not easy to find highly qualified specialists, of which there are few in the insurance market. However, companies always try to take relatively honest, reasonably open, loyal employees who understand what is needed. Companies are trying, but only some highly qualified people like that. So, there are specific difficulties in finding them. Moreover, now many companies are trying to raise these people within the company”.

Interestingly, the two most concerning issues involve high turnover and work overloading. It is not surprising that most HR strategies concentrate on recruitment. However, the performance risks are those that put pressure on the personnel, are old-fashioned, and psychologically distressed. In that light, the accompanying fear, anxiety,

defensiveness, and resistance might shape the attitude to risk management practices and, in turn, support the prevalence of the compliance-based culture. At the same time, it is vital to constantly develop the personnel's qualifications and improve skills and competence as prescribed by the fit and proper regulatory requirement in Solvency II:

B2: "More people were used to working the old-fashioned way. A formal report was made, reported, and closed; even people cannot publicly present their report to an audience".

G1: "That is what I have seen in recent years, and it is striking because there are very few competent specialists. That is a big problem in the market, especially specialized ones like the actuary and the underwriter. It used to seem fashionable, KPIs, and so on. Moreover, often, there was much formalism. Words and actions did not go together".

J1: "That is when you can constantly improve the qualifications of your employees, and you reduce operational risks, you reduce the risk of errors, and so on. Thus, if your operational settings are right, you ensure your internal business processes work. Moreover, if internal business processes work, it means that internal controls work. Moreover, if the internal control works, then you also have, let us say, a minimal impact of external risks".

E2: "Because of this shareholder's expectation that our business grows, the attitude to the staff does not change; at least, the inflation rate indexes the payroll. Sort of economy of scale effect. Moreover, it is supposed that without automation, people start

working faster and increase their productivity. However, it does not work that way because there is a growing error rate. First, they do a quality job; then, they burn out because they are dissatisfied. Then, the internal audit service fixes those miscalculations and prerequisites, which were laid at the stage of formation of the strategy and budget strategy. Moreover, accordingly, people leave, taking with them all the experience, knowledge, and expertise, and we spend even more money in the short term”.

H1: “Still, it is close to ordinary people, but as a typical person, I understand them. They have their responsibilities now operational, and it turns out no one knows yet what will come out of it. Well, from the point of view of the ordinary human consciousness. Moreover, psychologically, of course, it is hard for people”.

The role of the board of directors is essential: It needs to be clarified about the differences between top-down and bottom-up approaches. Half of the respondents identified that top-down is necessary, but just a few mentioned that bottom-up is unsuccessful. The skills and composition of the board play a pivotal role and a factor in success. The nominal or formal approach to the board members' selection might impact the efficiency.

G1: “Here it is also crucial when the shareholder himself is active in business, when the board of directors is alive, when the reports are also alive and very informal, then when there are members of the board and members of the board of directors present at such directorates.”

The requirements imposed by the regulator on the board of directors, its composition, skills, and competencies are strong enough according to Rules 198. They will get stricter with implementing Solvency II, IFRS17, and the new ESG framework. Many depend on the composition and skills of the board of directors and their approach to the corporate governance and risk management system organizations.

The most controversial issue with human capital is that most of the participants identified the vital role of teamwork for better risk management:

L1: “To what extent do the employees feel like they are part of the team? That is the extent to which the atmosphere in the company allows them to, well, let us say, take that initiative. Well, I agree that this will only be accepted in some places. How to work, but here to raise this team spirit, that all in one boat, that if, as they say, everyone gets a bonus, then all also take away somehow. If this is instilled, people will be open-minded. Moreover, if there is a division, you are wrong, you are good, you are mine, you are not mine, but it will not be like that”.

Even with this, many admit that essential decisions and strategic planning are the board of directors' responsibility rather than ordinary specialists. Also, the teamwork, or groupthink effect, can play a role. However, it still needs to improve the knowledge exchange of risk information.

Concept 3: Poor Risk Knowledge Exchange

The description of how the three lines of defense models operate in insurance organizations provides insights into the knowledge exchange between the units and

people. Overall, the model is considered well-constructed and efficient. However, cross-case analysis revealed different perceptions of the effectiveness of this model between various units. Thus, the internal control units commonly admitted that there is no overlap in functionality and no issues with different accountability modes. In contrast, the operational units recognized that the top management identified.

Barriers to knowledge sharing involve *reluctance to share, lack of understanding, unwillingness to share, excessive workload, fear, lack of interactions on risks, and interpersonal conflicts*. Most respondents highlighted the competence to understand the importance of not keeping silent and sharing mistakes. The best practice recognized here is synchronizing the business processes and organizing an ongoing dialog between departments.

A1: “The subdivisions that report to the board, they are also involved in operational activities, and they are kind of so reluctant to share, well, their operational risks.”

A3: “There is an obstacle in the employees' lack of understanding. First is the level of employees' competencies. The most important thing is to convey to them the necessity because only they will know about these mistakes”.

A4: “The first factor is that some employees, who have great experience, are unwilling to share it. That is, they, maybe somewhere, do not want to grow competitors. This is a fear of losing their benefits. Many people keep their attractiveness because only he has this knowledge, irreplaceable, and so on. The second factor, in principle, can also

be attributed to human factors. These are different levels of motivation of employees. In other words, we are talking about the fact that not all people are equally willing to accept any additional workload in the form of mentoring. I always find it easier to say no and say let us abstain. So, he does not want to take any responsibility because he first fears, and it is easier to say no because he is not motivated. Moreover, probably the third one is just some bad communication in the company. These are some interpersonal conflicts when people work from now to now”.

B2: “In other words, we actively discuss risks, consequences, and forecasts within the framework of these committees. In other words, we have long moved away from just formal reports. Indeed, we are now encouraging all our employees to study the material in depth. Earlier, we used to put a tick in the risk profile if only to be positive. We are looking at changing this negative or tick no to yes. We are doing much work; the whole market is working”.

C1: “But not to torture people with these formalities; we are just asking what problems you face. Where do you see things that could go wrong? Where can we lose money? Such simple questions like that, not like formal risk management, but understanding that they must be so people are not afraid to identify risks. The questions are asked in a neutral form. Then, they get together at the management level, analyze them, make a small action plan, and adjust some things. Of course, risks are taking place all the time. They are revealed during various inspections and business operations.

