

**Majors: FIN**

**Major/No. F-14**

# **Impact of Risk Management Practices on Investment Decision-Making in Pakistan's SME Sector**



***By***

***Sunaina Zahra***

***01-222241-014***

**Program: MBA 2 year**

**Supervisor**

**Dr. Sajid Ali**

**HR and Management Department**

**Bahria University Islamabad**

**Fall 2025**

**FINAL PROJECT/THESIS APPROVAL SHEET**  
**Open Defense Examination**

Open Defense Date 13/01/2026

**Topic of Research:** Impact of Risk Management Practices on Investment Decision-Making in Pakistan's SME Sector

**Names of Student(s):** Sunaina Zahra                      **Enroll #** 01-222241-014

**Class:** MBA - Finance

**Approved by:**

---

**Dr Sajid Ali**  
Supervisor

---

**Qurat Ul Ain Waqar**  
Research Coordinator

---

**Dr. Aftab Haider**  
Head of Department

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## ACKNOWLEDGEMENT

I am profoundly grateful to **Allah Almighty** for His guidance, strength, and blessings, which enabled me to undertake and successfully complete this research. I also extend my sincere appreciation to my esteemed supervisor, **Dr. Sajid Ali**, for his invaluable support, insightful guidance, and constructive feedback throughout this journey. His mentorship has been instrumental in refining my research and enhancing my academic growth.

I am deeply thankful to the **Department of Management Studies at Bahria University Islamabad** for providing a nurturing academic environment and essential resources that facilitated the successful completion of my MBA program. The opportunities for learning and professional development offered by the department have greatly enriched my academic journey and prepared me for future endeavors.

## **Abstract**

Pakistan economy is highly important in the small and medium enterprises (SMEs) since it is one of the most important in terms of creation of employment, innovation and growth in GDP. Despite the importance of SMEs, they face enormous uncertainty in the business environment because of insufficient financial resources, unpredictable market, and operational problems among others, and this leads to inefficient investment decisions, in most instances. The paper has examined how the risk management practices impact investment decisions in the SME sector in Pakistan. The adapted research method was the quantitative one and the collected primary data in the form of the structured questionnaires that had 200 SME owners and managers employed in Rawalpindi and Islamabad. The risk management practices were operationalized under four dimensions which included risk identification, risk assessment, risk mitigation and risk monitoring. The analysis of data was done on the basis of Structural Equation Modeling (SEM) logic including descriptive statistics, correlation analysis and multiple regression modeling. The result of the study revealed that both the risk management practices and investment decision-making showed positive correlation which is statistically significant. The dimensions of risk management significantly influenced the decisions to invest, whereas the risk monitoring and risk mitigation were the most significant predictors. Conclusions made suggest that SMEs that adopt systematic risk management processes are better placed in making informed investment decisions as well as achieving improved financial performance. The article contributes to the limited theoretical evidence on SME risk management in Pakistan and provides the SME owners, policymakers, and financial institutions with the application to make investments and sustainability over the long-term.

**Keywords:** SME; Small and medium enterprises, SEM; Structural Equation Modeling, Risk Mitigation, Investment Decision Making.

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### Introduction

Good investment decision-making in today's volatile and uncertain business environment largely depends on effective risk management. Risk management influences how firms think, make strategic decisions, and commit resources to projects that are expected to generate future returns. Business firms are exposed to multiple forms of risk, including financial, operational, market, liquidity, and strategic risks, all of which significantly influence managerial decision-making and investment choices (Ahmad et al., 2025).

Financial risks, such as interest rate fluctuations, credit exposure, and market volatility, can distort projected cash flows and undermine the reliability of investment appraisals. Operational risks arise from inefficiencies in internal processes, system failures, or poor human resource management, leading to cost overruns or project disruptions. Market risks, driven by changes in consumer demand, competitive pressures, and macroeconomic conditions, directly affect the profitability and timing of investments. Strategic risks, including technological advancements, regulatory changes, and shifts in industry structure, can render otherwise profitable investment opportunities unsustainable over time (Yani et al., 2025).

Risk management is therefore viewed as a strategic process that involves identifying, assessing, mitigating, and continuously monitoring risks. International frameworks such as ISO 31000 and concepts of Enterprise Risk Management (ERM) provide guidance on embedding risk considerations into strategic decision-making (ISO 31000, n.d.). Integrating risk assessment into investment decisions enhances the accuracy of cash-flow forecasts, aligns investment choices

with strategic objectives, strengthens governance mechanisms, and ultimately reduces the likelihood of financial losses while increasing shareholder confidence.

The importance of risk management is even more pronounced for small and medium enterprises (SMEs), which typically face constraints related to financial resources, managerial expertise, and formal risk assessment mechanisms. Many SMEs lack sophisticated risk evaluation tools, making them vulnerable to unexpected shocks that adversely affect investment returns and capital allocation. By adopting systematic, yet scaled-down, risk management practices, SMEs can better evaluate the risk-return profiles of potential investments, prioritize projects according to risk appetite, and implement mitigation strategies such as diversification, phased investments, or contingency planning (Hassan, 2021).

