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# **Beyond the Numbers**

## A Study on the Effect of Managerial Judgment on Operational Risk

### **Authors:**

Brams, Christian

Persson, Walter Felix

### **Advisor:**

Funck, Elin

# Abstract

**Title:** Beyond the Numbers - A Study on the Effect of Managerial Judgment on Operational Risk

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**Authors:** Christian Brams & Felix Walter Persson

**Advisor:** Elin Funck

**Five Keywords:** Managerial judgment, Operational risk, Heuristics, Decision-Making Process, Economic- and Bounded- Rationality.

**Purpose:** The purpose of this study is to examine how managerial judgment affects decisions regarding operational risk within financial institutions. The study takes an exploratory perspective to examine the internal decision-making processes of financial institutions. The study aims to identify where and how managerial judgments can lead to potential misjudgments. Furthermore, the study intends to examine organizations' strategies to avoid these mistakes and enhance the decision-making process.

**Methodology:** The research methodology for this thesis is qualitative with an exploratory element. Firstly, a literature review was conducted. Secondly, empirical data was collected via semi-structured interviews. Lastly, the empirical data was put into relation with the theories examined in the literature review in order to answer the purpose of this study.

**Theoretical perspectives:** This thesis explains the decision-making process, followed by an explanation of operational risks within financial institutions, Managerial Judgment, the Bounded Rationality Model, and Economic Rationality. Lastly, the heuristics were explained.

**Empirical Foundation:** This thesis's empirical material was gathered through semi-structured interviews with nine professionals from financial institutions who work with operational risk.

**Conclusions:** Within the scope of this thesis, managerial judgment has been found to affect the decision-making process both positively and negatively. Incorporating managerial judgment enables faster and more accurate decisions but can increase risks due to overconfidence and reliance on junior analysis. A model describing four decision-making stages identifies biases and heuristics affecting each stage. Financial institutions can enhance decision-making by fostering a risk-aware culture, leveraging the experience of decision-makers, and maintaining a rigorous corporate structure to balance judgment with structured processes.

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Christian Brams

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Felix Walter Persson

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# 1. Introduction

## 1.1 Introduction & Background

Ideas, intuition, and personality, where do they come from? This question has been an interesting discussion among great thinkers such as Plato, Locke, Hume, Bentham, and Kant. However, in recent years, judgment within decision-making has gotten more attention among business schools (see, e.g., King, 1975; Bonabeau, 2003; Emmanuel, Harris & Komakech, 2010; Harris, Emmanuel & Komakech, 2009; Harris, 1999). Most decisions within a business context follow a structured process, such as net present value calculations or discounted cash flow (DCF) models, resulting in a projection or rejection of the proposal in question (Hull, 2023). Despite this structure, the role of intuition and personality in influencing decisions is increasingly recognized as crucial for entrepreneurial ventures and established corporations (Tversky & Kahneman, 1974).

The concept of decision-making as a purely rational process, a notion popularized during the Enlightenment and championed by the likes of Kant and Bentham, has been challenged by modern research that highlights the limitations of human cognition and the biases inherent in our judgments. As scholars like King (1975) and Bonabeau (2003) have pointed out, the complexity of real-world situations often renders reliance on formal analytical methods impractical. Instead, successful decision-making often involves a blend of analysis and intuition. This blend, as underscored in the work of Emmanuel, Harris, & Komakech (2010) and Harris, Emmanuel, and Komakech (2009), is not just a theoretical construct but has practical implications for decision outcomes. Their research suggests that intuitive judgments, far from being random guesses, are informed by a profound source of inherent knowledge and experience that decision-makers accumulate over time (Harris, Emmanuel & Komakech, 2009). This implies that intuition can be seen as an advanced form of cognition that enables decision-makers to make swift, effective decisions in complex and uncertain environments, a skill of great importance in the business world.

When making decisions, a primary concern decision-makers must acknowledge is whether to rely either on data-driven analysis, their judgment, or a combination of the two (Emmanuel,

Harris, & Komakech, 2010). Decision-makers must acknowledge these concerns to make objective decisions that align with the organizational objectives and generate value (Grant & Nilsson, 2019). Further, researchers have found that decision-makers with access to the same underlying information will make similar decisions due to their unified objective of maximizing economic value (Emmanuel, Harris, and Komakech, 2010). However, in practice, it is difficult for the decision-maker to obtain and compile all relevant information to make qualitative and accurate decisions (Emmanuel, Harris, & Komakech, 2010). Despite decision-makers making the same decisions with the same underlying information, gathering and interpreting the underlying information becomes increasingly important (Emmanuel, Harris, & Komakech, 2010).

Since getting complete information to support decisions is very difficult for many of today's organizations, managerial judgment becomes crucial when making decisions (Emmanuel, Harris, & Komakech, 2010; Tversky & Kahneman, 1974). Managerial judgment is essential to maximize economic growth and mitigate risks associated with the decision (Tversky & Kahneman, 1974). One of the most difficult risks to recognize is operational risk (Moosa, 2007; Pakhchanyan, 2016; Galloppo & Rogora, 2011), described by the "Basel Committee of Banking Supervision" as "...the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk but excludes strategic and reputational risk." (Bank for International Settlements, 2019). However, in line with prior research by Sturm (2013), reputational and strategic risk will be included in the scope of "operational risk" in this thesis.

Lastly, research shows that healthier firms are often more open to taking risks, where it is emphasized that managerial judgments are often considered a primary driver of success in these decisions (Tsai & Luan, 2016). However, balancing managerial judgment with data-driven analysis is inevitably difficult since managerial judgment is simultaneously occurring, unavoidable, and necessary (Grant & Nilsson, 2019). Nevertheless, managerial judgment needs to be counterbalanced with broad thinking within the organization to enhance the team's judgment, as opposed to a decision made by an individual manager (Hammond, Keeney, & Raiffa, 2006), underscoring the importance of enhancing a group's opinion and decision to mitigate biases and risk, especially in the absence of data that can underscore the decision (Hammond, Keeney, & Raiffa, 2006).

## 1.2 Problematization

Researchers have found that decision-makers must balance their judgment with an analytical approach to navigate an uncertain business environment and reduce risks associated with their decisions (Harris, Emmanuel & Komakech, 2010; Bonabeau, 2003). When making decisions, relying on objectively verifiable and reliable data is often preferable (Hull, 2023). However, when such data is unreliable, unavailable, or unobtainable, basing decisions on numerical and data-driven processes becomes increasingly difficult (Hull, 2023). When making decisions, managers must, in absence of a numerical data-driven process, rely more heavily on their experience, organizational culture, and structure (Emmanuel, Harris & Komakech, 2010; Simon et al., 1987), all of which affect the decision-makers judgment (Emmanuel, Harris & Komakech, 2010; Simon et al., 1987; Grant & Nilsson, 2020). In these situations, the synthesis of intuitive judgments with empirical data becomes not only advantageous but essential (Tversky & Kahneman, 1974). Managers who effectively integrate a combination of judgment and an analytical approach can enhance their strategic agility and responsiveness to rapidly changing market conditions (Emmanuel, Harris & Komakech, 2010). Fostering a decision-making culture that values analytical rigor and intuitive insight can lead to more sustainable and adaptable business strategies (Tversky & Kahneman, 1974). However, basing decisions solely on judgment or intuition can also drastically increase the risk associated with the decision (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Grant & Nilsson, 2020). Thus, organizations are encouraged to cultivate environments where both an analytical approach and judgment within the decision-making process can be developed and valued as complementary rather than conflicting approaches (Tversky & Kahneman, 1974).

In the landscape of financial institutions, operational risk management is of great importance, traditionally governed by quantitative risk assessments and structured financial models (Hull, 2023; Filusch, 2021; Blümke, 2020). These models, predicated on the reliability of historical data and statistical methodologies, assume that past patterns predict future outcomes (Hull, 2023; Seyedan & Mafakheri, 2020). However, due to the dynamic nature of the financial sector with rapid changes in market conditions and regulatory frameworks, the statistical methodologies described by Hull (2023) and Seyedan and Mafakheri (2020) might undermine the efficiency of such methodologies. In such an environment, managerial judgment becomes increasingly



important in the decision-making process, guiding the decision-maker through times of high uncertainty.

Managerial decisions, shaped by the decision-maker's unique experiences, intuitions, and personal biases, might enhance the decision-making process (Emmanuel, Harris & Komakech, 2010). At the same time, the risk associated with a single decision-maker making a decision solely based on their judgment drastically increases the risk associated with the decision (Tversky & Kahneman, 1974). These human elements inject necessary agility into the decision-making process but are also vulnerable to cognitive biases such as overconfidence, anchoring, framing, and confirmation bias (Tversky & Kahneman, 1974; Emmanuel, Harris & Komakech, 2010). These biases might undermine the decision-making process, leading to sub-optimal decisions influenced by personal biases instead of the risk appetite decided by the financial institution (Tversky & Kahneman, 1974). Overconfidence may cause an underestimation of risks, anchoring might result in excessive reliance on initial information, and confirmation bias could lead decision-makers to favor confirming evidence while disregarding contradictory data (Kahneman, Lovallo & Sibony, 2011; Weinstein, 1980). Such biases are particularly treacherous in high-stakes environments, such as financial institutions, where decisions must be made swiftly and often with incomplete information (Grant & Nilsson, 2020; Emmanuel, Harris & Komakech, 2010). The challenge and opportunity in integrating managerial judgment with structured decision-making frameworks lie in harnessing the benefits of human experience and intuition while reducing the influence of inherent biases (Tversky & Kahneman, 1974; Kahneman, Lovallo & Sibony, 2011).

In the case of the decision-making process, researchers highlight the negative and positive outcomes of relying on managerial judgment (Grant & Nilsson, 2020; Emmanuel, Harris & Komakech, 2010). The negative aspects of relying too heavily on managerial judgment are that the managers often lack complete information, and they may not lead to accurate or compelling strategic and financial rationales, potentially impacting the success of the decision (Grant & Nilsson, 2020; Emmanuel, Harris & Komakech, 2010). Additionally, other research highlights the positive aspects with the judgment of experienced managers, empathizing that their experience can increase the quality and efficiency of decisions (Grant & Nilsson, 2020; Emmanuel, Harris & Komakech, 2010). However, studies within managerial accounting and

financial measurement literature suggest that decisions should be taken based on numerical methodologies to maximize the value for the organization (Emmanuel, Harris & Komakech, 2010; Simon et al., 1987; Bierman & Smidt, 2012; Garrison, Webb & Libby, 2018). Further, research indicates that financial institutions use rigorous numerical and data-driven methodologies to assess and mitigate investment risks (Hull, 2023; Filusch, 2021; Blümke, 2020). However, despite their rigorous approach to risk mitigation, these institutions encounter scenarios where the underlying data proves unreliable, unavailable, or unobtainable (Hull, 2023; Filusch, 2021; Blümke, 2020). Other research suggests that such processes and methodologies can not be relied on when there are limited or uncertain numerical data (Emmanuel, Harris & Komakech, 2010; Simon et al., 1987). Hence, when faced with decisions surrounded by uncertainty, financial institutions have to rely on managers' intuition and should foster reliance on group decisions alongside structured methodologies to mitigate operational risk effectively (Office of the Superintendent of Financial Institutions Canada, 2023; McKinsey & Company, and; Schulz & Funaro, 2018; Shah, nd). Additionally, research suggests that senior managers' judgment is essential (Emmanuel, Harris & Komakech, 2010). However, an organization's collective decision is precious when navigating uncertainty to mitigate operational risk and biases within the decision-making process (McKinsey & Company, nd; Schulz & Funaro, 2018).

This study aims to contribute to the extensive literature on the decision-making process. Its unique contribution is that it examines how managerial judgment affects these processes and examines organizations' strategies to avoid potential misjudgments. Simultaneously, there is an acknowledgment of the value that managerial judgment brings, especially in situations where data is incomplete, unreliable, or altogether missing (Grant & Nilsson, 2020; Emmanuel, Harris & Komakech, 2010). However, a significant underexplored area remains regarding financial institutions' strategies to avoid mistakes and enhance the decision-making process.

### 1.3 Purpose

The purpose of this study is to examine how managerial judgment affects decisions regarding operational risk within financial institutions. The study takes an exploratory perspective to examine the internal decision-making processes of financial institutions. The study aims to identify where and how managerial judgments can lead to potential misjudgments. Furthermore,

the study intends to examine organizations' strategies to avoid these mistakes and enhance the decision-making process.

## 2. Methodology

### 2.1 Research Approach

This study investigates how managerial judgment affects decisions regarding operational risk within financial institutions through a qualitative and exploratory lens. The research focuses on internal decision-making processes and aims to identify where and how managerial judgments can lead to potential misjudgments. Lastly, the study intends to examine organizations' strategies to avoid these mistakes and enhance the decision-making process. To fulfill the purpose of this study, data was gathered through a semi-structured interview process with professionals from the financial sector who play a crucial role in evaluating operational risk within financial institutions. These participants offer valuable insights into their decision-making processes and the potential influences shaping their judgments. In line with Bell, Bryman, and Harley (2022), the collected data was carefully analyzed to identify important factors that influence decision-maker judgments within financial institutions, to identify where and how managerial judgments can lead to potential misjudgments, and to examine organizations' strategies to avoid these mistakes and enhance the decision-making process.