Nevertheless, there is a warning system, as if to say, when a person sitting at his workplace can say what can go wrong. Or what goes wrong? Yes, it works well in principle. Our company's risk management system is very much not formalized”.

F1: “The first thing I wanted to say is that we have a regular exchange of information at the level of the entire company, that is, a person telling others about the work of his department, telling others how the actions of others can affect him, and it helps him think about it. Moreover, the second thing we have done is to go directly into each unit's processes, which are synchronized with other units so that the work of one does not interfere with or cause difficulties in the work of another unit”.

M1: “Risk manager often collects information from the back office of the part, some statistical reports, but not directly from the sellers. So, he gets some average temperature of the hospital. Moreover, some things, such as subtle things important in risk management, are generally collected from sources other than those on the front line”.

Training practices are relatively weak. Many participants emphasized the formal approach to training as it is conducted when required by law. Several initiatives were developed explicitly by the regulators on compliance and actuarial education. However, some respondents noticed that internal training is vital to corporate development. The best practice here is to maintain its internal training academy, aimed at the initial and professional education of the employees, but it is rare. However, the effectiveness of such training still needs to be questioned as there is still a need for more professionals and

competencies in the market. It is also noticed that some participants need clarification on understanding knowledge-sharing with training.

A1: “Well, within the company, any process, for example, from the compliance side, if any legislative requirements are updated, something is introduced, any changes in the legislation, then we conduct training, bring it to the department's attention. Sometimes, we tell them which processes, how to implement them, and how to minimize the risk of violating the law. Similar processes in part of training shall be introduced on the part of risk management service”.

A3: “People say that we need more training; it is like this necessary regulation. The training in the part that maybe the motivation or something should be in people's heads a little bit to switch to the fact that it is not bad, that it is the other way around”.

B1: “Each listed professional has a certain set of requirements that they must meet. They must go through training. That is, compliance officers are trained in the AML laws. The risk management service also must undergo training on an ongoing basis. This is training provided by the company, but the training is targeted. Now, the regulator also puts much effort into training these specialists so that enough are on the market. These are internally trained people.”

C1: “So we train our staff not to keep quiet if something happens. We do not have a punishment system if something happens. Yes, everything is done to ensure that people do not hide information and always know what can go wrong with a new product or

project. We sit down, and one question is, what can go wrong? Where can we have problems? Do you understand or not? Moreover, this is informal risk management”.

F1: “Generally, we have a system where employees can access risk records. That is, if he sees some issue in his position. He thinks that it could be a risk, or it is, for example, a deviation from the standard process, and sometimes, he works with our system of contracts. He sees that he administers the contract according to the standard process. Still, in some situations, that is not standard according to the process and cannot be processed. Furthermore, he needs to know how it could affect the reporting on some of our other indicators. We have been informed that when a situation like that, you fix that, it is a risk. We have an IT system where a person goes in and fixes that risk. That is it. We have yet to determine if it is a risk or not a risk. The employee thinks it is probably a risk, and he fixes it”.

G1: “Well, in-house risk training is essentially nonexistent and irrelevant. I do not even know. It still depends on the company's scale, experience, some very active activities related to reinsurance, and some such risks, just significant insurance risks”.

G2: “If we talk about the underwriting risk, the underwriting practitioners are obliged to have training in one or another class of insurance and in the priority areas of the company, which are of interest to us within the framework of the company policy on the insurance market. So, people should understand how risk is assessed, how primary underwriting is done, and how specialized underwriting is done”.

H1: “State bodies; when they set up in terms of compliance administration, we have entire training assignments. It is usually like a corporate portal where people take tests, including on risks. However, in general, the extent to which it is beneficial is only, you know, like mushroom rain when you need good rain for the harvest. It is kind of like that”.

L1: “I think a little training is being conducted, but that is why I have already outlined that it could be more interesting. If there will be training, there must be interest. However, there is no such interest. Well, this is my understanding. We generally have such a situation on the market. There would be more, but they are just not willing. Moreover, to conduct is a waste of time if there is no desire. Well, you know, to want and to oblige. I mean, they are different verbs”.

M1: “Well, the concise answer is simple. No, it is not being conducted”.

The good practice here is to ask people to fix the risks every time and everywhere without fear of punishment. Specifically, one participant mentioned the cloud-based solution to fixing the risks even before a specialist identified any case as a risk. The general idea is to fix it on a common platform and communicate across the organization.

Finally, the role of internal auditors and risk managers is significant in enterprise risk management. Participants believe that internal auditors must participate in the operational units' activities, even indirectly but in the way of recommendations to some before the risk occurs. The role of internal audit is recognized as a post-factum declaration of the risks and issues that already happened with no value added. The role of

the chief risk officer is more blurred as most interviewees admitted the risk professionals' reporting nature, which is hardly connected with normal operational activities. They must introduce this risk system, a risk-oriented approach through the system, and create the criteria to assess risks.

G1: "It is when the internal auditor is subordinate to the holding company. In other words, the board of directors is there, but they have an informal grouping in the holding company where they share their methods and vision".

B2: "Risk managers must first be very knowledgeable about the legislation. He must be very well-versed in the specifics. He must report to higher supervisors on time the degree of risk or the impact of this or that risk".

F1: "The role of the head of risk management in the decision-making process - a key to his qualifications, position, and decisions, depends on the definition and assessment of risks. There are not many experienced risk managers in the insurance industry of Kazakhstan, and if a particular risk manager has experience and qualifications in risk management (unless he was in this position formally or semi-formally to meet the regulatory requirements for this position), risk management experience should be respected".

H1: "A risk manager must get up from his chair, go to the Almaty branch, and sit down with some sales managers. Moreover, to show them how to explain and help so that he would automatically move on. This is important. Such moments. Of course, it may be

methodologically wrong that it lacks consistency and scale, but it is a small victory.

Furthermore, to move on”.