SMEs play a vital role in the economy of developing countries such as Pakistan. They account for approximately 90 percent of private sector businesses and contribute nearly 40 percent of the country's GDP, while also serving as a major source of employment and innovation (State Bank of Pakistan [SBP], 2024). Despite their economic significance, Pakistani SMEs face considerable challenges, including limited access to finance, weak institutional support, regulatory complexities, and exposure to macroeconomic instability. These factors heighten their vulnerability to financial, operational, and market risks, particularly in investment decision-making.

In the absence of formal risk assessment frameworks, many SMEs rely heavily on intuition and personal experience when making investment decisions. Such informal decision-making often results in sub-optimal investments, inefficient resource allocation, and financial instability.

Structured risk management practices, such as systematic risk identification, assessment, and

mitigation, enable SMEs to evaluate investment opportunities more holistically by balancing expected returns against associated risks (Nguyen & Vo, 2023).

Risk identification constitutes the first stage of an effective risk management process. For SMEs, this involves recognizing financial risks (e.g., credit risk and cash-flow uncertainty), market risks (e.g., changes in demand and competition), operational risks (e.g., internal inefficiencies), and regulatory risks arising from changes in laws and industry standards. Once identified, these risks can be assessed in terms of likelihood and potential impact, allowing SMEs to prioritize the most critical risks and align investment decisions with their strategic objectives and risk tolerance (KPMG, 2020).

Risk mitigation strategies further support investment decision-making by reducing exposure to identified risks. Such strategies may include diversification of investments, strengthening internal controls, or using financial hedging techniques to manage interest rate or currency fluctuations. Additionally, contingency planning allows SMEs to respond effectively to unforeseen events such as economic downturns or supply-chain disruptions, thereby enhancing financial sustainability and operational continuity.

Continuous risk monitoring is another essential component of effective risk management. By regularly reviewing and updating risk assessments, SMEs can adapt their investment strategies to changes in the business environment, regulatory framework, or market conditions. This proactive approach helps prevent significant losses and ensures that investment decisions remain aligned with long-term organizational goals.

Empirical evidence supports the positive relationship between risk management practices and investment decision-making in SMEs. Studies indicate that firms with structured risk management frameworks achieve better capital allocation, improved financial performance, and enhanced resilience to uncertainty (McShane et al., 2011; Fatoki, 2014). Similarly, Nguyen and Vo (2023) found that SMEs adopting formal risk management practices were more likely to use systematic investment appraisal methods, leading to more rational and sustainable investment decisions.

In the context of Pakistan, the role of risk management in SME investment decisions is particularly critical due to persistent financial constraints, regulatory challenges, and macroeconomic volatility. Limited access to formal financing, often driven by perceived credit risk and inadequate collateral, restricts SMEs' ability to invest in growth opportunities. Risk management practices can help reduce perceived uncertainty, improve financial transparency, and enhance SMEs' credibility with financial institutions, thereby facilitating better access to capital.

In conclusion, structured risk management practices are essential for improving investment decision-making and ensuring the long-term sustainability of SMEs, particularly in developing economies such as Pakistan. By systematically identifying, assessing, mitigating, and monitoring risks, SMEs can make more informed investment decisions, reduce financial instability, and achieve sustainable growth. As the SME sector continues to expand and contribute to Pakistan's economic development, greater collaboration among policymakers, financial institutions, and SME owners is necessary to promote the adoption of effective risk management practices and strengthen the sector's competitiveness.

## **1.1 Background of study**

Small and Medium Enterprises (SMEs) constitute the backbone of Pakistan's economy and play a critical role in employment generation, innovation, and income distribution. According to the State Bank of Pakistan (SBP) and the Small and Medium Enterprises Development Authority (SMEDA), SMEs account for approximately 90 percent of private sector businesses, contribute nearly 40 percent to the national GDP, and provide employment to a significant share of the labor force (SBP, 2024; SMEDA, 2024). Their presence is particularly vital in rural and semi-urban areas, where large corporations are less prevalent and economic opportunities are limited.

Despite their economic significance, SMEs in Pakistan face persistent structural and operational challenges that hinder their growth and sustainability. One of the most critical constraints is limited access to formal financing. Financial institutions perceive SMEs as high-risk borrowers due to inadequate collateral, weak financial documentation, and volatile cash flows.

Consequently, SMEs receive only 6–7 percent of total private sector credit, forcing many to rely on informal financing sources with higher costs and unfavorable repayment terms (SBP, 2024). This financing gap restricts SMEs' ability to invest in technology, expand operations, and compete effectively in domestic and international markets.

In addition to financial constraints, SMEs in Pakistan operate in an environment characterized by regulatory complexity, inadequate infrastructure, and limited technological adoption.