Since the purpose of this thesis is to examine how managerial judgment affects decisions regarding operational risk within financial institutions, examine the internal decision-making processes, identify where and how managerial judgments can lead to potential misjudgment, and examine organizations' strategies to avoid these mistakes and enhance the decision-making process, a qualitative methodology with semi-structured interviews seemed appropriate. The reasoning behind this decision was that direct questions regarding how decision-makers feel about their judgment affecting the decision-making process were not feasible. Instead, the authors of this thesis decided to ask more general questions about the decision-making process to examine how their judgment affects the described process.

## 2.2 Literature Review

A comprehensive review of existing literature was conducted to deepen the understanding of the decision-making process in financial institutions, focusing mainly on managerial judgment, pre- and post-decision controls, and operational risks within financial institutions. This thesis probes into various decision-making frameworks, including bounded rationality and economic rationality models, and examines heuristics like framing, anchoring, and confirmation bias. By exploring these elements, this thesis aims to uncover how managerial judgments can lead to potential misjudgments and to examine organizations' strategies to avoid these mistakes and enhance the decision-making process.

Data collection sources for this literature review were meticulously selected from various databases and libraries to ensure a broad and comprehensive theoretical foundation (Bell, Bryman & Harley, 2022). The databases used for this review were LUB Search, Google Scholar, and Emerald Insight, which are all electronically based. Complementary insights were gathered from the Library of Lund University School of Economics and Management. The material from these platforms offered diverse theoretical and empirical insights (Bell, Bryman & Harley, 2022). The articles selected for the literature review predominantly consist of peer-reviewed articles from well-renowned scientific journals to ensure the credibility and reliability of the examined literature. To further build on the findings from the scientific articles, books and specific book sections relevant to the subject were incorporated to strengthen the literature review (Bell, Bryman, and Harley, 2022). Systematic categorization of these data resources provides the theoretical foundation that supports this research (Bell, Bryman & Harley, 2022). This enables a nuanced exploration of the decision-making process within financial institutions, identifying where and how managerial judgments can lead to potential misjudgments, and examining organizations' strategies to avoid these mistakes and enhance the decision-making process.

The terms utilized for searching for relevant literature are detailed in the table below:

Data collection sources	Terms
<ul style="list-style-type: none"> <li>● LUB Search</li> <li>● Google Scholar</li> <li>● LUSEM Library</li> <li>● Emerald Insight</li> </ul>	<ul style="list-style-type: none"> <li>● “Managerial judgment”</li> <li>● “Operational risk”</li> <li>● “Operational risk within financial institutions”</li> <li>● “Economic rationality”</li> <li>● “Pre-decision controls”</li> <li>● “Post-decision controls”</li> <li>● “Decisions making process”</li> <li>● “Heuristics”</li> </ul>

*Table 1. Data Collection Sources and Search-Terms*

## 2.3 Research Design

In accordance with Bell, Bryman, and Harley (2022), this study has adopted a qualitative approach to capture nuances within complicated processes in business-related topics. A semi-structured interview process enabled this study to capture nuances and examine the topic in question in-depth. A semi-structured qualitative method further enhances the reliability and quality of the data collected due to its increased depth, flexibility, and reliance on multiple sources (Bell, Bryman & Harley, 2022). Semi-structured interviews have allowed the authors greater flexibility within the interview process. By allowing for follow-up questions within the semi-structured process, the authors of this thesis could dive deep into the experiences of the individual interviewees to examine organizations' strategies to avoid mistakes and further enhance the decision-making process. Moreover, the semi-structured interview process allows for more flexibility, which enables the possibility of pursuing topics of interest and increases the quality of the study due to its broadening data collection (Bell, Bryman & Harley, 2022). Further, in line with the purpose of this study, questions regarding how managerial judgment affects decisions regarding operational risk within financial institutions. Also in line with the purpose of this study, an exploratory perspective was employed to examine the internal decision-making

processes of financial institutions. Some of these questions were not included in the interview guide because if the interviewees had time to prepare for them, they would likely assume that they were not affected by their judgment in the decision-making process. The semi-structured interviews gave the authors an instinctive and neutral answer to how the potential judgment of the decision-maker might affect the decision-making process and increase the credibility of the answers.

Interviewing multiple participants from different organizations has allowed this study to dive deeper into the internal decision-making processes, how managerial judgment affects this process, and to examine organizations' strategies to avoid these mistakes and enhance the decision-making process within financial institutions (Bell, Bryman & Harley, 2022). To further deepen the understanding of the decision-making process, how managerial judgment affects this described process, and to examine organizations' strategies to avoid these mistakes and enhance the decision-making process, people with different levels of seniority and experience have been interviewed. By interviewing people with different levels of seniority and authority, participants contribute with different perspectives to this study (Bell, Bryman & Harley, 2022). Further, in line with the purpose of the study, different seniority levels were chosen to examine organizations' strategies to avoid making mistakes in the decision-making process. Different seniority levels could contribute to different perspectives regarding how managerial judgment affects these decisions.

### 2.3.1 Selecting the Interview Participants

Since part of this thesis's purpose is to examine how managerial judgment affects decisions regarding operational risk within financial institutions, people working with operational risk within financial institutions were the only ones considered as interviewees for this thesis. Since financial institutions are rigorously regulated, restricting their risk appetite, managerial judgment becomes increasingly interesting since there are predefined processes that limit their ability to act independently. Financial institutions within the scope of this thesis are limited to full-service institutes, meaning they offer customers a full range of services ranging from savings accounts and insurance to pensions and corporate services. The reason for only allowing full-service

financial institutions was that they have greater structure and experience in making decisions than their smaller competitors.

Some criteria were established to determine whether interview participants were suitable for this study. Professionals need extensive experience evaluating and making decisions regarding operational risk within financial institutions to be considered interviewees. The interviewees should have at least three years of experience working with these decisions. This experience is crucial for this study to understand organizational contexts. Further criteria that needed to be met to be considered as an interviewee for this study were that the individual needed to be employed by a financial institution or to have consulted within operational risk for a financial institution. Further, all interviewees, except one, make decisions as representatives of the organization; the consultant offers advisory services to several financial institutions.

To find participants that matched these criteria, the authors of this study employed three methods. The first method employed was reaching out to organizations through their e-mail addresses, establishing the first contact with the organization. After the first contact, the respondent could often make directions to potential interviewees. The second method employed to find interview participants was through previous professional contacts. However, when the professional contacts did not meet the set criteria, they could often guide the authors of this thesis through the organization and establish contact with potential interviewees. The third way of establishing contact with professionals was through LinkedIn. Search words such as “risk manager” and “operational risk manager” were used for potential interviewees. To determine if the potential interviewees could participate in this study, an initial e-mail was sent where the study was presented, and a suggestion was made for a short phone call to explain the process and the extent of their potential participation. The initial e-mail explaining the study to potential interviewees is attached in Appendix 1. Given the scope of this research, conducting between eight to ten interviews was deemed appropriate. This range was selected because it allows for a comprehensive collection of data sufficient to analyze and address the purpose while still being manageable within the constraints of the time available for this master thesis. Ultimately, nine participants were interviewed, at which point theoretical saturation was deemed to have been achieved.



The table below presents the interviewees' job titles and years of experience within the field. It also states whether the interview was conducted digitally or in person.

<b>Job Position</b>	<b>Interview</b>	<b>Years of Experience</b>	<b>Acronym</b>	<b>Duration</b>
Financial Advisor	Digital	5	I1	38
Financial Advisor	Digital	7	I2	27
Operational Risk Officer	Digital	24	I3	12
Corporate Financial Advisor	Digital	14	I4	26
Financial Advisor	Digital	4	I5	32
Financial Analyst	Digital	5	I6	21
Operational Risk Officer	Digital	24	I7	32
Financial Consultant, Director	Digital	28	I8	23
Head of Operational Risk	Digital	30	I9	23

*Table 2. The Participants of the Semi-Structured Interviews.*

## 2.4 Data Collection

Data was gathered through a semi-structured interview process tailored to prioritize the interviewees' perspectives (Bell, Bryman & Harley, 2022). This less strict interview format was chosen to allow participants greater flexibility in sharing what they consider important and relevant (Bell, Bryman & Harley, 2022). The theoretical frameworks were used as the foundation for shaping the interview questions. The semi-structured interview process enables the interviewer to intervene with questions further to deepen their knowledge about the subject at hand and broaden the questions to increase the relevance of the answers (Bell, Bryman & Harley, 2022). The interview process was divided into four different sub-categories. The first sub-category defined the interviewee's previous experience, education, and involvement in identifying operational risks.

Consequently, the first section of the interview guide is very standardized and not as subject to follow-up questions as the other sections. This section was deemed important to get contextual

knowledge about the interviewee and their experience regarding operational risk. The second sections build on the information provided in section one, namely their different experience and how they use their experience and judgment when making decisions related to operational risk. In line with the purpose of this study, this section of questions aimed to answer how the decision-making process regarding operational risk appears within financial institutions and to answer where and how managerial judgment might lead to potential misjudgments. The third section delves into the internal dialogues aimed to increase reliability and accuracy in a decision and the interviewees' reflections on this process, aimed to examine organizations' strategies to avoid mistakes within decision-making process. Lastly, the fourth section builds on the answers from the third section, with a developed and more in-depth exploration concerning the impact these dialogues and discussions have on the decision at hand, further examining organizations' strategies to avoiding mistakes within decision-making process.

Additionally, a semi-structured interview process permits the interviewers to leave some questions out and pose alternative follow-up questions not listed to the interview candidate (Bell, Bryman & Harley, 2022). Such flexibility is crucial for the study's research, as it enables interviewees to transparently and comprehensively discuss the decision-making process and the influence of managerial judgment. Further, it enables the study to examine organizations' strategies to avoid these mistakes and enhance the decision-making process within financial institutions (Bell, Bryman & Harley, 2022). The questions were further categorized and formulated based on recurring events and interview findings (Bell, Bryman & Harley, 2022). Furthermore, the interviews were audio-recorded to enable the researchers to revisit and listen to the collected data and information if needed. The relevant findings provided through these interviews were transcribed and presented in this study's empirical section (Bell, Bryman & Harley, 2022). The interviews were conducted through video calls to ensure continuity and completeness within the scope of this thesis (Bell, Bryman & Harley, 2022).

Lastly, it should be noted that the data collection within this study was made in Swedish, as both the authors' and all participating interviewees' native language is Swedish. This might limit the study since the authors must translate the interviews and quotes (Bell, Bryman & Harley, 2022). However, to counteract this limitation, the authors transcribed the interviewees entirely (Bell,

Bryman & Harley, 2022). This way, the information and quotes presented in this thesis can be verified in the transcription (Bell, Bryman & Harley, 2022).

## 2.5 Empirical Data

### 2.5.1 Presenting the Empirical Data

The empirical findings will be presented in two stages. The stages will be in line with the sub-categories within the interview guide. However, the first sub-category within the interview guide will not be extensively examined since it only gives the study contextual facts about the interviewee. The empirical findings will be focused on sub-categories two, three, and four. The first area of focus of the empirical material is the decision-making process and how managerial judgment affects decisions regarding operational risk. The second step of the empirical findings will present how financial institutions can avoid mistakes and enhance the decision-making process.

### 2.5.2 Analyzing the Empirical Data

Once the Empirical data has been presented, it will then be analyzed in chapter five. The analysis will first discuss how managerial judgment affects decisions regarding operational risk. The heuristics presented in the theory chapter will identify where and how managerial judgments can lead to potential misjudgments. Further, the theory of bounded rationality will be used to examine how managerial judgment affects decisions regarding operational risk within financial institutions. Lastly, within the scope of chapter five, a discussion regarding what strategies employed by financial institutions to avoid mistakes and enhance the decision-making process.

## 2.6 Research Quality

When reviewing the quality of research, two terminologies are often used: reliability and validity (Bryman, Bell, & Harley, 2022). Bryman, Bell, and Harley (2022) argue that the concepts of reliability and validity are applicable and relevant in qualitative research, as they offer valuable descriptors for assessing the quality of qualitative studies. Bryman, Bell, and Harley (2022) emphasize that by collecting empirical data from participants who stay anonymous, there is a

higher degree of truthfulness given within those answers. However, anonymous interviewees have gotten criticism regarding its lack of transparency. To counteract this potential criticism, the findings in this thesis will be transcribed, increasing the transparency of this study (Bell, Bryman & Harley, 2022). Ultimately, this study's overall findings are sourced from a collection of individuals' truth, which, according to Bryman, Bell, and Harley (2022), enhances the results' reliability, validity, and credibility. Hence, this study's research approach is favorable for answering its purpose.

Further terminologies used when describing the quality of research include trustworthiness and authenticity (Bell, Bryman & Harley, 2022). Trustworthiness and authenticity will be used to describe the quality of this study, as opposed to reliability and validity since trustworthiness and authenticity are often only used to describe the research quality of qualitative studies (Bryman, Bell, & Harley, 2022). To increase the trustworthiness of this study, interviewees were asked to read the parts of the empirical material to confirm that their point came across as intended. Further, they will also be able to read the transcripts for them to validate them and make any clarifications. By doing this precaution, the study's credibility increases, which is a criterion to ensure the study's trustworthiness (Bell, Bryman & Harley, 2022).

In the context of this study, neutrality is a central subject. Bryman, Bell, and Harley (2022) highlight that complete objectivity and neutrality are impossible to accomplish; it should be noted to the reader that the authors have acted in good faith during the research process and exerted maximum effort to enhance the study. Bryman, Bell, and Harley (2022) refer to not allowing personal values or theoretical biases to impact the research and its results. However, the authors of this study are influenced by previous events but have had a firm purpose to strive for neutrality and objectivity in this study to increase its trustworthiness and authenticity.