E2: “It is still quite formal or passive. Even now, ten years after introducing risk management, it is more perceived as a formal position. The regulator's role is reporting, interacting at best with the board of directors, and compliance. However, I do not see any way to react to some external factors or internal incidents daily. Moreover, that would be very useful. Collect and accumulate this information, process it, and present it transparently. This would be very good. Unfortunately, the formal side of risk management was confirmed here”.

M1: “Because if we take the things that a company's risk management is supposed to analyze, those are the things that. There is a reason why risk management reports to the board of directors. These are strategic things that should be critical, and timeliness is essential here. That is, to refrain from starting these processes to such an extent that it could threaten the company itself. Moreover, when we are talking about some forms of reports, stress tests, which are done on the knees, and at the same time, the figure of the risk manager, it is often controlled, even indirectly, by some operational managers; this blurs the picture and, accordingly, the very meaning is lost. Moreover, it is considered that we often have people on the Board of Directors who fulfill our regulator's requirements. That is, it is not a BOD as such. Some guy was lucky enough to become an independent director and get an excellent salary for being on the website. So, there is a problem here from the bottom and the top. It goes something like this”.

Concept 4: Proper Risk Assessment

Generally, insurance professionals estimate the level of the risk assessment as average. They admitted that the risk appetite statement is a tool to communicate the strategic direction of the business. Risk managers and actuaries calculate the margin, net assets, and other financial ratios necessary to estimate the monthly net retention per risk underwritten by lines of business. Then, the information goes to the Board of Directors, who decide on the risk appetite figures. Finally, the risk appetite is circulated to the operational units as mandatory for performance. The procedure is well described in Rules 198. However, I did not find the expression of *risk appetite* in Rules 198; the rules indicate merely establishing transaction limits and restrictions. Participants stated the importance of the competencies and skills of top management to set strategically appropriate statements. Specifically, to communicate the statements and goals.

A1: “Top managers should be able to build the organization's goals strategically, taking into account the described risk criteria, and the departments working with clients should be able to communicate the possible risks in cooperation with them appropriately.”

A3: “Somewhere at the management level, it is when you are developing a strategy. And then the communicating, that is where it is more complicated as a rule. However, I have seen that they need to bring it up. They do not bring it down. At the management level, they understand some things, and there is no such practice of sitting there with an employee and explaining the strategy to him”.

A4: "Top management is a kind of liaison, and they may discuss this information at their level, but it comes down to me in the form of ready-made decisions."

The information assessment was based on past periods. Furthermore, most of the information is quantitative. Participants experienced difficulties expressing the risk appetite for catastrophic or reputational risks requiring qualitative components. The risk criteria are highlighted in table documents and visuals like questionnaires, risk profiles, risk maps, and stress tests. Thus, due to the quantitative nature of the reports on risks, some participants indicated the need for more automation and the pressure on the personnel involved to comply with all these reporting activities.

A2: "There is also a little bit about risk in-depth there. However, overall, some lighthouses ahead are indicated for all employees of companies. Moreover, everybody roughly understands why this kind of underwriting happens at some point, why we look at some things more loyally, and some things we look at more harshly. However, it is weird that it is kind of like some documents guide us, but they are all formed based on past periods".

B1: "There is a small quantity of a gap in this area. This gap has to do with the lack of specialists in this field. I am coming from my own experience. Several specialists monitor risks in a company, for example, compliance risks, legal risks, and the risks that internal auditors monitor. They somehow still work more in their direction. Some related risks cover all these areas, but this is my opinion. It is still more of a disjointed rather than unifying work".

L1: “So first, there is work with the portfolio based on the objectives, and then there is an analysis of the portfolio and its susceptibility to catastrophes. If exposed, it needs protection, diversification, or something else. This is how one should initially understand the risk appetite, but it is not easy. However, it is all post factum”.

E2: “And a very little flow of information rapidly as this river enters the field and spreads out to the lower layers. Because the flow of information only reaches at a time. The general manager, I do not know if it is being broadcast from the top there. Sometimes decisions are made very subjectively, in some human beliefs”.

H1: “The risk managers write their recommendations and indicate in the reports the action plan. It is a work in progress, but on the other hand, we were heavily influenced by the disconnect between automation and the rest of the processes. Moreover, it caused a small quantity of psychological fatigue for all the employees; it has a significant impact on the fact that we have a lot of operational risks in connection with this. We need to clean up the basic principles and causes. That is to fight not with fire but with the causes of fire here. This gap is still there. It is 2023, after all”.

E2: “I would say that if risk management is not automated, we can say that it is not controlled because there is the human factor everywhere; there are gaps in the delivery of information, its assimilation, and further application of information. Even if there was high-quality, detailed training, but no checkboxes at the entrance, some violations will likely slip through”.

Operational units need help describing how precisely the risk appetite statement is communicated across the organizations. Most participants indicated that in terms of risks, there are many surrounding only the AML legislation as the requirements here are high. Furthermore, the role of the risk management function needs to be more defined within the structure. Most respondents highlighted the risk management unit as a *reporting function*:

A2: “So they generate reports all the time, they get reports on risks from all the departments, they analyze them, and they see the risks.”

A3: “Risk manager reports and does reports. The Board of Directors sits there, listens to their reports, and accepts”.

H1: “At the moment, risk managers are only listened to through the prism of numbers, more so, only through the prism of numbers.”

J1: “Accordingly, first, the level of risks is divided into layers where more people participate. The more risk, the more people participate in the acceptance of risk. Furthermore, accordingly, all this together gives an adequate risk assessment system. Moreover, consequently, it gives the capital an adequate burden. We use capital to take risks. So, if we have such a system of risk analysis and acceptance, the role of the risk management director is leveled because there are actuaries and everybody else besides him”.

Many participants indicated that the risk appetite of their employers is relatively moderate and conservative or even low. Uncertainty and the painful nature of claims are the factors influencing that.

F1: “The second is that claims payments are tied to inflation; they must be adjusted annually for inflation. Furthermore, in Kazakhstan, inflation is more political than fixed inflation. It only sometimes corresponds to the real one. Moreover, there is a risk that no one will know how it may change; this is not predictable”.

E2: “This is an awareness of the role of risk management, first, by risk managers themselves. That is not satisfied with a rather formal function, or their position will be more productive, let us say. Moreover, they will go into the business daily and do more than just the formal reporting. Alternatively, they will develop programs and new products together with the sales department to feel the mood in the world, the trends”.