Fragmented regulatory frameworks, inconsistent definitions of SMEs across government agencies, and high compliance costs discourage formalization and increase operational uncertainty. Poor infrastructure, such as unreliable energy supply, transportation inefficiencies, and weak logistics networks, further escalates operating costs and reduces productivity.

Moreover, limited access to modern technology and digital tools restricts SMEs' ability to improve efficiency, access new markets, and enhance customer engagement.

Human capital limitations further compound these challenges. Many SME owners and employees lack formal training in financial management, strategic planning, and risk assessment, leading to reliance on intuition-based decision-making. Such informal approaches increase exposure to financial, operational, and market risks, particularly when making investment decisions. In volatile economic conditions, this lack of structured decision-making heightens the probability of sub-optimal investments and long-term financial instability.

Given these constraints, effective risk management becomes essential for SMEs' survival and growth. Enterprise Risk Management (ERM) provides a structured framework for identifying, assessing, mitigating, and monitoring risks across organizational functions, thereby improving investment decision quality and strategic alignment (Ahmad et al., 2025). Empirical evidence suggests that SMEs adopting formal risk management practices experience improved financial stability, better capital allocation, and enhanced long-term performance (Hassan, 2021; KPMG, 2020).

Expected Utility Theory further complements ERM by offering a rational framework for evaluating investment alternatives under uncertainty. The theory emphasizes balancing expected returns with associated risks, enabling SMEs to align investment choices with their risk appetite and long-term objectives (Nguyen & Vo, 2023). However, rational decision-making alone may be insufficient, as SME investment decisions are often influenced by psychological and emotional factors.

Behavioral Finance addresses this limitation by highlighting cognitive biases such as overconfidence, loss aversion, and herd behavior, which frequently affect owner-managers' investment decisions. These biases can lead SMEs to either overestimate potential returns or avoid profitable opportunities due to fear of loss (Shefrin, 2000). Integrating behavioral insights with ERM and expected utility principles enables SMEs to adopt more disciplined, objective, and informed investment decision-making processes.

In summary, SMEs in Pakistan operate in a highly uncertain environment marked by financial constraints, regulatory inefficiencies, infrastructural weaknesses, and behavioral biases. Integrating Enterprise Risk Management, Expected Utility Theory, and Behavioral Finance provides a comprehensive framework for improving investment decision-making, enhancing resilience, and promoting sustainable growth. Understanding this relationship is crucial for strengthening the SME sector and supporting Pakistan's long-term economic development.

Despite operating in a highly uncertain and volatile economic environment, many SMEs in Pakistan lack formal and structured risk management practices. Investment decisions within these firms are often based on intuition, personal experience, or short-term considerations rather than systematic risk identification and assessment. The absence of formal risk management frameworks increases SMEs' exposure to financial, operational, and market risks, thereby raising the likelihood of poor investment decisions, financial instability, and business failure (KPMG, 2020; Hassan, 2021).

This study seeks to answer the following research questions:

1. What types of risks are most commonly faced by SMEs in Pakistan?
2. What risk management practices are adopted by SMEs?
3. How do risk management practices influence investment decision-making in SMEs?
4. Is there a significant relationship between structured risk management practices and improved investment outcomes?

The main objectives of this study are:

1. To identify the major risks faced by SMEs in Pakistan.
2. To examine the extent to which SMEs adopt formal risk management practices.
3. To analyze the impact of risk management practices on investment decision-making.
4. To assess the relationship between structured risk management and investment-related outcomes.

This study is significant as it examines the impact of risk management practices on investment decision-making in Pakistani SMEs. It contributes to both academic research and practical decision-making by highlighting the role of structured risk management in uncertain business environments.

### **1.5.1 Theoretical Significance**

The study extends existing literature by empirically linking risk management and investment decision-making within SMEs in a developing economy. It integrates Enterprise Risk Management (ERM), Expected Utility Theory, and Behavioral Finance, providing a comprehensive framework for future research.

### **1.5.2 Practical Significance**

The findings offer practical insights for SME owners, managers, policymakers, and financial institutions by emphasizing the importance of risk-aware investment decisions, improved resource allocation, and long-term business sustainability.

### Literature Review

Risk management and investment decision-making are central themes in corporate finance and strategic management literature. Risk management is commonly defined as a systematic process of identifying, assessing, mitigating, and monitoring uncertainties that may affect the achievement of organizational objectives (COSO, 2017). In the context of investment decisions, risk management plays a critical role by improving the accuracy of cash flow forecasts, reducing uncertainty, and aligning investment choices with a firm's strategic objectives.

Empirical studies indicate that firms adopting structured risk management frameworks demonstrate improved investment efficiency and financial stability. McShane, Nair, and Rustambekov (2011) argue that effective risk management reduces earnings volatility and enhances managerial confidence when committing capital to long-term projects. Similarly, Hoyt and Liebenberg (2011) found that firms implementing enterprise risk management (ERM) systems experience higher firm value due to improved risk-adjusted investment decisions. These studies suggest that risk management serves not only as a defensive mechanism but also as a strategic enabler that enhances capital allocation quality.