## 2.7 Ethics

Bryman, Bell, and Harley (2022) emphasize the importance of taking ethical considerations into account when conducting research. The areas of concern are how data is collected, processed, stored, and published (Bryman, Bell, & Harley, 2022). Before any interviews were conducted, potential participants were e-mailed explaining the study and its purpose. In addition to

informing them about the scope of this study, potential participants could reject the request for an interview. Bryman, Bell, and Harley (2022) also highlight that the authors must provide adequate information to the interviewees about how the data will be used, not to cause psychological or career-oriented harm. By clearly explaining the study's objective, the authors can ensure that the participants involved will not be affected negatively by their participation (Bryman, Bell, & Harley, 2022). Once the interviewees consented to conduct an interview, the interview guide was sent by e-mail, enabling participants to prepare or ask questions beforehand (Bryman, Bell, & Harley, 2022). To ensure the interviewees truly consented to the use of the material gathered during the interview for this study, they were once again asked during the interview to confirm their consent for the use of the information they provided within the scope of this study (Bryman, Bell, & Harley, 2022). Moreover, the authors of this thesis would like to emphasize that contact with the interviewees has been constant during this study, both to get complementary information from the interviewees and to keep them up to date with how the study is progressing (Bryman, Bell, & Harley, 2022). This was done to minimize any potential harm described above (Bryman, Bell, & Harley, 2022).

By implementing these precautions, the authors of this thesis ensure that no harm, as described in the previous section, will occur as a result of the publication of this thesis. However, the authors have made the decision to keep the respondents and the organization they are working with anonymous. According to Bryman, Bell, and Harley (2022), this choice could potentially undermine the study's credibility as the interviewees cannot be held accountable for the information provided. However, the authors of this thesis are confident that this decision will not compromise the study's credibility, but rather, it will encourage the respondents to provide more honest and in-depth responses, thereby enhancing the quality of the study.

## 3. Theory

### 3.1 Decision-making Process

Emmanuel, Harris, and Komakech (2010) state that the decision-making processes may vary across different organizations due to the lack of formal documentation. However, the stages of these processes can also differ among organizations (Emmanuel, Harris & Komakech, 2010). Furthermore, they suggest that economic rationality and managerial judgment will be present and unavoidable during the different stages of the process (Emmanuel, Harris & Komakech, 2010). Managerial judgment may influence the decision-maker depending on the uncertainty of the decision (Emmanuel, Harris & Komakech, 2010). One of the main challenges decision-makers encounter when deciding what projects to pursue is managing the uncertainty of outcomes (Emmanuel, Harris & Komakech, 2010). While managers frequently rely on subjective assessments of the risks associated with business decisions, these decisions are seldom systematically integrated into their decision-making processes (Emmanuel, Harris & Komakech, 2010). However, researchers have continuously dissected the decision-making processes of organizations, with both King (1975) and Harris (1999) critiquing and building upon traditional financial analysis methods. The decision-making process within financial institutions is characterized as a complex interplay of judgment, risk assessment, and strategic evaluation, which extends beyond the conventional reliance on numerical data (King, 1975; Harris, 1999). King (1975) and Harris (1999) describe a similar decision-making model divided into multiple stages. Despite the two describing the decision-making process, some key differences exist in how they are perceived.

King's (1975) model of decision-making revolutionizes the traditional scientific decision-making model, challenging the notion that all necessary information can be compiled and accurately analyzed before making a decision. Harris (1999) complements King's perspective by delving into how companies navigate uncertainty in decisions, focusing on how subjective judgments concerning risk are integrated into the formal decision-making processes, presenting a more innovative methodology. Both King (1975) and Harris (1999) underscore the importance of risk evaluation throughout the decision-making process. Harris (1999) identifies several crucial

attributes of project risk, offering a more comprehensive understanding that surpasses what standard models typically capture. In contrast, King's (1975) model proposes that risk evaluation is a continuous concern, integrated into each stage of the decision-making process, challenging the assumption that decisions can be made based purely on objective and numerical data.

Both King (1975) and Harris (1999) underscore the influence of an organization's structure on decision-making. King (1975) demonstrates how decisions flow through hierarchical levels within an organization, highlighting that senior management often holds the final decision-making authority, relying on information and recommendations from subordinates. Similarly, Harris (1999) discusses the hierarchical approval processes and stresses the importance of managerial judgment and feedback loops, which aid in refining the risk assessment and decision-making processes at various stages. Furthermore, in the later stages of the decision-making process, King (1975) and Harris (1999) emphasize the value of post-decision controls. Harris's decision-making model highlights the usefulness of post-audit stages that evaluate the accuracy of the risk assessment and refine future processes. Conversely, King (1975) views the decision stages as more about formal endorsement and commitment rather than rigorous judgment, emphasizing that thorough and accurate project evaluation depends on the earlier stages within the process.

Lastly, these models challenge traditional theories that predominantly emphasize quantitative analysis, often neglecting the complex realities of managerial judgment within decision-making, organizational politics, and the nuanced understanding of risk perception. King (1975) and Harris (1999) argue for a broader integration of qualitative assessments into the decision-making framework, including managerial judgment and risk perception, thus offering a more realistic view of how decisions are made in practice.

### 3.1.1 Stages within the Processes

The process begins with the identification and triggering of opportunities, a stage that is described as the "Ideas and Opportunities" in Harris's (1999) model. The corresponding stage within King's (1975) model is the "Triggering" phase. This initial stage is crucial as it initializes the decision-making process setting. Both models highlight how opportunities are generated internally and triggered by external market conditions and strategic organizational inputs (Harris,

1999; King, 1975). As opportunities are identified in the second stage, they are subjected to a preliminary screening to evaluate their initial viability and strategic fit. This phase is viewed as the "Preliminary Assumptions" stage of the Harris (1999) model and the "Screening" of the King (1975) model. King (1975) considers both environmental and strategic factors in this stage, while Harris (1999) still analyzes and creates a business case as a basic premise.

In the third stage, King's (1975) model has a broader approach to defining feasible alternatives through rigorous strategy and situational analysis. This stage is vital for laying out all possible paths and rigorously examining their potential impacts and returns, ensuring that solid data and strategy fit for every decision. Within the screening process, the opportunity is assessed and evaluated on its feasibility along with data collection and risk assessment in order to make a team decision to either proceed, deny or modify the proposed opportunity (Harris, 1999). The evaluation stage is where the most critical thinking occurs, this is where the "DCF Analysis and Evaluation" is conducted within the Harris (1999) model and the "Evaluation" in the King (1975) model, where alternatives are carefully examined according to criteria and procedures specific to the organization.

The next step is to make a decision to fund the opportunity, and decide on its organizational fitment and criteria. This organizational step in King's (1975) model is the "Transmission," where the decision is transmitted through organizational hierarchies to ensure it aligns with overall strategic objectives. Similarly, Harris's (1999) model has divisional executive team judgment appraising the project. The final stage of the decision-making process within the King (1975) model is deciding to execute the opportunity at hand. Harris's (1999) model has an extra decision-making step where a group board assesses the hurdle rates and decides on the opportunity and assesses the hurdle rate. The last stage of Harris's (1999) model is to measure the outcome of the decision that has been made and to measure the outcome of the opportunity; this includes a Post Completion Audit (PCA) (Harris, 1999). PCA is conducted after the decision has been made and monitors the alignment and success of an opportunity, both strategically and financially (Harris, 1999).



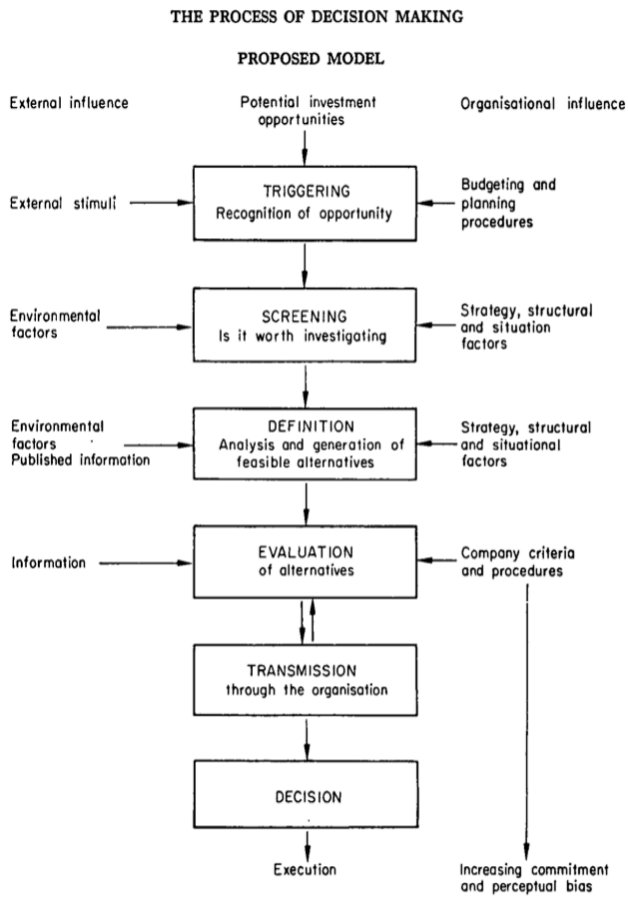


Figure 1. King (1975) The Process of Decision Making

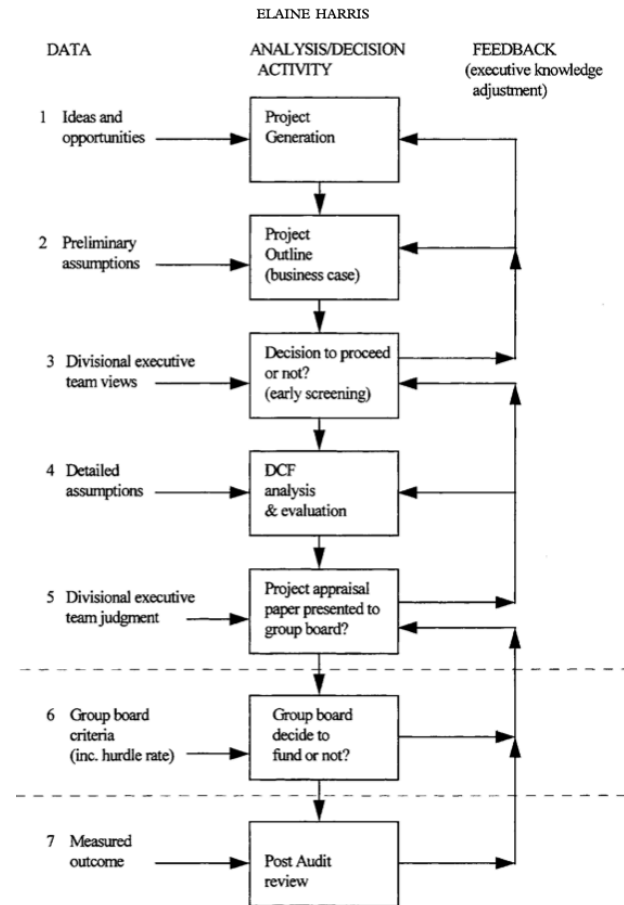


Figure 2. Harris (1999) Analysis/Decision Activity

### 3.1.2 Pre-decision Controls

Pre-decision controls in decisions refer to the processes and systems in place in an organization to ensure that the behaviors and decisions undertaken by decision-makers are in harmony with the organization's objectives and strategies before the decision is made (Huikku, Karjalainen & Seppälä, 2018; Northcott & Alkaraan, 2007b). These controls include policies, procedures, and formal routines related to expenditure authorization levels, profitability requirements, managerial involvement, and pre-determined financial, strategic, and risk analyses (Huikku, Karjalainen & Seppälä, 2018). Huikku, Karjalainen, and Seppälä (2018) emphasize that changes in organizations' economic, strategy, and organizational conditions relate to the increased use of pre-decision controls such as policies, procedures, and routines to mitigate risks.

Furthermore, adaptations of pre-decision controls in response to environmental changes in appraising decisions are usually overlooked (Huikku, Karjalainen & Seppälä, 2018). Research supports the idea that increased financial pressure can be related to the increased use of pre-decision controls (Huikku, Karjalainen & Seppälä, 2018). Pre-decision controls play a crucial role in the appraisal, but the need for continuous adaptation presents both opportunities and challenges for organizations (Huikku, Karjalainen & Seppälä, 2018).

Pre-decision controls can help companies select their investments appropriately, facilitating optimal capital investment (Huikku, Karjalainen & Seppälä, 2018). These controls provide a structured decision-making framework, ensuring decisions align with the organization's objectives and strategies (Huikku, Karjalainen & Seppälä, 2018). Additionally, pre-decision controls can help organizations adapt to environmental changes, such as regulatory changes or economic pressures, by allowing for adjustments in the decision-making process (Huikku, Karjalainen & Seppälä, 2018). However, Huikku, Karjalainen, and Seppälä (2018) raise the potential challenge with pre-decision controls, which is the need for continuous adaptation to changes in the external and internal environment. Changes in external and internal environmental conditions may cause strategic misalignments and require further adaptation of pre-decision controls (Huikku, Karjalainen & Seppälä, 2018). This ongoing need for adaptation can pose a challenge for organizations, as continuous monitoring and adjustment of control mechanisms are required to ensure their effectiveness (Huikku, Karjalainen & Seppälä, 2018).