Concept 5: Risk-Aware Culture

The risk-aware culture was the most controversial and difficult-to-explain theme. Many needed clarifications on the topic with the corporate culture and spoke about teamwork and like-minded spirit. However, some participants identified that a risk-aware culture comes top-down from either shareholders or management boards. The undoubted understanding is that clear communication and trust are the keys to achieving a risk-aware culture. Although most participants admitted no conflict of interest in operating the three lines of defense model, the potential conflicts lie in interpersonal interrelationships.

A1: “When it comes to culture, as I understand it, there should first be an interest from the management or the shareholders. Nevertheless, what is very important here is the trust of the management, like recognition, so that it is all with respect so that your work is not written off. Suppose management understands that, supports it, and appreciates your work and status.”

A2: “The company forms its own culture. As I see it, I do not think I am a risk manager, or they may have more experience in this respect. As I see it, the company has goals and objectives, and there are all the tools for that now. The main thing is that there is a desire to use them. No, the risk culture is there, but not everywhere. I mean, there are companies where it is downstream.”

F1: “So we work, again, always based on our strategic tasks and our internal culture that we say that we can, even if you are a professional, you still cannot behave with others like that wrong because you are the one with the KPIs. Moreover, that is the basis on which we have the following conversation. We came to the point that you need to communicate with each other more often, to talk, and not just get into a formality, who wrote what, to whom email. Emails are necessary, but periodically communicate. It is a thing; you cannot prescribe it with a process. It is just these kinds of regular meetings, conversations, and communication that must solve it. That is the culture because that is what we do. We are saying to talk more clearly about processes, write and go. On the contrary, we are in favor of us talking more often. Furthermore, it is distracting and sometimes time-consuming, but it helps us better understand each other”.

J1: “Secondly, you must build the right corporate culture to retain these people. What is the right corporate culture? It is clear rules of the game. It is clear what is required from the employee and how and what he will get for it. It is unnecessary to communicate to employees why we do it, why we must work for it, and come to work every day. It is a story we understand. Accordingly, that story is an important one. Moreover, when you can establish this process, you will have, shall we say, an appropriate environment. You will have a team that can launch products harmoniously”.

Investing in a risk-aware culture is under no demand, as there are no specific items in the insurance organizations' budgets. The most challenging part is predicting strategic goals like a risk-aware culture due to short-term planning horizons, which most top managers prefer to follow. Furthermore, due to the compliance-based nature of the risk management practice, boards, and management will likely only change the situation once there is a requirement to invest in a risk culture prescribed by the regulator. However, none of the participants mentioned that there might be an extended model for risk governance, including the regulator and external auditors, as the fourth and the fifth lines proposed by Ashby et al. (2019). However, the formal approach to risk management practices provided a clear understanding that the regulator is already a part of the model.

Summary

This chapter represented the research settings, participants' demographics, data collection and analysis methodology, and the study's results. Overall, the answers to the research questions provided a clear picture of the risk management system and the

practices that insurance professionals use. The five emerging concepts include: (a) compliance-based culture, (b) human capital, (c) poor risk information knowledge sharing, (d) proper risk assessment, and (e) risk-aware culture. These concepts might be helpful to explain the further actions and improvements the insurance professionals can apply in their operational and strategic risk management practices. I explain the application of these concepts in terms of the general systems and other supporting theories in Chapter 5. Chapter 5 describes the study's results to contribute to the existing knowledge and literature. Chapter 5 interprets the study's findings, recommends future research, and discusses the study's limitations and potential social change implications.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative multiple-case study was to explore the insurance professionals' use of best practices like: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements to manage enterprise risk. ERM practices depend on strategic decision-making and how organizations interpret the risks (Andersen et al., 2021; Hoskisson et al., 2017). The target population of this study consisted of a purposeful sample of insurance professionals involved in the ERM processes in Kazakhstaniaan insurance organizations. This study used the explanatory multiple case studies approach and 18 interviews to investigate the insurance organizations' current position and people's experience triangulated with publicly available external and internal artifacts. This study intended to identify how the current risk management practices of the insurers shape the system and its five essential principles within the GST and other supporting theoretical and empirical literature.

The thematic and concept analysis revealed five major concepts that influence the development of the risk management system in the insurance organizations in the country, including: (a) compliance-based culture, (b) human capital, (c) poor risk knowledge information sharing, (d) proper risk assessment, and (e) risk-aware culture. The emergence of these concepts allowed me to identify the potential improvements insurers might apply to impact positive social change in the industry and national economy. Chapter 5 provides the interpretation of findings, limitations, recommendations

for future research, implications of the results at organizational and national levels, and conclusion.

Interpretation of Findings

Overall, the study's findings confirmed knowledge of risk management practices in the peer-reviewed literature. The study also extended the knowledge by applying the GST (Bertalanffy, 1956) and its six basic principles: congruence, adaptability, internal interdependence, emergence, equifinality, and feedback loops. The overarching research question for this study sought the answers to how do insurance professionals apply: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statement in enterprise risk management. The emerging concepts organize the interpretation of findings, their implication to risk management practices as indicated in the research question, and the theoretical explanations of the phenomena found in this study.

Compliance-Based Culture

The compliance-based culture prevails in the risk management practices of insurers. Insurers concentrate on their regulatory and solvency risks (Essert, 2020) and consider risk management a compliance issue (Hoffman & Scordis, 2018; Ozdemir, 2021). Although the risk-oriented approach is announced, rules-based regulation dominates risk management systems. Within a compliance-based culture, risk management's strategic importance is difficult to recognize (Arena et al., 2011). The regulators impose requirements on every aspect of the risk management practices,

including strategy, risk appetite, and governance framework (compulsory three lines of defense). Internal and external auditors and rating agencies also mandate many prescriptions that, in case of underperformance, lead to downgrading and worse reported results as auditors and rating agencies today pay attention to ERM practices (Ai et al., 2018; Fiol, 2019; Hoyt & Liebenberg, 2011). This study recognized risk management as a formal function primarily aiming to fulfill regulatory-prescribed reporting duties and comply with regulatory requirements (Ozdemir, 2021). Economic uncertainties add complexity to the appropriate strategy selection, performance failures, and low-risk appetite that ignores the opportunity side of the risks and considers risks mainly as a threat (Ashby et al., 2019).