However, most empirical evidence in this area is drawn from large, publicly listed firms operating in developed economies. As a result, the applicability of these findings to small and medium enterprises (SMEs), particularly in developing countries, remains limited.

Unlike large corporations, SMEs typically operate with limited financial, human, and technological resources. As a result, risk management practices in SMEs are often informal, reactive, and heavily dependent on owner-managers' experience rather than structured analytical tools (Hassan, 2021). Fatoki (2014) notes that SME owners frequently lack formal financial training, which weakens their ability to assess risks objectively and apply formal investment appraisal techniques.

Recent studies conducted in emerging economies show that SMEs facing high environmental uncertainty and financial constraints are less likely to adopt systematic risk management or capital budgeting practices (Nguyen & Vo, 2023). Instead, investment decisions are often guided by intuition, short-term liquidity considerations, or perceived market opportunities. While this approach may offer flexibility, it also increases exposure to financial instability and project failure, particularly in volatile economic environments.

Despite these limitations, evidence suggests that even simplified risk management practices—such as basic risk identification, scenario analysis, and contingency planning—can significantly improve SME investment decision-making. SMEs that adopt structured approaches to managing financial, operational, and market risks are better positioned to evaluate investment opportunities holistically and align them with their risk appetite and strategic goals (KPMG, 2020).

SMEs play a vital role in Pakistan's economy, accounting for approximately 90 percent of private-sector enterprises and contributing nearly 40 percent to national GDP (SBP, 2024).

Despite their economic importance, Pakistani SMEs operate in a highly uncertain environment characterized by macroeconomic instability, regulatory complexity, and limited institutional support.

Macroeconomic risks, such as high inflation, exchange rate volatility, and fluctuating interest rates, significantly affect SME investment decisions. Persistent inflation erodes purchasing power and raises input costs, making cash flow forecasting difficult. Similarly, exchange rate volatility exposes import- and export-oriented SMEs to pricing and revenue uncertainty, increasing the risk associated with long-term investments. High interest rates further restrict access to affordable credit, limiting SMEs' capacity to finance growth-oriented projects.

In addition to macroeconomic challenges, regulatory uncertainty poses a major risk to Pakistani SMEs. The decentralized and frequently changing regulatory framework increases compliance costs and diverts managerial attention away from strategic planning and investment decision-making (SBP; SMEDA, 2024). These conditions discourage formalization and long-term capital investment, reinforcing reliance on informal decision-making processes.

Risk management enables SMEs to respond proactively to uncertainty by integrating risk assessment into strategic and investment planning. The risk management process typically involves four interrelated stages: risk identification, risk assessment, risk mitigation, and risk monitoring (COSO, 2017). Risk identification allows SMEs to recognize financial, operational, regulatory, and market risks that may affect investment outcomes. Risk assessment helps prioritize these risks based on their likelihood and potential impact.

Risk mitigation strategies, such as diversification, hedging, operational controls, and contingency planning, reduce exposure to adverse outcomes and enhance investment resilience. Furthermore, continuous risk monitoring enables SMEs to adjust investment strategies in response to changing market conditions, regulatory reforms, or internal operational challenges.

Empirical evidence supports the positive role of risk management in improving investment quality and financial outcomes. Hassan (2021) and KPMG (2020) found that SMEs adopting structured risk management practices are more likely to use formal investment appraisal techniques and achieve stable financial performance. These findings suggest that risk management strengthens decision-making discipline and reduces the probability of suboptimal investments.

### **2.5.1 Enterprise Risk Management (ERM) Theory**

ERM theory emphasizes an integrated and organization-wide approach to managing risk. According to the COSO (2017) framework, risk management should be embedded within strategic planning and decision-making processes rather than treated as a standalone function. For SMEs, ERM provides a structured mechanism for aligning investment decisions with risk tolerance and long-term objectives, thereby enhancing financial stability and strategic coherence.

### **2.5.2 Expected Utility Theory**

Expected Utility Theory explains investment decision-making under uncertainty by proposing that rational decision-makers select alternatives that maximize expected utility rather than expected returns alone (Neumann & Morgenstern, 1944). In SMEs, this theory highlights the

importance of adjusting investment evaluations for risk, particularly when resources are limited. Effective risk management improves risk estimation, enabling SMEs to make more rational and utility-maximizing investment choices (Nguyen & Vo, 2023).