### 3.1.3 Post-decision Controls

Post-decision control refers to evaluating and monitoring a decision's outcome based on its performance and a post-audit review, which occurs in the later phase of the decision-making process (Huikku & Lukka, 2016; Huikku, 2011). Post-decision control is often related to conducting post-completion auditing (PCA) reports in an organization, which assesses the performance and outcomes of investment projects after completion (Huikku & Lukka, 2016; Huikku, 2011). The PCA report often involves comparing the project's actual results with the initial objectives and estimations and evaluating the investment's financial and non-financial impacts (Huikku & Lukka, 2016). Post-decision control, in the form of PCA reports, plays a

critical role in evaluating the success of investment projects, facilitating organizational learning, and ensuring accountability in the decision-making process (Huikku & Lukka, 2016).

The PCA reports include reviewing the investment project, including follow-ups on costs and scheduling, comparing ex-ante and ex-post investment estimations, evaluating KPIs, and lessons learned from previous decisions and experiences (Huikku & Lukka, 2016; Huikku, 2011). The purpose of conducting PCA reports is to facilitate organizational learning and accountability functions (Huikku & Lukka, 2016). Organizational learning involves gathering learning experiences about successes and failures to improve future investment projects (Huikku & Lukka, 2016; Huikku, 2011). Accountability functions involve measuring the performance of the investment project and enhancing the integrity of investment appraisals (Huikku & Lukka, 2016). Huikku and Lukka (2016) raise the concern of potential biases associated with self-assessment-based post-decision controls concerning the PCA, where the individuals involved in the investment project conduct their assessments. It highlights the importance of a collective process in constructing persuasive PCA reports and the need for objectified external and internal benchmarking for information and compliance with reporting guidelines (Huikku & Lukka, 2016; Huikku, 2011).

### 3.2 Operational Risk within Financial Institutions

Operational risk within financial institutions is a well-known research topic among scholars (Moosa, 2007; Pakhchanyan, 2016; Galloppo & Rogora, 2011). However, to truly define risk as one homogenous topic has been shown to be more difficult than thought (Moosa, 2007). Crouchy, Mark, and Galai (2001) describe operational risk as an ambiguous concept that is hard to distinguish between normal uncertainties and risks faced daily by the organization and operational risks. Further, researchers highlight that to define operational risks, it is easier to point to what operational risk is not, namely credit and market risk (Moosa, 2007).

However, defining an operational risk negatively is not an effective approach (Buchelt & Unteregger, 2004). Despite some scholars thinking this definition is a somewhat ineffective approach, some scholars have supported defining operational risk negatively (Moosa, 2007; Jameson, 1998). The most commonly accepted definition of operational risk was defined by

Robert Morris Associates (1999) and later established as a definition by the "Basel Committee of Banking Supervision" as "...the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk but excludes strategic and reputational risk." (Bank for International Settlements, 2019). Operational risk in this thesis focuses on external factors that affect the organization, such as decisions that can not in its entirety be based on numerical data-driven processes and are not related to the financial institutions market and credit risk (Elmassri, Harris & Carter, 2016). In line with prior research by Elmassri, Harris, and Carter (2016), operational risk in the scope of this thesis will be defined as the risks that are determined as those risks that can not be based on numerical data-driven processes but rather on the basis on "risk as a feeling" (Harris, 2014 p.163).

Hence, within the scope of this thesis, strategic and reputational risk is included as operational risk. In line with prior research by Elmassri, Harris, and Carter (2016), operational risk in the scope of this thesis will be defined as the risks outside the scope of market- and credit risks. Since these types of decisions are not based on numerical data-driven processes, the judgment of the deciding manager becomes increasingly essential to make good decisions (Emmanuel, Harris & Komakech, 2010; Simon et al., 1987).

### 3.3 Managerial Judgment

Managerial judgment can be described as the invisible hand that guides decision-makers when making hard decisions, primarily when reliable data can not support the decision (Bonabeau, 2003). Another explanation is that managerial judgment is based on the decision-maker's intuition, experience, and knowledge instead of relying solely on formal analytical and numerical methods (Harris, Emmanuel & Komakech, 2009). However, researchers have found that managers must balance their judgment with an analytical approach to navigate an uncertain business environment (Harris, Emmanuel & Komakech, 2009; Bonabeau, 2003). Managerial judgment is further described by Northcott and Alkaraan (2007a), who emphasize that managerial judgment becomes increasingly important for organizations and decision-makers when there is insufficient information on which to base the decision. Instead of solely relying on managerial judgment when making decisions, organizations should strive to involve team members with different seniority levels (Emmanuel, Harris & Komakech, 2010). This way,

organizations can leverage knowledge from the entire team instead of solely relying on rational economic analysis and managerial judgment (Emmanuel, Harris & Komakech, 2010).

Emmanuel, Harris, and Komakech's (2010) research has found that managerial judgment plays a pivotal role when organizations should filter out data and understand the context of this data when making decisions. For organizations operating within highly competitive, high-tech, and uncertain industries, managerial judgment becomes even more important since sufficient information is not always available (Emmanuel, Harris & Komakech, 2010). Further research finds that managerial judgment can act as a form of pre-decision control as it contributes to what projects organizations think is a strategic fit and, therefore, decide to pursue (Northcott & Alkaraan, 2007a). In the initial phase of the decision-making process, decision-makers often use their judgment to screen projects (Northcott & Alkaraan, 2007b). However, deciding managers tend to overlook the investment's potential future earnings and instead emphasize the decisions' alignment with the deciding manager's personal beliefs and vision for the organization (Northcott & Alkaraan, 2007b).

As a consequence of managers making decisions based on their vision and personal beliefs (Northcott & Alkaraan, 2007b), the provided information and its interpretation become increasingly important (Emmanuel, Harris, & Komakech, 2010). However, decision-makers' access to all relevant information and how they interpret it comes down to their judgment (Emmanuel, Harris, & Komakech, 2010). In the case of inadequate information or conflicting opinions within teams, managers must rely on their previous experiences and expertise to make decisions (Emmanuel, Harris, & Komakech, 2010). Therefore, it is essential to understand the essence of decision-making problems from the viewpoint of those directly involved (Emmanuel, Harris, & Komakech, 2010). In this case, understanding managers' biases and limitations in decision-making becomes essential (Emmanuel, Harris, & Komakech, 2010).

### 3.4 Bounded Rationality Model

The bounded rationality model is a concept that was introduced more than 60 years ago by Herbert A. Simon (Simon, 1955). Simon et al. (1987) proposed shifting from the traditional

economic focus on maximizing utility to a more realistic understanding involving "satisficing", meaning settling for an acceptable option instead of the absolute best and adjusting the decision-maker's goals or aspirations based on previous successes (Simon, 1955). "Satisficing", as defined by Simon, is a decision-making strategy where individuals with bounded rationality settle for their minimum requirements rather than seeking the optimal solution (Selten, 1990; Simon et al., 1987). Bounded rationality is a concept in decision-making theory that acknowledges the limitations of human rationality, where individuals are not always able to make entirely rational decisions due to cognitive limitations, time constraints, and the complexity of the real world (Simon et al., 1987). These limitations include incomplete information, cognitive biases, and restricted processing capabilities (Simon et al., 1987).

Bounded rationality challenges traditional economic theories that assume individuals always make decisions based on perfect rationality and aim to maximize economic value (Simon et al., 1987). Bounded rationality suggests that real-world decisions often diverge from what would be expected if individuals were entirely rational (Simon et al., 1987). Deviations from the predicted rational behavior can lead to unexpected market outcomes, questioning markets' efficiency and underlying human decision-making's impact on market dynamics (Simon et al., 1987).

Moreover, according to Simon et al. (1987), bounded rationality influences economic agents' decisions. This raises questions about how decisions by individuals with limited rationality differ from those of entirely rational agents, prioritizing satisfactory outcomes over pursuing the highest profits (Simon et al., 1987). Furthermore, bounded rationality is crucial in developing theories and decision-making processes (Simon et al., 1987). It advocates for models based on realistic human decision processes rather than on idealized rationality, which assumes that individuals have unlimited information, unlimited time to make decisions, and the ability to choose the absolute best option (Simon et al., 1987; Emmanuel, Harris, & Komakech, 2010).

In practical applications, bounded rationality has underscored the importance of creating decision-making models that align with human cognitive abilities (Simon et al., 1987). This insight has fueled progress in artificial intelligence (AI) and cognitive psychology, focusing on understanding and accommodating the limitations of human rationality in decision-making (Simon et al., 1987). In essence, bounded rationality significantly impacts economic theories,

decision-making practices, and the creation of methodologies to support decision-making (Simon et al., 1987). Recognizing human rationality's limits encourages a move toward more accurate and nuanced understandings of decision-making in complex and uncertain situations (Simon et al., 1987).

### 3.5 Economic Rationality

Economic rationality, as described by Emmanuel, Harris, and Komakech (2010), argue that decision-makers can access all relevant information to make decisions. However, in the real world, this assumption is often a challenge. Decision-makers, despite their best efforts, find it difficult to obtain and compile all the necessary information for making qualitative and accurate decisions. According to Emmanuel, Harris, and Komakech (2010), the concept is based on the assumption that decision-makers, when presented with the same information and set of alternatives, will make decisions that maximize their utility and financial growth (Emmanuel, Harris, & Komakech, 2010). This concept assumes a uniform approach to decision-making; when given identical information, decision-makers will make similar judgments due to their unified objective of maximizing economic profit (Emmanuel, Harris, & Komakech, 2010). Moreover, it presumes that all relevant information is accessible and obtainable with a collective consensus on the relevance of the information concerning the decision (Emmanuel, Harris, & Komakech, 2010; Northcott & Alkaraan, 2007a). Emmanuel, Harris, and Komakech (2010) underscore that, despite economic rationality's pivotal role in economics and decision theory, economic rationality faces criticism from interdisciplinary perspectives, especially concerning cognitive biases influencing economic decisions. Emmanuel, Harris, and Komakech (2010) argue that biases significantly affect decision-making processes.

The complex nature of the decision-making process provides a crucial setting to explore the limits of economic rationality (Emmanuel, Harris, & Komakech, 2010). Emmanuel, Harris, and Komakech (2010) emphasize the importance of involving multiple managers' opinions in the decision-making process and valuing managerial judgment within this process. Unlike the traditional view of purely rational economic decisions, decisions might be affected by factors beyond financial gain (Emmanuel, Harris, & Komakech, 2010). These include personal decision-making shortcuts (heuristics), how decisions are presented, and the process of reaching

an agreement among decision-makers (Emmanuel, Harris, & Komakech, 2010). Insights from behavioral finance and cognitive biases highlight how these biases and heuristic elements influence organizational decision-making, challenging the fundamental belief in economic rationality (Emmanuel, Harris, & Komakech, 2010). Behavioral finance explores how the emotions and biases of decision-makers influence their financial choices (Emmanuel, Harris, & Komakech, 2010). It recognizes that people do not always make logical decisions but are influenced by their feelings and prone to cognitive errors (Emmanuel, Harris, & Komakech, 2010).

Emmanuel, Harris, and Komakech (2010) delve into the limitations of economic rationality in understanding the decision-making process. They underscore the importance of managerial judgment, which becomes particularly crucial in navigating the complexities and uncertainties that characterize certain decisions of financial institutions. This approach challenges the idea of a consistent and logical decision-making process, highlighting the unique and valuable role of managers in decision-making.

### 3.6 Heuristics

Research highlights various cognitive biases and heuristics influencing managerial judgment (Tversky & Kahneman, 1974; Kahneman, Lovallo & Sibony, 2011; Piotrowski & Bünnings, 2022; Hammond, Keeney, & Raiffa, 2006). These biases, such as framing, anchoring, and confirmation bias, can distort rational decision-making (Tversky & Kahneman, 1974). Influenced by these biases, managers might overlook crucial information, overestimate certain aspects, and neglect risks associated with alternatives (Kahneman, Lovallo & Sibony, 2011). These biases may lead to an overreliance on simplified decision-making shortcuts (heuristics) that could hinder a comprehensive evaluation of the prospect (Piotrowski & Bünnings, 2022). The impact of cognitive biases and heuristics in the decision-making process might result in managers presenting some information while withholding others to convince subordinates and potentially the board of directors that their proposal is a good one (Tversky & Kahneman, 1974; Hammond, Keeney, & Raiffa, 2006).



On the other hand, cognitive biases and heuristics might, in some situations, be beneficial; the primary strengths of managerial judgment lie in its adaptability to complex and uncertain situations (Grant and Nilsson, 2020; Emmanuel, Harris & Komakech, 2010; Piotrowski & Bünnings 2022). In the realm of complex decisions, where conventional models or rules might not be entirely applicable due to incomplete or unreliable data (Northcott & Alkaraan, 2007a), managerial judgment fills the gap. It allows managers to navigate through ambiguity, drawing upon their experience, expertise, and intuition to make informed decisions (Emmanuel, Harris & Komakech, 2010). Further, Emmanuel, Harris, and Komakech (2010) argue that managerial judgment complements rational economic analysis models by incorporating contextual understanding and organizational nuances. Additionally, research has shown that companies' long-term vision and mission statements might align more with managerial judgment rather than systematic economic analysis (Emmanuel, Harris & Komakech, 2010).