Solvency II implementation might cause issues. On the one hand, the study results confirmed that the insurance industry is still being prepared for such complicated model implementation due to the knowledge gaps, human capital risks, socio-economic context, and formal reporting nature of risk management (Bešter, 2015; Hoffman & Scordis, 2018; Morgunova & Bolkina, 2020). On the other hand, implementing ERM practices included in Solvency II principles might improve operational performance and strategic decision-making (Eckert & Gatzert, 2018; Santomil & Otero-González, 2020). Such contradiction requires a specific approach to regulation and many trade-offs between the regulator and the industry. Also, the study results confirmed that a similar approach to risk management should be avoided. The Solvency II Directive and COSO Framework have significant downfalls with the one-size-fits-all principle, keeping a homogeneous

framework for all organizations. The regulation should consider the size differences and complexity of the risks the insurance organizations in the country possess (Eling & Pankoke, 2016; Siri, 2017).

The study participants needed to recognize the strategic purpose of risk management, supporting some research describing a weak connection between strategy setting and ERM framework (Altuntas et al., 2021; Krishna Govender & Hassen-Bootha, 2022). Nonetheless, adverse side effects of the Solvency II regime, such as bureaucracy, additional capital needs, complicated calculus, models and procedures, and over-demanding reporting, were confirmed by the study's results (Bešter, 2015; Dzięcioł, 2017). The participants also highlight strategy development as a compulsory procedure required by the regulation and board of directors. In system terms, such a formal approach may lead to one of the archetypes called *fixes that fail*. A systemic pattern based on bounded rationality with its limited knowledge base leads to policy resistance, pulling the system stock towards various goals (Meadows, 2008). If this happens, shared strategy development and implementation requires harmonizing the goals within the systems.

Compliance-based culture might hinder effective risk mitigation and sustainability (Bednarek et al., 2021; Bhatnagar, 2021). The holistic response to strategic and operational risk management as prescribed by academics (Agarwal & Kallapur, 2018; Andersen et al., 2021; Ashby et al., 2019; Bohnert et al., 2019) can be blurred due to the lack of integrity and silo-based traditions among various practices used (Ai et al., 2018; Hoyt & Liebenberg, 2011; McShane, 2018; Ogutu et al., 2018). The traditional risk

management practices may limit the potential the employees might explore to mitigate the risks because of the lack of initiative within the prescribed framework, fear of punishment, and the defensive nature of risk management. The study also confirmed the formative stage of ERM development in insurance organizations (McShane, 2018). As such, the knowledge gained through the management of the risks and, therefore, human capital plays a vital role in insurers coping with a holistic view of the current ERM practices (Bakos & Dumitrascu, 2021; Liff & Wahlström, 2018).

Human Capital

Solvency II will impose the fit and proper regulatory requirements on the human resources of the insurers (Siri, 2017). However, human capital is a stock in the system term, which is not static and changes over time, influenced by the impact of a flow (Rutherford, 2019). This study confirms the gap between the HR strategy and enterprise risk management as in Royal et al. (2014) with the urgent need for human capital risk systems in the insurance industry, including risk HR risk framework, knowledge transfer mechanisms (Gerstein et al., 2016; Lengyel et al., 2019). The study confirmed the existing knowledge that human capital is scarce in the insurance industry; thus, the HR risks need to be lowered, including high turnover, lack of specialists, and knowledge gaps.

The study confirmed partially that auditors' scrutiny creates an adversarial relationship investigating the three lines of the defense model (Zeier Röschmann et al., 2019) and that potential conflicts, including the principal-agent nature, may develop

biases toward others' decisions and personal relationship conflicts may add to the issues (Hoskisson et al., 2017). The study results do not confirm the importance of the first line or linear management as described by Andersen et al. (2021), but stress the efficiency of communication between the lines, as explained by Vousinas (2021). The participants put little emphasis on the understanding that risk decisions must be consistent with the strategy (Ashby et al., 2019). Furthermore, this research confirmed the defensive nature of risk management practices supported by fear of punishment, anxiety, and resistance shaping the corporate structure, culture, and processes (Vousinas, 2019). Overall, the three lines of defense model, even admitted as efficient by the participants, merely reflects the compliance-based culture prevailing in the market.

The most contradictory attitude is found between participants in the training and learning processes. Many admitted the importance of risk learning and highlighted the compulsory and often useless nature of training that needs to confirm the importance of effective team learning (Koeslag-Kreunen, 2018) and leadership (Wibowo & Hayati, 2019). However, the participants explained the role of the Chief Risk Officer (CRO) in the process, their qualifications, and, specifically, their mastery and self-confidence as prescribed by Senge (2006). The study results confirmed the positive impact of CRO expertise on effective risk management strategies and performance (Bailey, 2022; Ozdemir, 2021). Within the operation of the three lines of defense model, the participants emphasized the role of the CRO and supported the idea that the position is respected. However, there was no support for the literature's findings that the CRO's hierarchical

position and dual reporting nature might involve challenges (Arena et al., 2011; Ashby et al., 2019; Kaplan & Mikes, 2012). However, perceiving the risk manager's role as a reporting function is the most challenging. Therefore, the knowledge transfer mechanisms from the reports to the fundamental actions might be investigated.

Poor Risk Information Knowledge Sharing

In system terms, information is a flow. Due to the intangible nature of flows, people tend to focus on the stocks rather than the flows and the inflows rather than the outflows (Rutherford, 2019). The study results confirmed that the information asymmetries between the lines worsened by the principal agent conflicts and subjective biases might lead to inconsistencies and ineffectiveness of the three lines of defense model (Bantleon et al., 2021; Hoskisson et al., 2017). The effectiveness of the risk information sharing might be addressed by fixing every mistake and potential threat without fear of punishment and defensive behavior. In addition, the continuous dialog within the organization and the role of internal control functions is highlighted.