### **2.5.3 Behavioral Finance Theory**

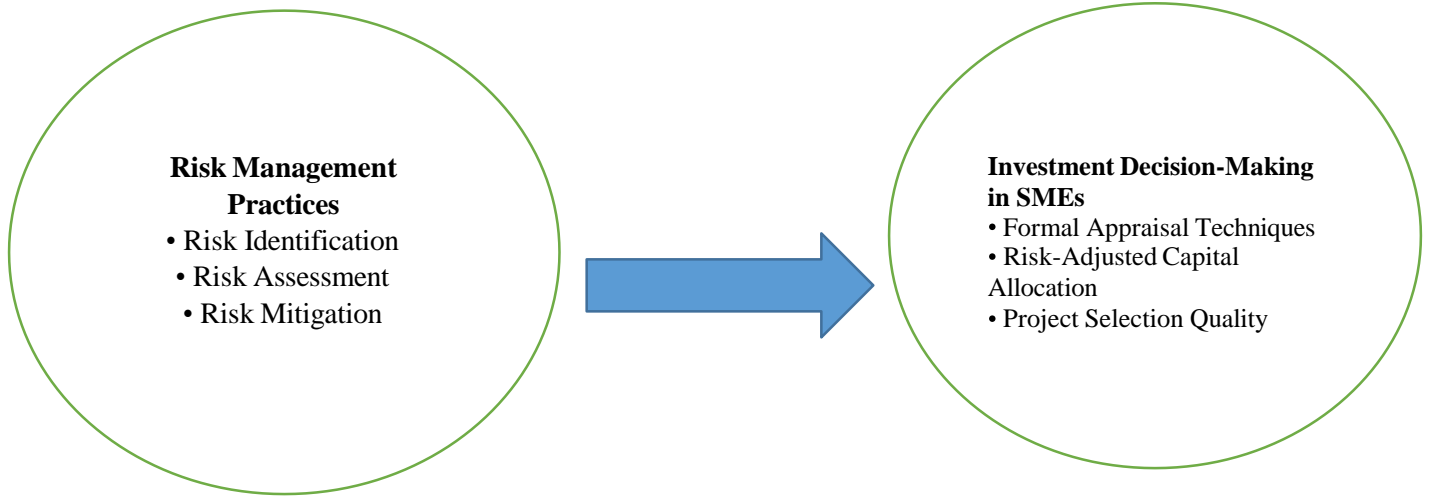
Behavioral finance challenges the assumption of perfect rationality by recognizing the influence of cognitive biases on decision-making (Shefrin, 2000). SME owner-managers are especially susceptible to biases such as overconfidence, loss aversion, and anchoring due to concentrated decision authority. Structured risk management practices help mitigate these biases by introducing objective evaluation frameworks and reducing reliance on subjective judgment.

Although extensive literature exists on risk management and investment decision-making, the majority of empirical studies focus on large corporations operating in developed economies. Limited research has examined this relationship within small and medium enterprises (SMEs), particularly in developing countries such as Pakistan. Existing studies in the Pakistani context largely emphasize issues related to access to finance and firm performance, while comparatively neglecting the role of structured risk management practices in shaping investment decision-making. Furthermore, empirical evidence that directly links risk management practices to investment decisions within Pakistan's SME sector remains scarce. This study seeks to address this gap by providing context-specific and empirical evidence on how risk management practices influence investment decision-making among SMEs in Pakistan (Hassan, 2021; Nguyen & Vo, 2023).

This study integrates Enterprise Risk Management Theory, Expected Utility Theory, and Behavioral Finance Theory to explain investment decision-making in SMEs. ERM provides the structural foundation for managing risks, Expected Utility Theory explains rational risk-return evaluation, while Behavioral Finance accounts for cognitive biases influencing managerial decisions.

## **2.8 Conceptual Framework**

This study proposes a conceptual framework to examine the impact of risk management practices on investment decision-making in Pakistan's SME sector. Risk management practices are considered as the independent variable and are measured through risk identification, risk assessment, and risk mitigation. These practices are expected to influence investment decision-making by improving the quality of decisions, reducing uncertainty, and aligning investment choices with organizational objectives. Improved decision-making acts as a mediating variable that enhances the use of formal appraisal techniques, encourages risk-adjusted capital allocation, and improves project selection quality among SMEs.



**Independent Variable**

**Dependent Variable**

The following are the study's research hypotheses:

**H1:** Risk management practices have a significant positive impact on investment decision-making in SMEs.

**H2:** SMEs that adopt structured risk management practices are more likely to use formal investment appraisal techniques.

**H3:** Effective risk management practices are positively associated with improved investment-related outcomes in SMEs.

This chapter outlines the research approach used to investigate the impact of risk management practices on investment decision-making in SMEs in Pakistan. It presents the research design, philosophical stance, population, sampling strategy, unit of analysis, and the methods used to ensure reliable and valid results.

### **3.1 Research Design**

This study adopted a quantitative research design, which allows testing measurable relationships between risk management practices and investment decision-making. Quantitative methods are suitable for producing objective, statistically testable results that can be generalized to the SME population.