Decision-makers are affected by subconscious heuristics and biases that influence their ability to make objective decisions, often occurring unconsciously in uncertain decisions, and these biases can potentially impact decision processes in both beneficial and detrimental ways (Piotrowski & Bünnings 2022; Tversky & Kahneman, 1974; Emmanuel, Harris & Komakech, 2010). Decisions are seldom based solely on objective facts but are often affected by heuristics such as framing, anchoring, and confirmation bias (Tversky & Kahneman, 1974; Emmanuel, Harris & Komakech, 2010). Tversky and Kahneman (1974) highlighted that cognitive biases and heuristics influence managerial judgment. When these biases influence managers, they might overlook crucial information, overestimate certain aspects, and neglect risks associated with investment opportunities (Kahneman, Lovallo & Sibony, 2011). These biases may lead to an overreliance on simplified decision-making shortcuts that could hinder a comprehensive evaluation of the prospect at hand (Piotrowski & Bünnings, 2022) - enhancing the importance of a rigorous evaluation process used in the decision-making to ensure reliability in the decision and awareness of managerial judgment's limitations.

### 3.6.1 Framing

Framing, a cognitive bias that significantly influences decision-makers, is a crucial aspect of the decision-making process and is one of the most prevalent biases (Hammond, Keeney, & Raiffa,

2006; Tversky & Kahneman, 1974). Framing describes how a problem or opportunity is framed can have a profound impact on organizational decisions (Hammond, Keeney, & Raiffa, 2006). Framing is often intertwined with other psychological traps, leading to different choices or judgments depending on how the information is framed and presented (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974).

The initiation of the decision-making process involves defining the problem, a step that can inadvertently trigger psychological traps and significantly shape the resulting decision (Hammond, Keeney, & Raiffa, 2006). This initial framing can influence preferences, emphasize irreversible costs, or seek information that merely confirms pre-existing beliefs (Hammond, Keeney, & Raiffa, 2006). Hammond, Keeney, and Raiffa (2006) further illustrate how the framing effect leads individuals to display risk-averse behaviors when potential gains are emphasized, in contrast to risk-seeking behaviors when focusing on preventing losses. Additionally, individuals often accept the initial presentation of a problem rather than reinterpreting it from their perspective (Hammond, Keeney & Raiffa, 2006). This underscores the significant influence framing has on decision-making (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974).

A common form of framing is where the information or problem is presented regarding gains and losses, significantly impacting the decision-making process and the decision-maker's ability to evaluate the information or problem (Hammond, Keeney, & Raiffa, 2006). Hammond, Keeney, and Raiffa (2006) demonstrate that framing information or a problem can lead to significantly different decisions, depending on whether the emphasis is placed on potential gains or losses as an outcome of the decision. When an opportunity is framed to highlight possible gains, individuals generally exhibit risk-averse behavior, preferring options with guaranteed outcomes over those with uncertain but potentially higher rewards (Hammond, Keeney, & Raiffa, 2006). Contrary to the focus on avoiding potential losses, people are more likely to engage in risk-seeking behavior, choosing uncertain outcomes if they offer a chance to prevent an inevitable loss (Hammond, Keeney, & Raiffa, 2006). This contrast underscores the profound influence that framing has on decision-making preferences, and the perspective on different decisions changes depending on what is emphasized (Hammond, Keeney, & Raiffa, 2006).

Research has found that mitigating the effects of framing on decision-making requires adopting specific and comprehensive strategies (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). Decision-makers and individuals should question the initial framing of a problem or information instead of accepting it at face value by attempting to reframe the issue from multiple perspectives to uncover potential biases introduced by the original framing (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). Incorporating a balanced perspective that equally weighs gains and losses is crucial for decision-makers to navigate today's complex business environment (Hammond, Keeney, & Raiffa, 2006). By presenting the problem with a comprehensive view that includes diverse reference points, decision-makers can effectively avoid the traps of framing, which often leads to biased or overreliance on simplified conclusions (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). Critical reflection throughout the decision-making process about how the issue is framed can enable decision-makers to identify how alternative framings might alter their thought process (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). Moreover, when seeking advice from others, carefully examining how their suggestions are framed and considering alternative perspectives is essential (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). This approach helps to ensure that decisions are not disproportionately swayed by a biased presentation of the issue or opportunity (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974).

### 3.6.2 Anchoring

According to Tversky and Kahneman (1974), one of the main heuristics affecting decision-makers judgement is anchoring. Anchoring occurs when managers are influenced to rely too heavily on initial information (anchors) and fail to adjust their judgments based on new or relevant information. This cognitive bias impedes their ability to make fully informed decisions, as they might not fully consider or integrate newer, potentially more critical information into their analysis (Slovic et al., 2007). Moreover, Tversky & Kahneman's (1974) research found that anchoring in the decision-making process often results in errors in estimation, which can lead to inaccuracies. This phenomenon primarily arises due to managers' initial estimates and diverse starting points (Hammond, Keeney & Raiffa, 2006). Additionally, managers frequently assess scenarios using reference points based on previous experiences

(Emmanuel, Harris & Komakech, 2010). A common misconception is the belief that individuals can easily ignore these anchors in their decision-making process, but in reality, decision-makers are often unable to be completely objective (Kahneman, Lovallo & Sibony, 2011).

Anchoring causes decision-makers to overly focus on the first pieces of information they get, like initial impressions or estimates, which then heavily influence their decisions (Kahneman, Lovallo & Sibony, 2011; Hammond, Keeney & Raiffa, 2006). In today's business environment, a frequent form of anchoring occurs when estimates are based on historical data or trends, even though one cannot assume that these trends will continue (Kahneman, Lovallo & Sibony, 2011; Hammond, Keeney & Raiffa, 2006). Kahneman, Lovallo, and Sibony (2011) suggest that a detailed examination of numerical data in a proposal may enable decision-makers to identify and overcome any anchoring biases (Kahneman, Lovallo & Sibony, 2011). Should a recommendation seem influenced by an initial reference point (anchoring), decision-makers are advised to ask for a revision of the estimates to account for a more balanced starting point to counteract the anchoring effect (Kahneman, Lovallo & Sibony, 2011).

The concept of anchoring has both a positive and negative effect on the decision-making process (Weinstein, 1980; Lyles 1981). However, anchoring is often viewed to have emerged as a challenge in decision-making and is often seen more as a negative aspect of managerial judgment (Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). Anchoring can positively impact the decision by enhancing knowledge and confidence through the decision-maker's previous experience (Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). However, it is also emphasized that decision-makers frequently overestimate their knowledge based on their prior experience (Weinstein, 1980; Lyles, 1981). In line with the previously stated problem of professionals overestimating their knowledge based on previous experience, research has also found that more than 90% of people overestimate their ability and often view themselves as above average, creating a so-called better-than-average effect (Weinstein, 1980). Further, Weinstein (1980) suggests that anchoring complements traditional economic analysis methods by adding context and understanding organizational nuances.

According to Hammond, Keeney, and Raiffa (2006), mitigating the influence of anchoring in the decision-making process is complex. However, viewing the problem or decision from different

perspectives and using alternative starting points can reduce the influence of anchoring (Hammond, Keeney, & Raiffa, 2006). The key is to be open-minded and seek information and opinions from various people to widen the frame of reference and promote alternative thinking and solutions (Hammond, Keeney, & Raiffa, 2006). Furthermore, Hammond, Keeney, and Raiffa (2006) emphasize the importance of avoiding anchoring advisors, consultants, and others from whom the decision-maker solicits information and counsel by telling them as little as possible about the idea, estimates, information, and decisions at hand.

### 3.6.3 Confirmation Bias

Confirmation bias significantly influences decision-making (Hammond, Keeney, & Raiffa, 2006; Nickerson, 1998; Tversky & Kahneman, 1974). This bias prompts individuals to actively seek out and prioritize information that aligns with their pre-existing beliefs or opinions while disregarding or undervaluing evidence that might challenge their viewpoint (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). This tendency affects the sources from which decision-makers gather their information and how they interpret it and make decisions (Tversky & Kahneman, 1974). Consequently, a disproportionate emphasis is placed on evidence that correlates with their initial belief, with conflicting data often being overlooked or the risk associated is minimized (Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010).

Such a bias originates from a deeper unconscious bias, often occurring subconsciously, decides what they want to do before figuring out why they want to do it and before fully understanding the rationale behind their choice (Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). This is often due to individuals' tendency to be more interested in information or opinions they naturally agree with than those they disagree with (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). As a result, decision-makers are unconsciously drawn toward information that supports their subconscious leanings (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). This tendency can significantly distort their judgment and decision-making abilities, resulting in choices that might not be well-informed or that may ignore crucial opposing views (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010).

### 3.7 The Use of Literature

In this thesis, the literature review is instrumental in framing the investigation and underpinning the analysis of how managerial judgment influences decisions regarding operational risk within financial institutions. Within this chapter, the authors will briefly explain how the presented literature will be used when analyzing the empirical material. Since the purpose of this thesis is to examine the internal decision-making processes of financial institutions, such models were chosen to give the reader a conceptual understanding of the processes. The models proposed by King (1975) and Harris (1999) explain the decision-making process from two different perspectives. These models challenge the primacy of numerical data, emphasizing the role of judgment under conditions of uncertainty and risk. This thesis will apply these theoretical models to analyze how financial institutions incorporate managerial judgments into their risk evaluation and decision-making processes, moving beyond straightforward economic rationality. Moreover, pre- and post-decision controls are presented as a part of the decision-making process. Pre-decisions controls are used in the scope of this thesis to understand how organizations ensure that the behaviors and decisions undertaken by decision-makers are in harmony with the organizations' objectives and strategies before the decision is made. Additionally, the heuristics presented in this chapter will be used to further examine how managerial judgment affects decisions regarding operational risk.

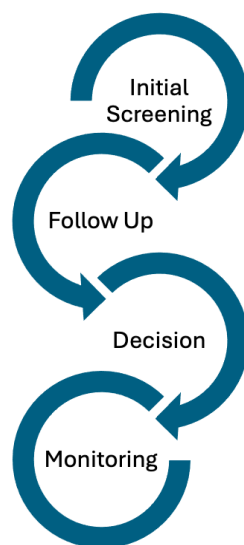
Further, to answer the purpose of this study, namely to examine how managerial judgment affects decisions regarding operational risk within financial institutions, managerial judgment and operational risks within financial institutions were explained. These theories will identify where and how managerial judgments can lead to potential misjudgments within the decision-making process. Related to the literature on managerial judgment are cognitive biases and bounded rationality. This analysis will identify specific instances where managerial judgments deviate from traditional economic predictions, using real-world examples from financial institutions to highlight these deviations.

## 4. Managerial Judgment within Operational Risk

In this chapter, the empirical material will be presented. Firstly, the decision-making process is related to the risk assessment done by financial institutions. This process will be presented and explained in relation to a self-developed model divided into four different stages. This model deviates from previous models described in the scope of this thesis, such as the King (1975) and Harris (1999) model. However, the model presented in this chapter is more related to how financial institutions operate. In contrast to other models presented in the scope of this thesis, our model consists of fewer steps and gives the reader a briefer but more comprehensible overview of the decision-making process. Lastly, the empirical section describes what strategies financial institutions can adopt to avoid mistakes and enhance the decision-making process.

### 4.1 The Decision-Making Process - Stages & Managerial Judgment

From the interviews conducted, formal processes are the main basis on which financial institutions base their risk assessment. The decision-making process within financial institutions is multifaceted and heavily reliant on quantitative and qualitative data. The interviews show that the decision-making process is crucial to understanding what parts are susceptible to managerial judgment. In the scope of this thesis, the decision-making process will be described in different stages. These stages are described in the following model:



*Figure 3. Process of the Decision-Making within Financial Institutions*

#### 4.1.1 Stage One - Initial Screening Process

The first stage within this model is stage one, “Initial Screening.” This stage of the decision-making process is driven by formal processes, where the customer is required to answer a set of standardized questions. The customer gets to answer questions about their income, assets, nationality, beneficial owner of any companies, if they transfer or receive money from another country, and why they chose that specific financial institution. Answering these questions is part of the formal process known as “know your customer” (KYC). These questions are asked to get a basic understanding from the customer. Interview findings have shown that financial institutions have different routines for answering these questions. I1, I4, and I9 state that their organization has an in-person meeting where the customer answers the questions, contradicting other findings where the initial screening process is entirely online based.

*That process is quite standardized; everyone gets exactly the same form and fills it in, and above all, what you fill in is which transactions should be made and from which countries. Will you have more banks in Sweden, and if so, which ones, what flow will there be between them? There, you also fill in your nationality, whether you receive transfers from other countries or if you are going to send money to other countries. And if you have a company, you also provide that information in the form. So it's quite comprehensive, but still very general, so to speak, so that's the big part we do. -I2*

As for managerial judgment within this process, I5 describes that all customers answer the same questions about their finances. Within these initial questions, there is little to no room for managerial judgment. However, the findings show that the initial screening processes can be conducted online or in person at a physical office. I1 describes this process as a chance to meet the customers and get an overall feeling about them. Meeting customers with whom the financial institution is doing business with is, according to I4, greatly appreciated since it allows for follow-up questions in direct relation to their answers. Further, I1, I2, and I5 describe the process as being just as much about how someone answers a question as what they say.