Barriers to knowledge sharing are confirmed in the study and include a low level of understanding, quality of the transmitted information and transmission channels, face-to-face interaction, language barriers, and the context in which the knowledge has been shared (Alrawi et al., 2013). The context in which knowledge of the risks is shared brought the study's results to the practice when risk management is linked to the corporate strategy prescribed by Senge (2006) that an organization must set up a shared vision and creative tension, which is the slight shortage of knowledge. Creative tension

can also be developed within the risk culture the insurers develop as an instrument mediating the adjustment of regulatory requirements with the firm-specific context. Regulatory authorities have a growing interest in the risk culture concept that should be embedded into the organizational culture of an insurer.

Although easily identified by the participants, the risk appetite formation process establishes mainly the amount of risk the insurance organization is prepared to accept. However, the risk appetite statement links to strategic objectives and long-term plans. Furthermore, no links were identified to other stakeholders, such as customers and society. Also, insurers use pure quantitative risk appetite statements; there should be qualitative indicators in the risk appetite statements in most cases. The insurers limit themselves in allocating scarce resources, except probably capital allocation, and must manage other stakeholders' expectations to provide healthier and more responsible growth (de Villiers Getz, 2018; Fiol, 2019; Hoskisson et al., 2017). The risk appetite statement should go beyond the logic established by the board of directors; however, it depends on the board's composition, experience, and skills (Gontarek & Belghitar, 2018; Yap Kiew Heong & Teng, 2018). Risk appetite and tolerance must be expressed relative to each strategic objective (Fraser et al., 2022). Adopting governance and compliance logic focusing on threat mitigation only (Ashby et al., 2019) might lead to misconceptions and misunderstanding of the risk appetite statement's purpose across organizations. Risk appetite might be expressed as a feedback loop, a control mechanism

at work creating the behavioral patterns to raise or lower stocks or keep them within an acceptable range (Meadows, 2008; Rutherford, 2019).

Proper Risk Assessment

The study's results demonstrated that the enterprise risk management practices of the insurers were based on past outcomes and did not consider the dynamics of risks (Acharyya & Brady, 2014). Although the participants admitted the critical connection between corporate strategy and risk management practices, most confirmed the gap between HR strategies and enterprise risk management framework as identified by Royal et al. (2014). Furthermore, the results revealed that risk information sent to the boards was merely quantitative in nature. However, the current research emphasizes that the qualitative information required for strategic decision-making is vital (Stoel et al., 2017). The bounded rationality required for a systemic approach is sometimes missed in such cases, as there is little basis for making reasonable decisions according to such scarce and incomplete information (Meadows, 2018).

Participants highlighted that strategic decision-making is a privilege of the board of directors if their role is not nominal; in that case, top management is responsible for strategy development and decision-making. The resource-based view (Barney, 1995) assumes strategic control includes accumulating resources, setting up the barriers constructed of those resources, and keeping the flexibility of such resources (Krishnaswamy, 2015; Zhang et al., 2010). Insurance organizations need help managing human capital. Learning practices existing in the market need to be revised.

Risk-Aware Culture

In contrast to the compliance-based culture, a risk-aware culture is the most desired but hard to achieve. I noticed that most participants needed help answering the questions about risk culture. Most of them confused risk culture with corporate culture. Many participants disagreed that risk culture might be a reason for the 2008 global financial crisis, as Power et al. (2013) investigated. Solvency II envisaged the development of a proper risk culture within the regulatory framework (Kunz & Heitz, 2021). However, the local regulation in Kazakhstan does not assume a risk-aware culture required for effective ERM (Ashby et al., 2019; Weston et al., 2018); instead, the regulator embedded the understanding of the risk-oriented approach that, in principle, contradicts the development of an authentic internal risk culture.

Fear and following defensiveness, anxiety, and resistance shape insurers' corporate structure, culture, and processes, trying to avoid unknown or uncomfortable situations (Morgan, 2006). The same goes for unresolved anxiety issues; they lead to cultures full of tension. Unconscious patterns that organizations want to avoid are instead subject to different cognitive-behavioral treatments that allow individuals to overcome fear, anxiety, and stress (Ducharme, 2004). ERM changes culture, promotes open discussions, and considers stakeholders' ideas (Fraser et al., 2022). However, in Kazakhstan, it is separated from the risk management practices of insurers as soon as the formal nature of risk management reporting prevails. The purpose of risk culture in ERM is to establish context for decision-making (Ashby et al., 2019; Bharathy & McShane,

2014; Weston et al., 2018; Wong Ching Ching et al., 2021). However, economic and political uncertainty plays a role, making establishing such a context complex and threatening the sustainability of the economy and the insurance industry. Therefore, overcoming the complexity of managing enterprise risks in insurance organizations requires systemic thinking.

Limitations of the Study

At the proposal stage of the dissertation, I described the limitations, including the need for more understanding of the topics discussed and the fear of answering honestly. I stressed that we were discussing general market practices and issues. Thus, participants could align their experience with something other than the organization they worked for. Another area for improvement might be an overall misunderstanding of the topic by potential participants and their resistance. Generally, I found no resistance to answering questions; in contrast, participants shared the knowledge they possessed quickly, and I noted their interest and desire to discuss the questions and issues. Thus, the abovementioned limitations were not observed. Overcoming the narrow focus of the study, I extended the overarching research question to the five broad topics, including: (a) fit and proper regulatory requirements, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements, I conducted detailed and thorough interviews, and obtained the extensive materials to analyze.

The relatively modest scope of the study imposed the application of several techniques to overcome potential issues with dependability and transferability, such as (a)

sample-to-population extrapolation, (b) analytic generalization, and (c) case-to-case transfer (Prabhu, 2020) and meta-analysis (Dooley, 2002). Thus, to address potential transferability issues, I included in the sample population different functional specialists to provide a broader perspective on the issues. I analyzed the questions within and across the cases. Furthermore, as highlighted before, the insurance industry is much of a global nature; therefore, the comparison with the existing research and theoretical background, such as the general systems theory's analytical generalizability (von Bertalanffy, 1956), allowed me to achieve greater generalizability. This study might be replicated in any other country.