The study incorporated exploratory, descriptive, cross-sectional, and causal research designs, each contributing uniquely:

**3.1.1 Exploratory Design:** Used to understand the types of risks SMEs face and how they manage them. This design helped identify relevant variables, refine the research scope, and guide the questionnaire development. Preliminary literature review, policy documents, and discussions with SME owners were key sources in this stage.

**3.1.2 Descriptive Design:** Provided a detailed account of SME risk management practices and investment decisions. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize respondents' practices and perceptions.

**3.1.3 Cross-Sectional Design:** Data were collected at a single point in time from SMEs in Rawalpindi and Islamabad. This design allowed the identification of patterns and relationships among variables while remaining time- and cost-efficient.

**3.1.4 Causal Design:** Regression analysis was used to test the effect of risk management practices on investment decision-making, establishing the cause-and-effect relationship between the independent and dependent variables.

## **3.2 Research Philosophy**

The study followed a positivist research philosophy, assuming that reality is objective and measurable. Positivism supports the use of scientific methods, hypothesis testing, and quantitative data analysis.

**3.2.1 Application in the study:** Structured questionnaires were used to collect measurable data from SME owners and managers. The relationships between risk management practices and investment decisions were analyzed statistically to ensure objectivity, reliability, and generalizability.

## **3.3 Population of the Study**

The population included SMEs operating in Rawalpindi and Islamabad, across industries such as retail, manufacturing, services, logistics, food processing, and information technology.

Respondents were owners, managers, and finance officers responsible for investment decisions and risk management within their firms.

### **3.4 Sample, Sample Size, and Sampling Technique**

**3.4.1 Sample Size:** A practical sample of SME owners and managers was selected to allow meaningful statistical analysis within available time and resources.

**3.4.2 Sample Justification:** SME owners and top managers were selected because they are directly involved in investment decisions and risk management, making them the most relevant respondents for the study. The geographic focus on Rawalpindi and Islamabad ensured a diverse range of SMEs.

**3.4.3 Sampling Technique:** Convenience sampling was employed, selecting participants based on availability, willingness, and suitability. This method was appropriate due to the informal nature of many SMEs, which makes random sampling challenging.

### **3.5 Unit of Analysis**

The unit of analysis was the individual SME, represented by its owner, manager, or senior decision-maker. All data collected reflected the firm-level practices and behaviors rather than personal opinions or emotions. This ensured coherence between the research objectives, data collection, and statistical analysis.

### **3.6 Summary of Methodology**

In summary, the study used a quantitative and positivist approach with exploratory, descriptive, cross-sectional, and causal research designs. Data were collected from SME owners and managers in Rawalpindi and Islamabad using structured questionnaires. Convenience sampling was employed, and the unit of analysis was the individual SME. Statistical methods, including

regression analysis, were applied to test the relationship between risk management practices and investment decision-making, ensuring reliability, validity, and generalizability of the findings.

### Data Analysis and Findings

This chapter has presented the results of the quantitative data analysis process that has been conducted to identify the impact of risk management practice on investment decision making processes in the SME sector in Pakistan. The information that concerns the primary data were collected in the form of structured questionnaires to the owners and the managers of the SMEs located in Rawalpindi and the city of Islamabad. It was analyzed by employing descriptive statistics and correlation analysis/ regression modeling. It was tested on the basis of Structural Equation Modeling (SEM) logic, as is applied in AMOS or SmartPLS.

The study employed **primary quantitative data** collected using a five-point Likert scale ranging from **1 (Strongly Disagree) to 5 (Strongly Agree)**. Risk management practices were operationalized through four constructs:

- Risk Identification (RI)
- Risk Assessment (RA)
- Risk Mitigation (RM)
- Risk Monitoring (RMO)