*The process is really standardized; everyone gets exactly the same form and fills it out, and primarily what you fill in are the transactions that are to be made and from which countries. Will you have more banks in Sweden, which ones if so, and what do they look like, and what flow will*



*occur between them. You also fill in nationality, whether you receive transfers from other countries or if you are going to send to other countries. And if you have a company and all, you fill that in there. So it's quite comprehensive. But still very general so to speak, so that's the big part we do. - I2*

*...to become a customer here... you must visit a physical office to fill out the physical form that is then taken and assessed. - I1*

Despite the standardized processes, the findings suggest that the judgment of the specific employee, particularly their “gut feeling”, plays a crucial role in the screening process. I1 explains that when they meet in person with customers, they often rely on this instinctive reaction. However, to ensure this “gut feeling” does not cloud their judgment, conversations with more senior colleagues about this feeling are a method rigorously employed by all interviewees. This practice helps to balance subjective assessments with objective data, enhancing the overall effectiveness of the “Initial Screening” process.

*Usually, we have a gut feeling about what type of customer it is.- I1*

*Then I have colleagues who have worked in these departments who are a great support to consult with, and they also have access to a different registry than we do, about people who appear in criminal cases. So we make an assessment, but often it's the deviations that we have to deal with. -I4*

*One must go to a number of different colleagues and managers to discuss these matters, quite thoroughly. -I5*

#### 4.1.2 Stage Two - Follow Up

When the initial screening has been made, financial institutions will progress in validating the provided information. As described by I1, I2, I5, and I6, the second stage of decision-making, when the initial screening has been conducted and quantitative data collected, is to validate the information provided. This process typically begins with a conversation with the customer about

the answers to the KYC questions they provided. Within this conversation, the decision-maker confirms that the provided information is accurate. While having this conversation, the employee interacts with the customer and, in this way, gets additional insights into how the customer answers questions. According to I1, I2, I4, and I6, this information is often related to personal financial assets, tax records, salary, and engagement in financial institutions or other financial resources. For customers who manage businesses, further analysis of relevant information and confirmation of the firm's beneficial ownership are essential.

Interviewees I1, I2, I4, and I5 highlight the favorable aspects of meeting the customer physically or through a phone conversation where the information is reviewed and confirmed. Interviewees I1, I2, and I4 all emphasize the importance of having conversations with potential customers since they give context to the client's purpose, which may be positive or negative for the decision. Interviewees I1 and I2 further state that behavior and knowledge about basic finances are vital for building a gut feeling about a client.

*We can almost immediately sense such a person when we meet them, so it's something we do. It's very important to meet the customer you are doing business with; it matters a lot. -I4*

Further, I1 highlights that if the client starts to get defensive about their answers or does not understand the impact of increased interest rates, might influence the intuition of the decision-maker negatively and raise concerns. Due diligence is a vital part of the process, but I1, I4, and I9 state that judgment and intuition are equally important when reviewing information. I4 also explains that employees within financial institutions are more cautious than other industries due to their risk-averse nature. I4 further argues that this trait is typical for bank employees and causes them not to be entrepreneurs or venture capitalists. If that were the case, bank employees would have a completely different approach to decisions; I4 stresses that they are trained to ask many questions and assess the risks to conduct continuous risk analysis.

I1, I2, I3, I7, and I9 emphasize how intuition accuracy improves over time as one gets more experience. I1 states that a certain gut feeling that occurred in the earlier stages of the career might have been incorrect and has, over time, developed to be more accurate with more experience. I1 exemplifies this with previous events where a customer's behavior or information deviates from the normal. However, more senior colleagues could ensure that such behavior or

information is normal within that industry or sector. I3, I4, I5, I6, and I8 claim that the gut feeling continuously evolves to become more accurate. They emphasize that working experience increases their reliance on gut feeling, improving the decision-making process to make it faster and more accurate. However, some interviewees recognize the difficulty of basing their decisions on judgment and experience. I4 further mentions that judgments and intuition are often based on deviation from what is normal. Moreover, I1, I2, I4, and I5 all emphasize that determining what is normal for a particular customer is often based on a general feeling and deviations from their provided answers to the KYC. This is further confirmed by I5, who states that the more abnormal a situation is, the more intuition, judgment, and gut feeling influence the decision-making process. However, I4 states that, when relying on judgment, there is an increasingly high risk that more senior members of the organization affect decisions made by less senior employees.

*There is always a risk that such things (senior members affecting less senior members' decisions) happen, as we have seen. It is a recurring issue for operations. -I4*

*We have become much stricter over the past year. This applies to the basis for the down payment as well as the pay slip and so on. Usually, we have a gut feeling about what type of customer it is; those (documents) that have been forged in the cases I know of have been handcrafted. You can see that it's not in PDF form, and you can also tell if it's a company that we are not 'familiar with. - I1*

Additionally, I4 highlights that intuition and judgment are frequently used to evaluate customer data to ensure that it is reasonable and accurate during this follow-up stage. I4 emphasizes the importance of getting to know the customer to get contextual information when assessing the provided data. Nevertheless, I4 mentions that one might have 400 clients and only know 80 very well while occasionally communicating with the rest.

#### 4.1.3 Stage Three - Decision

The final decision occurs during the third stage of the decision-making process, based on the data provided and customer interactions. I1, I4, I8, and I9 emphasize that while judgment should be integrated into the decision-making process, it is crucial that the financial calculations to remain coherent and add up. These calculations assess the customer's ability to withstand increased

interest rates and endure heightened financial pressure. Depending on the matter, the underlying financial resources and collateral are authenticated to make accurate calculations, which most decision-makers rely on as the basis of their decision. I1 and I2 highlight that the customers' behavior and knowledge about their financial situation play a crucial role in the decision-making process and may affect the outcome positively or negatively.

The findings reveal that decision-makers often base their choices on multiple factors, with their gut feeling and judgment being one of the primary influencers. I1 explains that the formal process serves as a guide for decisions where the data is reliable. However, I1 also points out that in certain instances, the deciding factor could be the judgment of the decision-making employee. I5 further elaborates on this, illustrating how alternative data can be interpreted differently depending on the recipient.

*Partially... it's a lot of personal decisions because it might be a calculation that works out with an extra 200 krona that I approve, but another one with an extra 2000 krona that I reject. It somewhat depends on how the customer behaves when one interacts with them, either over the phone or physically in the office. -I1*

A common practice employed by financial institutions within this stage of the process is to discuss the matter at hand, both internally within the department and with specialists. All interviewees who participated appreciated these discussions, no matter the seniority of the interviewees. Everyone describes this process as beneficial because it improves decision-making and is a great learning opportunity for less senior members to learn from more senior ones. On the other hand, I3 and I7 highlight the importance of fostering team decisions rather than only relying on the judgment of more senior team members. I2 and I5 go as far as saying that more senior members overlook some risks that less senior members often highlight as risks. I2 explanation for this is that more senior team members' experience weighs heavy when making decisions. I5 further describes that senior team members often just glance at an inquiry made by a less senior team member, going as far as calling it a "judgment call" rather than a decision. Even though I5 feels comfortable with their superiors' experience and knowledge, they wish they would be more invested in the decisions based on facts rather than just their experience. Further,

I4 emphasizes that an organization's overreliance on its manager's judgment might hurt the organization.

#### 4.1.4 Stage Four - Monitoring

The fourth stage of the decision-making process is the monitoring stage. Within this stage, I1, I2, and I5 state that the customer's due diligence or KYC questions are monitored to see if there are any deviations from what the customer has stated in the first and second stages. I1, I2, and I5 describe that any deviations are flagged automatically by the technical system and analyzed manually in-depth to determine the matter at hand. According to I4 and I5, transactions of abnormal sizes, in different currencies, and from other countries are particularly interesting. Interviewees I4 and I8 highlight that if the customer deviates from their normal behavior or would have any deviation from the initial screening process, questions about the legitimacy of these transactions will be raised.

However, employees' judgment is also used during the monitoring stage. Both I1 and I5 state that even if they rely on the technical system, if they identify abnormal or suspicious transactions, they are flagged and forwarded to a specific department that deals with that specific matter. During this stage, I1 and I5 highlight that even if a technical system is in place to monitor activities, decision-makers still need to make a decision, more reliant on their managerial judgment. Additionally, I4 and I9 state that one's experience makes it easier to identify abnormal behavior when interacting with a client. In cases where the intuition senses something is suspicious, the gut feeling is often proven right after a formal investigation.

*And... in the cases where we have escalated transactions involving customers who seemed uncertain and where the bank has conducted an internal investigation. Usually, I have had a correct gut feeling; that's how it is. - I4*

## 4.2 Avoid Mistakes & Enhance the Decision-Making Process

### 4.2.1 The Effect of Experience on Managerial Judgment

From the interviews, one of the main reasons for managerial judgment affecting the decision-making process is the experience of the deciding team members. I1 and I2 greatly

emphasize the formal models used within the process. However, I3, I7, and I8 put forward a perspective where some junior employees sometimes have an overreliance on the risk models employed in the process. I8 questioned some of the junior member's knowledge regarding the underlying models. I8 argues that even though the experience does not guarantee having a more holistic knowledge regarding operational risks, the experience provides conceptual knowledge about potential risks.

*I think that... it's also 'how long does the memory last in the organization?' When I was out in the offices looking back to the 2010s, which is soon 14-15 years ago. Back then, many were still in the organization who had been through the banking crisis and experienced poor lending that had bad consequences. 'I lost my job or we all lost our jobs.' That has been in the consciousness of many, and I'm not sure if it remains. -I8*

*But also that one has experience with risk methodology and that one has seen various methods and been involved in observing various scenarios and participated in assessing different scenarios and risks where one has seen risks materialize in different ways. -I7*

*"A burnt child dreads the fire" -I8*

At the same time, I5 describes their experience interacting with some more senior members within their organization as sometimes being clouded by their previous experiences. However, most interviewees recognize that experience enables decision-makers to make better and faster decisions.

*Often the boss might just say, 'Eh, it looks good, just go ahead,' but sometimes I get a feeling like, 'come on, you barely looked at this.' Is it because there isn't a big risk with this decision, or because you don't have time, or because you've seen this thousands of times and know that everything will go through? -I5*

*Yes, partly, it's simpler, but then I also think it becomes better. It's simpler in the sense that I am faster, but also that it becomes more... accurate, I would say. -I6*

#### 4.2.2 The Effect of Corporate Culture on Managerial Judgment

From the interviews, it has become evident that participants all agree on the importance of having a risk-aware organizational culture. Both I2 and I3 emphasize how a culture of open-mindedness increases the motivation to speak up and discuss complex decisions. Another point raised by I8 is the importance of having a corporate culture that promotes discussions and questions about risk. I8 further argues that these discussions regarding risk assessments have become increasingly more common within today's organizations than 20 years ago. The reasoning behind the increasingly more common discussions regarding risk is, according to I8, due to the more risk-averse culture of today's financial institutions. I3, I6, I7, and I8 enhance the significant positive effect open discussions can have on a firm, and such awareness about risk is beneficial to a firm's operations and in shaping the judgment of its employees. I1, I2, I3, I5, I6, and I7 all argue that even if there are hierarchy differences between junior and senior employees, today's financial institutions' cultures allow daily discussions. I1, I2, I3, I5, I6, and I7 also emphasize that senior employees are open to the opinions and judgments of junior employees, especially concerning challenging decisions when data is insufficient. Within the separate organizations of I3 and I7, organizational members are encouraged to question and challenge decisions.

*No matter what role one has, having someone who challenges what you have presented, just as you will be opposed in this thesis - it's good. Because then you have to think about your decision again, I believe we have such a culture. It's like no one has that pride; instead, we like to be questioned to challenged. - I3*

I2 and I8 further explain that the culture can promote and increase judgment development among junior employees with a risk-aware culture. Additionally, I1, I2, I3, I5, and I7 highlight how their culture, when in doubt, is motivated to contact expertise within the organization when senior employees' guidance is insufficient. I8 highlights a critical viewpoint concerning a firm's culture; I8 states that it is important that there is a strong culture and that the firm's risk appetite is reflected within it. I8 argues that if such a culture is not in place, formal and informal leaders within an organization will set those boundaries themselves and operate as separate entities,

directly affecting the organization negatively. Further findings from I8 suggest that there are not only cultural differences between the organizations but also between employees of different ages. I8 states that most junior employees have not experienced the financial constraints that senior employees have experienced, suggesting cultural differences between generations. Similarly to what I8 states, I3 and I9 suggest that people who have experienced financial hardships due to crises often have a different perspective on risk, namely being more risk-averse.

*Something that has also come up is the 'tone at the top,' which I suspect is still a common expression. I notice when I come to a bank that may have a more mature risk culture based on having taken a hit in the 90s, and a lot has happened since then. But from my experience with insurance companies, the risk culture isn't quite the same. - I8*

#### 4.2.3 The Effect of Corporate Structure on Managerial Judgment

From the interviews, it has become evident that the organization's structure plays a crucial role for its members. It enables members to seek advice from more senior colleagues or for more experienced members within the organization to be challenged by less experienced colleagues. Both I1 and I2 emphasize how an open corporate structure allows them to seek advice from experts and enhance the accuracy of their decisions while simultaneously developing their intuition, which is similarly experienced by I3, I5, I6, and I7. I3 and I7 further enhance that having a structure that allows junior and senior employees to interact improves judgment development, similarly stated by I8. I1, I5, and I8 highlight that today's financial institutions extensively use technical systems. According to I1, I5, and I8, these systems are a big part of what shapes today's financial institutions. I5 emphasizes that there is a high degree of reliance on these systems, and the organization's structure enables the members within these organizations to capture abnormalities. Additionally, I1 states that decisions within their organization are reviewed multiple times before the final decision is made.