Recommendations

Overall, this study covered such aspects of risk management practices in insurance organizations as ERM adoption, ERM implementation determinants, ERM adoption's effects, and others (Anton & Nucu, 2020; Crovini et al., 2021). However, some aspects might be explored further. The limited amount of existing literature and the findings in this study might encourage separate research to explain and investigate the reasons for poor ERM adoption and development in insurance organizations, such as risk culture, motivations, informal risk management, personal attitude to risk-taking applied to strategic decision-making, learning, and risk knowledge development, and the effect of Solvency II implementation in the long-term period.

Risk culture, although investigated in this study, needs in-depth separate research concentrating on the roots of weak risk culture, the factors that influence the risk culture,

and the relation of the specific risk culture and other external conditions like political, economic development, the life-cycle position of the industry, and resources to be explored to improve risk culture. Although some research revealed that it is possible to switch from a compliance-based culture to a cognitive risk-aware culture (Agarwal & Kallapur, 2018), such examples and studies are rare. Furthermore, as systems are not static but dynamic (Meadows, 2008), longitudinal research might be appropriate to explore the same risk management practices within five, ten, or longer years periods.

The remuneration approach based on the effectiveness of the risk management system and practices is separate from this study. Although some participants identified the motivation to manage risks properly within insurance organizations, they admitted that the remuneration system has no significant impact on the effectiveness of the risk management system operations. Future research might investigate the effect of the controlling system, metrics, KPI, and remuneration on the efficacy of the risk assessment and mitigation systems. The alignment of risk management, HRM, and corporate strategy based on the ability–motivation–opportunity (AMO) model (Appelbaum et al., 2000), a concept in strategic human resource management (SHRM) built on the expectancy theory should be studied to identify the best HRM practices leading to higher performance and greater motivation to implement the effective ERM.

As Ashby et al. (2019) described, informal side risk management might be explored separately. Collecting all potential information, automation, and digitalization of risk assessments is a new paradigm that has evolved in risk management practices.

Communication of risks is admitted as a vital part of the risk management practices within this study. Furthermore, risk communication determines successful ERM implementation (COSO, 2017; Hoffman & Scordis, 2018; Schroeder, 2014). Specifically, the communication by the boards of directors with the rest of the organization while making strategically essential decisions plays a role. The compliance-based culture recognizes the top-down approach as a potential weakness (Krishna Govender & Hassen-Bootha, 2022). However, it is necessary to ensure that everyone within the organization understands the risks (Andersen et al., 2021).

A specific topic to be explored is the learning and risk information sharing within the insurers' teams to create collective knowledge and personal mastery in risk management. Treating an organization as an open system emphasizes that every stakeholder has the power and opportunity to influence an organization and the risk outcomes accordingly, which might emphasize the stakeholder perspective application (Ackoff, 1970, 1974; Buckley, 1967). It was beyond the scope of this study to investigate the personal attitude to the risk and its impact on decision-making. Moreover, the different attitudes to the risk may also be a source for disagreements between the three lines of defense. For instance, risk-averse people have different perspectives on risk than risk-takers. The potential problems with the three lines of defense model in insurance organizations discussed in the literature involve risk culture, incomplete integration, strategic misstatement, defensive nature, subjective biases, and groupthink (Hoskisson et al., 2017; Zeier Röschmann et al., 2019). Although the groupthink issue was not

confirmed in this study, there is a potential impact on how standard and shared mental models might impact the effectiveness of risk management practices. Therefore, groupthink, subjective biases, interpersonal conflicts impact, and consequences might be an exciting topic for future investigations.

Finally, Solvency II is a regulatory regime implemented in the European Union in 2016. Admittedly, it is a regulation appropriate for developed countries with relatively stable political and economic positions. The insurance industries in developing countries might encounter difficulties or even discrepancies once such a regulatory framework is embedded. The reasons identified in this study involve short-term planning horizon, continuous moving of specialists, specifically top management, from organization to organization, and the skills and competencies of the boards of directors to envisage, align, and invest in long-term strategic development and risk management. Contradictions in the existing literature explain that the European Solvency II regulatory regime requires a more risk-averse approach to operational management, which may lead to a riskier business strategy in the long run (Müller, 2018). Such contradictions aggravate even more complex challenges to risk mitigation strategies of insurance organizations. The situation worsens regarding the developing economy with unstable environments and no possibility to predict long-term outcomes. Future research might provide a comparative analysis of the regulatory requirements impact on the overall development of the insurance industry in different countries.

Implications

Positive social change emerges with the development and sustainability of the insurance industry in the country, as described by Xie (2022) and Kaserer & Klein (2019), through strategic risk control (Porter, 1979). A practical understanding of the efficacy of strategically significant practices in enterprise risk management and their appropriate, timely, and efficient use makes the potential social change inevitable (Acharyya & Brady, 2014). Insurance organizations might reduce or diminish the risk of failures by considering possible worst-case scenarios for extreme events by proactively evaluating economic, social, and environmental effects and preventive measures (Bhatnagar, 2021; Krishnaswamy, 2015). Therefore, positive social change comes with appropriate and effective risk management practices in every insurance organization and industry.

The improvements might come from understanding how systems operate and what steps to undertake for such improvements. Compliance-based culture demonstrates the adaptability principle of the systems theory. However, compliance-based culture contradicts the systems theory principle of equifinality. Meadow (2008) described the archetype that requires strict regulation in case the resource is shared. However, von Bertalanffy (1956), explaining the principle of equifinality, explained that for open systems, it must be something soul-like that contradicts the laws of physics to maintain the system equilibrium. A compliance-based culture might be changed to a risk-aware culture by using a system-thinking approach (Agarwal & Kallapur, 2018) by adding other

operational layers to the three lines of defense model (Agarwal & Kallapur, 2018) and attracting regulator and external auditors as fourth and fifth lines (Ashby et al., 2019).

However, what is the systems thinking approach? Inspired by von Bertalanffy's (1956) systems philosophy, the holistic view of the risk management system might identify risk management in insurance organizations as a conceptual abstracted system with the system's dynamics involving the interplay between different professionals who manage the various enterprise risks by their functionality. Meadows (2008) described three characteristics of a well-working system: resilience, self-organization, and hierarchy. Resilience is the ability of an organization to recover and restore after turbulent times or events. Self-organization is an ability to learn, diversify, complexify, and evolve. Hierarchical systems evolve from the bottom up. The purpose of the upper layers is to serve the purposes of the lower layers (Meadows, 2008).