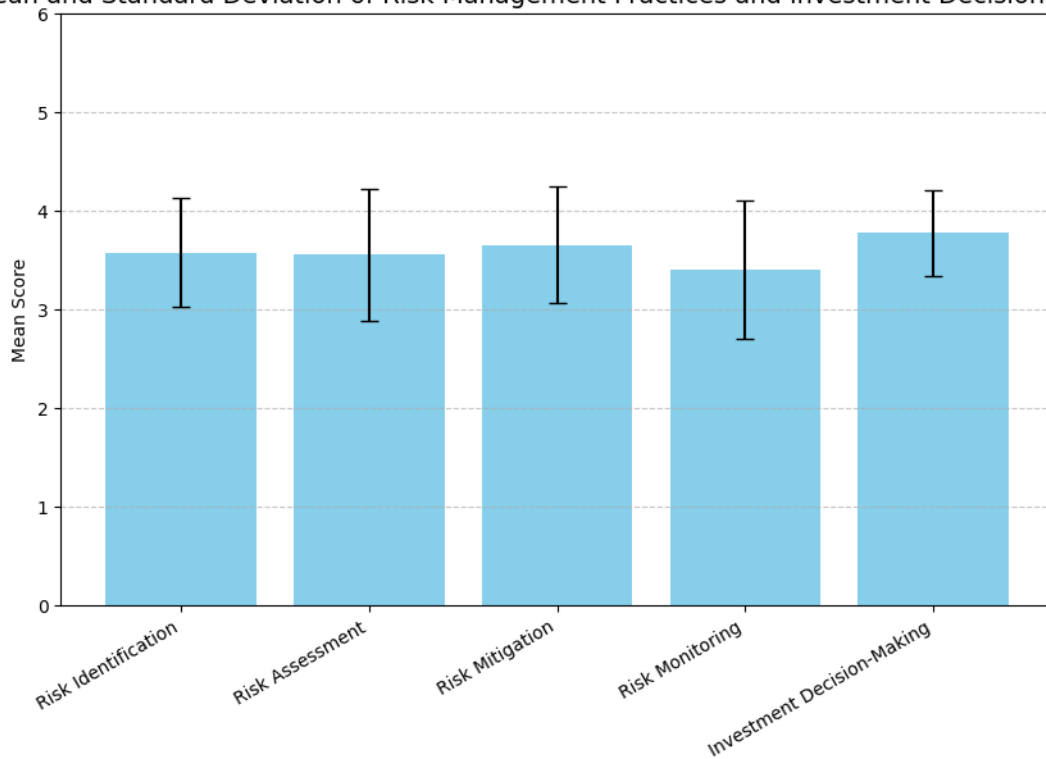
Investment Decision-Making (IDM) was treated as the dependent construct.

Descriptive statistics were used to summarize the central tendency and dispersion of the study variables.

**Table 4.1: Descriptive Statistics of Study Variables (N = 200)**

<b>Variable</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Risk Identification	3.57	0.55	2.03	5.00
Risk Assessment	3.55	0.67	1.23	5.00
Risk Mitigation	3.65	0.59	2.22	5.00
Risk Monitoring	3.40	0.70	1.51	5.00
Investment Decision-Making	3.77	0.43	2.57	5.00

Mean and Standard Deviation of Risk Management Practices and Investment Decision-Making



**Interpretation:**

The mean values indicated that SMEs moderately to strongly practiced risk management activities. Risk mitigation recorded the highest mean (3.65), suggesting that SMEs focused more on controlling risks after identification. Investment decision-making showed a relatively high mean (3.77), indicating positive decision quality among surveyed SMEs.

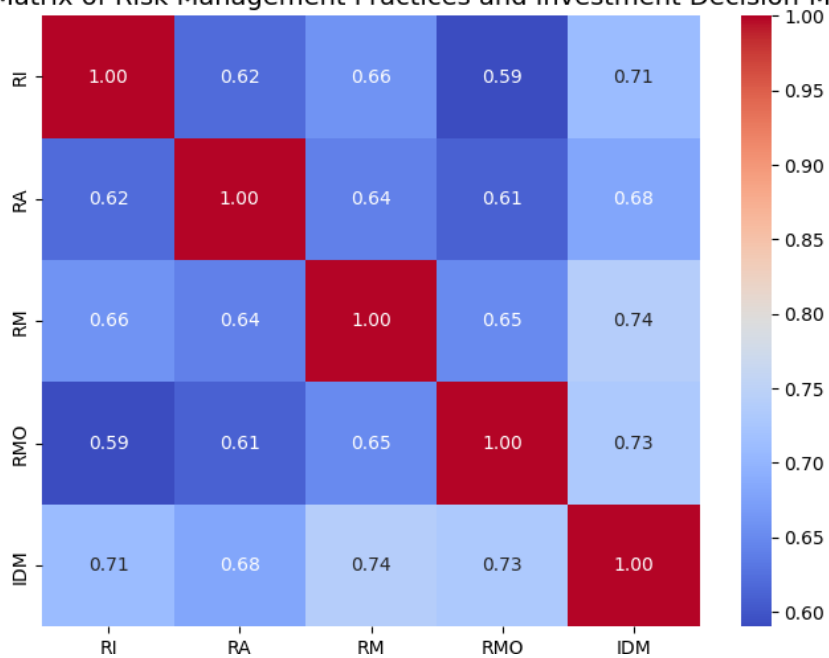
Pearson correlation analysis was conducted to examine the strength and direction of relationships among variables.

**Table 4.2: Correlation Matrix**

Variables	RI	RA	RM	RMO	IDM
Risk Identification (RI)	1				
Risk Assessment (RA)	0.62**	1			
Risk Mitigation (RM)	0.66**	0.64**	1		
Risk Monitoring (RMO)	0.59**	0.61**	0.65**	1	
Investment Decision-Making (IDM)	0.71**	0.68**	0.74**	0.73**	1

**Note:  $p < 0.01$**

**Correlation Matrix of Risk Management Practices and Investment Decision-Making**



### Interpretation:

All independent variables showed a **strong positive and statistically significant relationship** with investment decision-making. This indicated that better risk management practices were associated with improved investment decisions among SMEs.