*We do have a lot of systems that we rely on - I5*

*But one input that I can see as a general point here, I can see a risk in moving further away from your risk assessment because of too much trust the system - I8*



However, I8 questions the degree of reliance on the formal systems in place to monitor risk. I8 claims that the skill development of junior employees today might be negatively affected due to the overreliance on the systems at hand. Moreover, I4 describes how financial institutions are structured to allow them to operate more carefully and argues that there are many more protective measures within financial institutions than other organizations. I4 further enhances how the routines within financial institutions differ; I4 argues that a rigorous corporate structure supports routines and critical thinking to minimize the possibility of being blinded by one's judgment. Moreover, I5 highlights how a corporate structure increases and ensures employees' awareness of risk and compliance by having weekly meetings to address these questions.

## 5. Discussion

### 5.1 Managerial Judgment - Heuristics within the Process

Today's financial institutions encounter multifaceted challenges that have never been seen before, with risks that are difficult or even impossible to quantify. Risks regarding climate change, criminality, and geopolitical risks are risks that interviewees in the scope of this thesis name as some of the risks that they face on a daily basis. The authors of this thesis have developed a model to describe the decision-making process, evaluate these risks, and limit judgment calls within this process. In this chapter, the process will be used to describe where the judgment of the deciding employee affects the decision-making process. Research on this subject indicates that organizations must balance their judgment with an analytical approach to navigate an uncertain business environment and to reduce risks associated with their decisions (Harris, Emmanuel & Komakech, 2010; Bonabeau, 2003). However, as suggested by the findings, an analytical approach is not always a viable option when a decision needs to be made despite incomplete information.

Harris (1999) describes the decision-making process in several stages where managerial judgment and pre-decision controls play crucial roles. The empirical data reveal a strong alignment with these stages, particularly in how managerial judgment is integrated into each step, from initial screening to final decision-making. Further emphasized by Harris (1999) is the importance of pre-decision controls in the early stages, such as opportunity identification and preliminary screening, ensuring decisions align with organizational objectives before significant resources are committed. This integration of judgment and intuition, especially in the interpretation of customer data and assessment of financial stability, reflects the theory's emphasis on the complexity and subjective nature of decision-making processes, resembling Emmanuel, Harris, and Komakech's (2010) findings regarding the complexity of the decision-making process. However, the inherent complexity of the decision-making process gets easier with the help of tools such as the PCA, described by Harris (1999), providing the process with much needed feedback to refine and improve future decisions. From the empirical data, it has become evident that managerial judgment helps guide decision-makers. However, as the

empirical material shows, this judgment can also cloud the decision-making process. Hence, the following sections will describe and analyze the heuristics affecting the decision-making process.

### 5.1.1 Heuristics within the Process

As described in the empirical material, the decision-making process is divided into four different stages within the scope of this thesis. Within these stages, different heuristics affect the decision-making process. Within stage one, the initial screening process, decision-makers appear less affected by their judgment. The authors of this thesis argue that there is one main reason for this lack of judgment affecting this part of the decision-making process. The first stage of the decision-making process is more structured. As the findings have shown, the structures employed by financial institutions to counteract judgment within this stage of the decision-making process are for every customer to answer exactly the same questions regarding their financial situation, enabling the financial institution to decide the operational risk associated. Such structures leave the decision-maker with less ability to use their judgment within the decision at hand. The findings also suggest that the initial screening process is mostly affected by formal processes, confirming findings made by Dreyfus and Dreyfus (1980), however I1's organization deviates from the norm. Within I1's organization, I1 describes the initial screening processes is conducted at a physical office. When this process is carried out in the physical office, I1 emphasizes that potential biases toward customers can occur. I1 states that it is just as much about how someone says something as what they are saying, admitting to their biases. Such biases tend to get bigger as the decision-maker gets more experience, which aligns with the findings of Tversky and Kahneman (1974) and Simon et al. (1987).

Further resemblance can be found with Dreyfus and Dreyfus (1980) who argue that when more experience is gained over time the decision-maker relies less on abstract principles and, to a greater extent, on experience. Dreyfus and Dreyfus (1980) emphasizes that the brain is cognitively trained to organize and store information to provide a basis for future recognition of similar situations viewed from similar perspectives. This theoretical analysis resembles the findings from interviewees I3, I4, I7, and I8, which highlight how the experience gained in their particular field increases the reliance on their judgment and improves the decision outcome. Findings also suggest that younger and more junior employees with less experience tend to take

longer to do tasks. This behavior resembles the earlier skill acquisition stages of the Dreyfus model, where individuals follow the rules and where guidance is necessary to ensure actions align with the organization's culture, principles, and rules. However, Tversky and Kahneman (1974) argues that such judgment could also cloud a decision-makers judgment. Tversky and Kahneman (1974) name such biases anchoring. Hence, our findings suggest that anchoring might be a common heuristic within the initial screening process.

The second stage in the decision-making process, the follow-up stage, is when the decision-maker starts to get a general picture of the customer. Extensive personal contact with the customer in question characterizes this stage. When interviewees have such contacts, they describe that they get a general gut feeling or intuition about the customer (see, for example, I1, I3, I4, I5, I6, and I8). Interviewees describe that their gut feelings are a guiding factor when making decisions, subconsciously decided based on their intuition as opposed to the underlying data (Harris, 2014). When the decision involves greater risks or potentially falls outside the financial institution's risk appetite, the likelihood of decisions based on managerial judgment is higher than in more routine-like decisions.

The authors of this thesis argue that within the follow-up stage of the decision-making process, decision-makers are mostly affected by the heuristic confirmation bias, described by Tversky and Kahneman (1974). Answers from I3, I4 and I8 suggests that decision-makers are unconsciously drawn toward information that supports their subconscious leanings (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010). Such judgments might significantly distort their judgment and decision-making abilities, resulting in choices that might not be well-informed or that may ignore crucial opposing views (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974; Emmanuel, Harris, & Komakech, 2010).

The third stage of the decision-making process is the final decision. Less senior members within the organization describe the decision as a formal process that often, but not always (depending on the organization at hand and the level of seniority of the decision-maker), involves multiple people within the organization with different seniority. Since this stage of the process involves discussions between different decision-makers, within this part of the decision-making process financial institutions have the best likelihood of noticing any heuristics that have affected the

decision up until now. However, the decision is still made based on the initial analysis. Hence, the heuristics affecting previous stages within the process will affect how the analysis and reasoning behind the suggested decision will be affected.

Further, this thesis's authors argue that framing is the main heuristics that affect that part of the process. From the findings, it is evident that the way junior employees present an analysis to more senior employees can greatly affect their reaction to the analysis at hand. In this stage of the process, it is important for senior employees to ask the correct questions and give enough time to analyze the decision at hand. However, findings from I5 suggest that their manager often takes the analysis for granted without further looking into the underlying analysis. Hence, this suggests that the way a suggestion is framed greatly affects the outcome of the decision (Hammond, Keeney, & Raiffa, 2006; Tversky & Kahneman, 1974). Further, arguments could be raised that the more experience one gets, the more effective and accurate the decisions made by a decision-maker are, which strongly resembles the later stage of the Dreyfus model (Dreyfus & Dreyfus, 1980). The authors of this thesis argue, in line with findings by Dreyfus and Dreyfus (1980), that the more experience a decision-maker has, the more guided decision-makers seem to be by their judgment.

The fourth and final stage of the decision-making process is the monitoring stage. Despite a final decision already being made, the monitoring stage can be compared to the PCA (Huikku & Lukka, 2016). A limited number of heuristics affecting the process have been found within this stage. However, all interviewees agree that discussion after the decision greatly helps with the learning of both junior and senior members of the organization, resulting in organizational learning about the analysis process and the heuristics affecting the earlier stages of the process (Huikku & Lukka, 2016). However, it is important to acknowledge that experience development may not be linear. The interviews reveal a more complex and non-linear learning process, where individuals may move back and forth between stages of the Dreyfus model. This observation suggests that various external factors and cognitive biases influence skill progression. Furthermore, the Dreyfus model's focus on training implications may overlook learners' differences and unique learning capabilities, hence affecting the development of one's judgment and experience gained over time. The findings suggest that not all individuals progress through their experience development similarly, and their judgment shaping may vary based on their

specific strengths and weaknesses or their previous knowledge and experience. This nuanced understanding challenges the traditional view of skill acquisition, inviting for further exploration and discussion.

### 5.1.2 Bounded Rationality within the Process

In line with Hammond, Keeney, and Raiffa (2006), this thesis has found that bad decisions do not necessarily come from faulty decision-making processes but originate within the decision-maker's mind. The human mind can subconsciously sabotage decisions due to their natural biases. Hammond, Keeney, and Raiffa (2006) explain that their invisibility makes the biases so dangerous. This is also reflected within the empirical material found in the scope of this thesis, namely that the process itself is likely not a reason for managerial judgment within the decision-making process. Rather, the findings suggest that potential biases are hardwired into decision-makers' thinking processes, and if they fail to recognize them, they will likely fall right into these biases (Hammond, Keeney & Raiffa, 2006). When analyzing the decision-making process within financial institutions, it becomes evident that they are governed by a clear structure, but the rationale behind the decision can be questioned. When initially examined, the decision-making process of financial institutions seems very rational, based on numeral and formal structured processes; however, when dissected, it becomes apparent that these processes are vulnerable to the biases of decision-makers described in the previous section.

By having a nuanced discussion, where less senior team members question more senior team members and more senior team members provide their experience in the discussion, biases within the process can be recognized and avoided. Multiple interviewees expressed appreciation for having a nuanced discussion with their respective teams and the opportunity to get an outside perspective from specialist units. Even though the process itself is developed to be entirely rational, the practical execution of these processes remains partly irrational due to influences of human biases. Organizations can counteract the potential heuristics and biases within the decision-making process by having nuanced discussions and recognizing them.

## 5.2 Avoid Mistakes & Enhance the Decision-Making Process

### 5.2.1 Culture

The culture within an organization is one of the most important aspects affecting the decision-making process. Scholars have described culture as the invisible hand that helps guide organizations in uncertain times (Bonabeau, 2003). Since many of today's decisions are inherently uncertain (Emmanuel, Harris & Komakech, 2010), culture becomes one of the most important aspects affecting the decision-making process. The culture within an organization affects the intuition, gut feeling, and judgment of the deciding employee (Harris, 2014). By having a strong organizational culture where risks are recognized and discussed within the organization, interviewees highlight its importance in preventing individual risk appetites from emerging and staying within the boundaries of the organizational risk appetite. Further, among the interviewees, it is emphasized that having a risk-aware culture helps to mitigate potential biases, heuristics, and judgments affecting the decision-making process.

The importance of having a homogeneous culture does not end regarding corporate culture, it extends to differences between generations. Some findings point to the cultural differences between junior and senior employees. I7, I8, and I9 suggest that the new generation is less risk-averse than their senior counterparts who have experienced previous financial crises. This generational contrast affects how risks are perceived and managed, suggesting that the underlying economic rationale of the decisions is based on different economic rationales due to these generational and cultural differences. Economic rationality assumes that the decision-maker can access all relevant information to make decisions accurately based upon it and maximize their utility, usually in the context of decisions aimed at financial growth. One could argue that in such a uniform approach to decision-making, decision-makers will make similar judgments when given identical information due to their unified objective of maximizing economic profit. However, as our findings show, a decision is affected by much more than objectively correct data; one's judgment heavily influences the decision. This judgment is heavily influenced by the organizational culture. Hence, it could be argued that an organization's culture may clash due to these generational differences. To counteract this argument, I1

highlights that their organization employs rigorous formal processes to get a homogenized culture despite generational cultural differences.

According to the interviews, managerial judgment is particularly crucial in navigating the complexities and uncertainties that characterize operational risk decisions within financial institutions. This finding challenges the notion of a consistent and logical decision-making process by recognizing that decision-makers have diverse and subjective views on operational risk, valuation, strategic priorities, value creation, and investment alignment to organizational objectives (Emmanuel, Harris, & Komakech, 2010; Grant & Nilsson, 2019). These diverse views may be influenced by generational differences or a lack of a strong culture with sufficient guidelines forming the operational risk appetite.

The empirical evidence suggests that culture can serve as a form of pre-decision control, especially in the follow-up stage of the decision-making process (Huikku, Karjalainen & Seppälä, 2018). Establishing a robust, reliable, and risk-aware culture is an effective way for organizations to guide decision-makers and limiting the influence of biases in the decision-making process. Further, a risk-aware culture enables organizations to have a more rigorous follow-up stage, ensuring continuous monitoring of the decisions at hand. However, the empirical material also reveals the challenges associated with establishing such a culture, implying the complexity of the task.

### 5.2.2 Experience

It is inherent that experience acts as a cornerstone in refining the decision-making process and drives the development of managerial judgment. Experienced managers, as noted from the interviews, tend to make quicker and more accurate decisions, potentially due to an accumulated intuition that aligns with past successful outcomes. This finding resembles Simon et al. (1987) theory that managerial judgment evolves from a combination of knowledge and indirect understanding gained over time. However, more senior employees and managers must try translating this intuition into something more tangible. Something that the more junior employees can learn from. If the experience of more senior employees does not translate into something that junior employees can learn from, the chain of organizational learning will break



(Huikku & Lukka, 2016). An argument can be raised that organizational learning within the decision-making process can act as a form of post-decision control, enabling organizations to enhance their decision-making process continuously (Huikku & Lukka, 2016).

