



Understanding Financial Risk Decision Making Among Managers: The Mediating Effect of Financial Literacy and Risk Perception Across Psychological Traits

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Abstract: This study explores the impact of psychological factors on financial risk decision-making among Chinese company managers, with financial literacy and risk perception as mediating variables. Using a mixed-methods design, it combines quantitative questionnaires (distributed to 218 financial managers) and qualitative face-to-face interviews (with 6 key informants) in Shijiazhuang, Hebei, covering multiple sectors. Five core psychological factors are examined: risk tolerance, loss aversion, overconfidence, emotional resilience, and regret aversion. The findings show that these factors indirectly affect financial risk decision-making through the mediating roles of financial literacy and risk perception. Risk tolerance, emotional resilience, and overconfidence positively relate to rational financial decisions when mediated by financial literacy, while loss aversion and regret aversion have negative effects via risk perception. This research enriches behavioral finance theory and offers practical implications for organizations to reduce cognitive biases and improve decision quality.

Keywords: psychological factors, financial literacy, financial risk decision-making

1. Introduction

In the modern economy, sound financial risk decision-making is critical for organizational survival and competitiveness, involving risk identification, evaluation and strategy optimization to balance returns and downsides, subject to psychological, behavioral and market dynamics. Managers' strategic financial decisions are impacted by psychological traits and cognitive biases, which are overlooked by traditional finance theories. Behavioral finance indicates psychological biases distort decisions: overconfidence induces excessive risk exposure, loss aversion results in conservative strategies. These psychological factors and cognitive biases distort information processing, especially in high pressure, bringing financial vulnerabilities. Typical cases like Barings Bank's collapse illustrate the repercussions of unchecked biases. Against China's economic transition and market fluctuations, psychological factors exert greater impacts on managerial decisions, exemplified by LeTV's collapse and Xiaomi's success. Researches integrating multiple psychological traits and mediating variables in Chinese corporate settings remain scarce. This study addresses the gap by analyzing the relationship among psychological factors, mediating variables and financial risk decision-making, offering implications for managers and organizations.

1.1 Research Questions and Objectives

The research addresses three core questions:

①What is the effect of psychological factors (risk tolerance, loss aversion, overconfidence, emotional resilience, regret aversion) on financial risk decision-making? ②What challenges do managers face in making rational financial decisions due to psychological factors? ③What are the best practices for leveraging psychological insights to improve financial risk decision-making?

Corresponding objectives include:

①Evaluate the relationship between the five psychological factors and financial risk decision-making. ②Clarify psychological-level challenges in financial decision-making. ③Extract strategies from successful cases to inform best practices.

1.2 Hypotheses Development

Based on theoretical frameworks and literature reviews, ten hypotheses are proposed:

H1–H5: Risk tolerance (H1), loss aversion (H2), overconfidence (H3), emotional resilience (H4), and regret aversion (H5) positively influence financial risk decision-making.

H6–H8: Risk perception mediates the relationship between risk tolerance (H6), loss aversion (H7), regret aversion (H8) and financial risk decision-making.

H9–H10: Financial literacy mediates the relationship between overconfidence (H9), emotional resilience (H10) and financial risk decision-making.

2. Literature Review and Theoretical Foundations

2.1 Historical Background

The study of psychological factors in financial decision-making has evolved from traditional economic rationality theories to modern behavioral finance. Adam Smith's "rational economic actor" concept dominated 18th–19th century thought. However, Herbert Simon's bounded rationality and Kahneman and Tversky's Prospect Theory (1979) challenged this by highlighting cognitive and emotional limitations (Illiashenko, 2017). [1-2] The 2008 financial crisis further emphasized the impact of psychological biases such as overconfidence and herding behavior, which led to the rise of behavioral finance as a distinct field (Nelson & Katzenstein, 2014). [3] Today, neuroeconomics and cross-cultural research enrich the understanding of how psychological factors shape financial decisions in different contexts.