This study extended the theoretical understanding of how the general systems theory (von Bertalanffy, 1925) might inform strategic risk management and strategic decision-making of organizations under uncertainty. The study provided a framework or structure of systems for better decision-making. Using systems thinking studies, researchers relate new knowledge to previous knowledge and experience (Kodrova et al., 2018). Similarly, this study may offer the conceptual framework to investigate insurance professionals' ERM practices. Although qualitative research with a relatively modest sample conducted in a remote location might suspect the weak opportunity of transferability, this research might be generalized in other areas. The conceptual

framework sheds light on common errors and omissions insurance professionals experience in their practices.

This study might impact the insurance organizations in the country, providing insights into better risk management practices and offering the opportunity for performance improvements in insurance professionals' risk management where the traditional methods do not work. Practice recommendations might involve insurers switching from a compliance-based culture to a risk-aware culture, focusing on the strategy to improve performance and attain effective risk outcomes (Ai et al., 2018; Andersen et al., 2021; Hoskisson et al., 2017; Mazzoccoli & Naldi, 2020), and finally, developing human capital investing in personal mastery and self-confidence (Royal et al., 2014; Senge, 2006).

Using best practices for enterprise risk management could reveal how organizations could improve financial performance (Bednarek et al., 2021). Moreover, the system thinking approach, in contrast to the rules-based one, may facilitate the complex issues with human resource risk factors of insurers such as poor risk cultures (Agrawal & Kallapur, 2018), lack of competencies (Ozdemir, 2021; Royal et al., 2014), and lack of coordination between stakeholders (Ashby et al., 2019; Bohnert et al., 2019; Farrell & Gallagher, 2015) required to manage risks. Additionally, the study provided insights into how insurers' management mitigating significant risks can protect or create shareholder value (Beazley & Frigo, 2007; Lechner & Gatzert, 2018). Regulators might

gain insights from this study to adjust and strengthen qualitative requirements for insurers' enterprise risk management (Santomil & Otero-Gonzalez, 2020).

This study assists insurance professionals in diving into the significant details of their roles and responsibilities in the risk event occurrence (Essert, 2020). In turn, such a level of detail might provide a clear understanding that risk management is no longer an issue of compliance and internal audit function (Hoffman & Scordis, 2018; Ozdemir, 2021). Risk management practices are a system-integrated tool involving strategy setting and implementation (Andersen et al., 2021; Hoskisson et al., 2017; Slagmulder & Devoldere, 2018). Furthermore, systems thinking, or a holistic approach, might need more integration in the ERM of insurers (Ai et al., 2018; Hoyt & Liebenberg, 2011).

Conclusions

This qualitative multiple case study sought to find the answers to how insurance professionals apply best risk management practices like: (a) fit and proper requirement, (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statement to manage insurance organizations in Kazakhstan. I interviewed 18 professionals with different functionalities, having at least five years of experience in the insurance industry and involved in the risk management routine. To ensure trustworthiness, I triangulated the interviews' results with external and internal artifacts like insurance organizations' websites, published annual reports, regulatory legislation, the rating agencies' outlooks, COSO and Solvency II frameworks. Units of analysis included top management, operational units, and internal control units. Despite the minor

divergence in the opinions between the units, generally, the study results revealed 25 common themes and five significant concepts within the identified practices.

The results' analysis generally confirmed the knowledge in the rare academic literature that there is a lack of holistic or systemic view on risk management practices (Agarwal & Kallapur, 2018; Andersen et al., 2021; Ashby et al., 2019; Bohnert et al., 2019; McShane, 2018). Thus, insurers use traditional silo-based procedures to comply with the regulatory requirements and lack integrity in their risk assessment and risk knowledge-sharing practices (Ai et al., 2018; Hoyt & Liebenberg, 2011; McShane, 2018; Ogutu et al., 2018). The participants confirmed the prevalence of the compliance-based culture over the risk-aware culture that might lead to potential issues. Furthermore, the issues with strategic planning and risk management separation are confirmed by human capital risks, such as lack of specialists, the formal nature of training, burnout, excessive workload, and economic uncertainty. The insurers must be holistic in predicting and removing negative consequences of substantial risks to achieve market sustainability that contributes to overall economic sustainability (Kaserer & Klein, 2019; Xie, 2022). Sustainability is a vital strategic goal at every level of the organizational context and goes hand in hand with relevant strategic risk control and management (Porter, 1979); thus, social change starts with appropriate and effective risk management practices.

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Appendix A: Invitation Letter

Invitation Letter

Dear Mr./Mrs./Ms./Dr.,

You are invited to participate in a research study concerning insurance professionals' use of best practices for enterprise risk management. This study is being conducted by me, Gaukhar Kassymkanova, a doctoral student candidate at Walden University, in partial fulfillment of the Doctor of Philosophy (Ph.D.). You might already know me as a broker and a Managing Director at MOI Insurance Brokers, but this study is separate from that role.

I am inviting you to participate in recognizing your position engaged in risk management activities, either in strategic planning or the duties across the risk management architecture. The purpose of the study is to explore the insurance professionals' use of best practices like: (a) fit and proper regulatory requirements; (b) three lines of defense models, (c) risk culture, (d) link to strategy, and (e) risk appetite statements to manage enterprise risk.

Should you consent, you will have two options for the interview: face-to-face (preferable) or a web-based call. The interviews should take about 40-50 minutes of your time. To protect your privacy, the interview will take place in a private location away from the work site preliminary agreed upon with you. Once the interviews have been completed and transcribed, I will provide participants with a chance to review the

outcomes from the final analysis of the data. To ensure confidentiality, the researcher will code the data that only the researcher has knowledge of to maintain privacy.

To protect your privacy, the correspondence on the interview material will also be conducted through private email addresses. In case you agree to participate, please provide a convenient email address. I am attaching the Consent form to this email so you can acknowledge the procedures in more detail.

Sincerely,

Gaukhar Kassymkanova