However, experienced managers may also fall prey to biases such as overconfidence, where their judgment could be clouded by past successes, which may not necessarily be replicable in new contexts. Based on Weinstein's (1980) research, it could be argued that decision-makers frequently overestimate their knowledge based on their prior experience with a decision. Similar traits have been found in the empirical material in the scope of this thesis, where I5 states that managers often overestimate their knowledge based on previous experience. This overconfidence, as highlighted by multiple interviews and analyses, is a widely spread pitfall within managerial judgment and, combined with Weinstein's (1980) findings that people overestimate their abilities, may cause concern regarding the risk awareness within the decision.

Overconfidence, as highlighted by multiple interviews and analyses above, is a widely spread pitfall within managerial judgment and, combined with Weinstein's (1980) findings that people overestimate their abilities, may cause concern regarding the risk awareness of the decision. It can be argued that an individual with an excellent track record and experience might overestimate their ability and generate a so-called "better-than-average effect," as highlighted by Weinstein (1980), suggesting disregarding the risk associated and deciding more based on their subjective judgment and gut feeling. Further findings from the empirical material suggests that interviewees experienced that at the very beginning of their careers, most decisions they took were of high risk. However, the findings suggest that their experience enabled them to make faster and more accurate decisions. Moreover, the authors of this thesis argue that experienced decision-makers can help organizations to further develop their internal structures for the decision-making process. The experience from decision-makers enables the organization to improve the decision-making process by providing the organization with their experience enabling the organization to draw from their past experiences and learn from them. Hence, the experience from decision-makers contribute to the organizational development and learning (Huikku & Lukka, 2016).

It could be interpreted and argued that overconfidence in the decision would enhance risk due to individuals preferring one opinion over another and often neglecting or minimizing the risk associated and potentially exaggerating the benefits of the decision, suggesting increased risk due to the managerial judgment and the experience of the decision maker (Harris, Emmanuel & Komakech, 2009; Bonabeau, 2003). This increased risk associated with a decision is even greater for top management because there are fewer lines of defense within the top of the organization, thereby relying more on top management judgment within the decision-making process. On the other hand, one could argue that subjective judgment may minimize the risk simultaneously based on their previous experience, can affect decision-making positively, and lower their overconfidence due to previous track records, thereby recognizing their abilities, limits, and the organizations' boundaries.

Furthermore, according to the literature review, economic rationality assumes that decision-makers can access all relevant information and make choices that maximize utility or profit (Emmanuel, Harris & Komakech, 2010). However, the empirical findings challenge this assumption, suggesting that it is noteworthy how decision-makers often operate under conditions of incomplete information and must rely on managerial judgment. As observed, the decision-making process in financial institutions involves balancing economic calculations with managerial judgment, which could be argued to reflect the practical limitations of economic rationality in a practical setting. This discrepancy highlights the gap between theoretical economic rationality and the practicalities of decision-making, where not all decisions are made with complete information or purely on economic data. Arguments could also be raised that the economic rationality model theory is subjective due to the different experiences decision-makers have. Decision-makers with different experiences are likely to make different decisions regarding operational risk. However, one decision is not more rational than the other one but rather a product of the decision-maker's previous experience. Both decisions are rational in the scope of the decision-makers experience, ultimately showcasing the subjectivity of economic rationality.

### 5.2.3 Corporate Structure

The structure of an organization significantly dictates the boundaries in which managerial judgment operates. The findings show that structures that promote open dialogue and inter-departmental consultations enhance the decision-making process by leveraging diverse insights and mitigating individual biases. The interviewees support this, stating that organizational structures that foster engagement across different levels of seniority enable better judgment calls due to the engagement of more employees within the decision.

Further, limitations within the decision-making process arise when a decision is reviewed multiple times; it limits the influence of managerial judgment by having such an organizational structure. One could argue that such a rigorous structure is beneficial due to the limited influence of decision-makers biases while enhancing decision-making consistency. In contrast, such structures might slow down the decision-making process and preclude decision-makers from reacting to rapidly changing market conditions, acting as a form of pre-decision control (Huikku, Karjalainen & Seppälä, 2018). It could be argued that the bounded rationality model, where decision-making is not only about the rational maximization of outcomes but is also significantly influenced by the limits set by human cognition, available information, and organizational frameworks. This showcases the complex nature of managerial judgment, which is not merely a function of individual capability but is profoundly shaped by the interplay of cultural, experience, and structural dynamics within an organization.

Additionally, Emmanuel, Harris, and Komakech (2010) state that judgment and intuition play a significant role in data filtering. Northcott and Alkaraan (2007a) emphasize that subjective judgment is favorable in an organization's decision-making. Enhancing the positive impact of a manager's biased opinion is crucial for the decision's success. However, it is worth considering that such bias, by lacking objectivity, might increase risk and overlook uncertainties, as previously noted. Hence, it could be argued that even though subjective managerial judgment is favorable, based on I8 critical view on risk, judgment may lose the decision objective or disregard other opportunities lost in the pre-decision phase due to the manager being influenced by heuristics.

Furthermore, it could be argued that top management's values and beliefs align with the organization's vision and mission, which can be interpreted as a vital aspect of an organization's structure. This is based on the interpretation that there is a limited existence of natural lines of defense in the decision-making process at the higher level. At the same time, lower management typically has multiple lines of defense, as highlighted by I1, I2, I5, and I6. It underscores the importance of managerial judgment in top management since they often rely on judgment and intuition when making decisions. Additionally, these decisions are refined to align closely with their leadership visions and beliefs. Further, it begs the question of how an organization ensures that top managers' subjective judgments align with the organization's long-term goals, mission, and vision rather than being influenced by short-term financial and personal gains. It could be argued that the risk may increase, and the acknowledgment of judgment is even more critical among top management due to the limited lines of defense. On the other hand, subjective judgment may simultaneously minimize the risk based on their experience, positively affect decision-making, and lower their overconfidence due to previous track records by knowing their abilities. Moreover, scholars like Northcott and Alkaraan (2007a) and Simons (1955) highlight that managerial judgment influences decision-making towards the most desirable option. However, such judgment could also generate the so-called "better-than-average" effect, negatively impacting the decision-making process (Weinstein, 1980). However, I8 highlights that this may only be possible if the organization's structure allows it, increasing the importance of the organization's structure in order to operate successfully and stay within the preferred risk appetite.

## 6. Conclusion

Within the scope of this thesis, managerial judgment has been found to affect the decision-making process both positively and negatively. The findings suggest that incorporating managerial judgment within the decision-making process enables decision-makers to make faster and more accurate decisions, acting as a form of unconscious pre-decision control within today's financial institutions. The negative aspects of managerial judgment within financial institutions' decision-making processes have been shown to increase the risk associated with the decision. Decision-makers have shown to be overconfident within the decision-making process, sometimes disregarding risk associated with the decision at hand and alternatively having an overreliance on junior team members' analysis, potentially increasing the risks associated with the decision.

The decision-making process within financial institutions has, in the scope of this thesis, been described in a model consisting of four stages: (1) the initial screening process, (2) the follow-up stage, (3) the final decision, and (4) the monitoring stage. Based on this model, misjudgments and heuristics within the process have been identified. Findings have shown that financial institutions employ rigorous formal processes within the initial screening process, counteracting potential biases and misjudgments affecting this part of the decision-making process. During the follow-up stage, confirmation bias significantly impacts decision-makers, leading them to favor information that supports their preconceptions. The decision stage is heavily influenced by framing effects, where the analysis presentation can skew decision outcomes. Lastly, the monitoring stage benefits from post-decision discussions that facilitate organizational learning and help identify heuristics that influenced earlier stages. While structured processes and experience play crucial roles, the balance between rational analysis and managerial judgment remains critical to effective decision-making in financial institutions.

Lastly, in line with the purpose of this study, the authors have identified three strategies financial institutions employ to avoid mistakes and enhance the decision-making process. The three strategies identified in this study are the corporate culture, the experience of the decision-maker, and the organizational structure. The corporate structure is a crucial aspect of the financial institution's decision-making process since it helps decision-makers adopt a risk-aware culture that promotes the desired organizational values. By having a humongous organizational culture,

financial institutions could mitigate the risk of employees basing their decisions on judgment affected by heuristics. The second strategy employed by financial institutions is the experience of decision-makers. Experience helps decision-makers to make faster and more accurate decisions. However, the findings have shown that such experience can potentially lead to overconfidence within the decision-making process, affecting the decision-making process negatively. Further findings suggest that it is crucial for organizations for decision-makers to transfer their inherent knowledge and experience to more junior employees. This way, the organization and its members can learn from experienced decision-makers, enabling the organization to achieve organizational learning. The final strategy employed by financial institutions to counteract potential misjudgments and to enhance the decision-making process is to have a rigorous corporate structure, enabling financial institutions to limit decision-makers to act based on their judgment. Instead, decision-makers are forced to act by the pre-defined structures provided by the organization.

By adopting these strategies, financial institutions could avoid misjudgment in decision-making. However, it is important to note that judgment does not only negatively affect the decision-making process. Instead, the decision-making process needs to be balanced with the right amount of judgment. However, determining the right amount of judgment has been proven difficult and depends on the organizational context and the specific decision. Ultimately, the findings suggest that, despite financial institutions appearing rational and systematic in the decision-making process, they are significantly influenced by the subjective nature of managerial judgment. This further underscores the importance of developing a balanced approach that integrates both rigorous analytical methods and the nuanced understanding offered by managerial judgment.

## 6.1 Suggestions for Further Research

Further research could focus on evaluating digital tools, such as, but not limited to, AI. This research would explore how the usage of decision-making software and algorithms affects biases in decision-making processes. The research focuses on whether digital tools reduce traditional human cognitive biases, such as confirmation bias and anchoring, or introduce new forms of biases due to their design and underlying algorithms. It could involve experimental studies

comparing decisions made with and without these tools, analyzing error rates, the influence of biases, and the decision outcomes' effectiveness.

Further research could examine how biases in group decision-making differ from biases in individual decision-making. The study could focus on how cognitive biases manifest differently when decisions are made in groups compared to when made individually. Moreover, the study could examine whether certain biases, like confirmation bias or group thinking, are more prevalent in group settings, where the desire for harmony or conformity might influence decisions.

## 6.2 Research Limitation

One limitation of this study is the limited sample size. The limited sample size is due to the industry research in this study, namely full-service banks within Sweden. Given that the Swedish banking market is limited to just a few actors and actors of full-service banks are limited, it may have restricted the diversity of perspectives and possibly constrained the generalizability of the findings to other banking environments or larger markets. Furthermore, it should also be noted that the presented literature reflects the state of research as of the spring of 2024. If the study were to be duplicated in the future, it is essential to note that the literature review might need to be updated (Bell, Bryman & Harley, 2022).

Another limitation of this study is that the interviews were conducted in Swedish, as both authors and interviewees are Swedish. This might limit the study since the authors must translate the interviews and quotes (Bell, Bryman & Harley, 2022). However, to counteract this limitation, the authors transcribed the interviews entirely (Bell, Bryman & Harley, 2022). This way, the information and quotes presented in this thesis can be verified in the transcription (Bell, Bryman & Harley, 2022). The translation process was conducted in a way that accurately reflects the linguistic nuances truthfully and accurately. Instead of a word-for-word translation, a process was used that aimed to capture the essence of the participants' statements to minimize the risk of misinterpretation during the translation process. Both authors of this study participated in the translation process to enhance the likelihood of maintaining enhanced confirmability and accuracy.

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# Appendix 1

## Mail to potential participants

Our study is based on previous research conducted by Simon A. Herbert, Kahneman and Tversky as well as Harris E.P., Emmanuel C., and Komakech S. Based on this literature, we have become interested in the influence that the manager/more senior members have on other members of the work team related to the interesting subject of operational risk. We, and the literature we have read, suggest that managerial judgment becomes more significant in decisions that are not of a routine nature and where there is a lack of reliable data. Our hypothesis is that decisions related to operational risk are not of a routine nature and to some extent may lack reliable data.

The purpose of our study is as follows:

*The purpose of this study is to examine how managerial judgment affects decisions regarding operational risk within financial institutions. The study takes an exploratory perspective to examine the internal decision-making processes of financial institutions. The study aims to identify where and how managerial judgments can lead to potential misjudgments. Furthermore, the study intends to examine organizations' strategies to avoid these mistakes and enhance the decision-making process.*

# Appendix 2

## Interview Guide

### **Section 1 - Contextual information**

1. What are your main responsibilities?
2. What types of training have you completed to be able to assess risks related to the decisions you make on a daily basis?

### **Section 2 - Experience**

3. What is your involvement in assessing operational risk within the organization?
4. Can you walk us through the process you typically follow when assessing operational risk within the organization?
5. Does the use of economic rationality and managerial judgment differ in different phases of the process?

### **Section 3 - Internal Dialogue**

6. What information do you usually rely on when assessing risks?
7. How does the organization ensure that the information they base their decisions on is up to date and correct?
8. What information do you typically rely on when assessing
9. What is the process like when there is insufficient information to base the decision on? Does the organization decide to collect more data, or is it more risk-averse in these scenarios?

### **Section 4 - Organizations' strategies**

10. How does the organization ensure that decisions reflect the entire team, rather than just the top management?
11. Do you think that experience makes your job easier? Can you rely on previous experience when assessing operational risk?
12. Do you think managerial intuition and judgment play a big role in your organization's operational risk assessment? Or are decisions guided more by formal systems and analysis than managerial judgment?