2.2 Core Theories

Three key theories underpin this study:

Behavioral Finance Theory: Explores how psychological biases and emotions influence financial behavior, challenging rational choice models. It explains market inefficiency deviations and emphasizes heuristics in decision-making. **Regret Theory:** Suggests that regret anticipation affects choices, making individuals avoid risky decisions to reduce emotional discomfort. It complements expected utility theory by considering emotional comparisons with foregone alternatives (Loomes & Sugden, 1982). **Prospect Theory:** Explains how individuals assess gains and losses relative to reference points, showing loss aversion (losses seem bigger than equivalent gains) and different risk attitudes in gains and losses (risk-seeking in losses, risk-averse in gains).

2.3 Conceptual Model

The conceptual model identifies five independent variables (risk tolerance, loss aversion, overconfidence, emotional resilience, regret aversion), two mediating variables (financial literacy, risk perception), and one dependent variable (financial risk decision-making). The model posits that psychological factors influence financial decisions indirectly through their impact on financial literacy (knowledge of financial concepts) and risk perception (subjective evaluation of risk).

3. Research Methodology

3.1 Research Design

A mixed-methods approach is adopted:

Quantitative: Questionnaires to measure relationships between psychological factors, mediating variables, and financial risk decision-making.

Qualitative: Face-to-face interviews to explore challenges and best practices.

3.2 Respondents and Sampling

Questionnaire Respondents: 218 financial managers from Shijiazhuang-based companies (18 from agriculture, 131 from manufacturing, 69 from services) with over 10 years of decision-making experience.

Interview Informants: 6 key informants (1 from agriculture, 2 from manufacturing, 3 from services) including CFOs, risk managers, and investment managers.

3.3 Data Collection and Analysis

Quantitative Data: Online questionnaires adapted from validated scales (e.g., risk tolerance by Grable & Lytton, 1999; loss aversion by Li et al., 2021). Data is analyzed using SPSS and Smart PLS for reliability, validity, correlation, and mediation tests.

Qualitative Data: Semi-structured interviews using thematic analysis with NVIVO to identify challenges and best practices.

4. Key Findings (Preliminary)

4.1 Quantitative Results

Reliability and Validity: Questionnaire scales exhibit high internal consistency (Cronbach's α 0.7–0.9) and validity

(KMO > 0.7).

Correlation Analysis: Risk tolerance, emotional resilience, and overconfidence show positive correlations with financial risk decision-making ($p < 0.05$), while loss aversion and regret aversion show negative correlations ($p < 0.05$).

Mediation Effects: Financial literacy mediates the relationship between overconfidence, emotional resilience, and decision-making; risk perception mediates the relationship between loss aversion, regret aversion, risk tolerance, and decision-making.

4.2 Qualitative Results

Challenges: Managers cite cognitive biases (overconfidence, loss aversion), emotional pressure, and information asymmetry as key barriers to rational decision-making.

Best Practices: Strategies include structured decision-making tools, financial literacy training, emotional resilience building, and peer review mechanisms to mitigate biases.

5. Conclusions and Implications

Psychological factors indirectly affect financial risk decision-making via financial literacy and risk perception. Risk tolerance, emotional resilience, and overconfidence are mediated by financial literacy to promote rational decision-making, while loss aversion and regret aversion are mediated by risk perception, hindering it. The mediating variable is crucial for transforming psychological traits into decision outcomes. This study, based on the Chinese context, integrates multiple psychological factors and mediating variables, enriches behavioral finance theory, extends prospect and regret theories to management decision-making, and builds an interdisciplinary framework. Organizations can conduct financial knowledge training, build emotional resilience, and use structured decision-making tools like cost-benefit analysis and peer review to reduce bias. However, the study has limitations in single city sample and cross-sectional design. In the future, the geographical scope can be expanded with longitudinal design to supplement variables such as cultural factors and organizational culture.

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