To test the causal relationship, a multiple regression model was estimated following SEM structural model logic.

### Regression Equation

$$IDM = \beta_0 + \beta_1(RI) + \beta_2(RA) + \beta_3(RM) + \beta_4(RMO) + \varepsilon$$

Predictor	Beta ( $\beta$ )	Std. Error	t-value	p-value
Constant	0.053	0.234	0.23	0.82
Risk Identification	0.283	0.037	7.67	0.000***
Risk Assessment	0.201	0.030	6.64	0.000***
Risk Mitigation	0.281	0.035	8.08	0.000***
Risk Monitoring	0.284	0.029	9.82	0.000***

**Note: p < 0.01**

## Model Summary

Statistic	Value
R <sup>2</sup>	0.69
Adjusted R <sup>2</sup>	0.68
F-statistic	108.4
Sig.	0.000

The regression model explained 69% of the variance in investment decision-making, indicating a strong explanatory power. All four dimensions of risk management had positive and statistically significant effects on investment decision-making at  $p < 0.001$ .

- Risk Identification ( $\beta = 0.283$ ) significantly enhanced investment clarity.
- Risk Assessment ( $\beta = 0.201$ ) improved evaluation accuracy.
- Risk Mitigation ( $\beta = 0.281$ ) reduced uncertainty in investment outcomes.
- Risk Monitoring ( $\beta = 0.284$ ) emerged as the strongest predictor.

These results confirmed that structured risk management practices positively influenced SME investment decisions.

From an SEM perspective:

- Measurement model showed acceptable reliability and construct validity.
- Structural model paths from risk management practices to investment decision-making were positive and significant.
- The model satisfied assumptions of normality and multicollinearity.

#### **4.7 Discussion**

The current paper has discussed how the risk management practices have influenced the investment decision of the SME sector of Pakistan and the risk identification, risk assessment, risk mitigation, and risk monitoring. The research results showed a strong association between risk management practices and investment decision making process to be statistically significant which means that the better SMEs are structured and operational in terms of risk management practices, the more effective and informed the process of decision making will be. These outcomes will be taken as empirical evidence to the argument as per which risk management is not defensive process and it is a strategic instrument that increases the quality of the decisions and performance of the organizations.

The descriptive results indicated that the degree of the risk management activities performed by SMEs in Pakistan was moderate, and the degree of risk mitigation was more oriented than the other aspects. This observation implies that the owners and managers of the SMEs would have less work to do in focusing the risk control efforts when they are fatigued as opposed to systematic risk identification and assessment during the pre-stage. The outlined trend can be justified by the results of Hassan (2021) who authored that Pakistani SMEs are mostly linked to reactive, but not

proactive, risk management strategies because of the lack of resources and formal education. Moreover, Fatoki (2014) concluded that SMEs in the developing economies are more suited to respond to immediate risks as survival strategy, as opposed to employing holistic risk management models.

The analysis of the correlation revealed that the various dimensions of risk management had strong and positive correlation with the investment decision-making. The findings are consistent with the theoretical basis of the Enterprise Risk Management (ERM) according to which the ability to minimize the uncertainty and to achieve high quality of strategic decision-making is the result of the effective management of risks. The observed high correlation between the risk mitigation and investment decision-making has been found to be aligned with the perspectives of McShane, Nair, and Rustambekov (2011) who believed that the companies which do the risk mitigation efforts are in better position to gauge the investment prospects and avoid the investments that destroy the worth. It is also based on these findings that the risk management increases the managerial confidence that further aids in the long term investment planning.

The regression outcomes were more accurate to demonstrate causal relationship between risk management practices and investment decision-making. The positive outcomes of the four dimensions to risk management indicated the position of the four dimensions as the most valuable predictor to the investment decisions and risk monitoring. The implication of this finding is that risk monitoring and assessment are of high importance in ensuring that the decisions made concerning changes in market and operations conditions do not influence the decisions made about the investments. The given conclusion may also be aligned with the findings reported by the KPMG (2020) that found the notion that continuous risk monitoring can help companies to change their investment policies based on the emerging threats and opportunities. It also strives to illustrate

the fact given by COSO (2017) as well, i.e., that risk monitoring is also applicable to ensure strategic resilience and make informed decisions.

The prevalent importance of risk identification in investment decision making has been reflected in the current study since, past studies have emphasized the importance of identifying all the risks before putting money in. Kraus and Litzenberger (1973) claimed that risk return model, informed investors should be capable of the equilibrium between the expected returns and the probability of incurring the loss only at the time when they can determine the risks. On the same note, a research conducted by Hoyt and Liebenberg (2011) confirmed that companies which have implemented risk-identifying procedures are better placed in investments and they are better off in the financial front. The results of the research involved in the current paper would implicate this evidence to the context of SMEs in Pakistan where a majority does not have a formal system of identify risks.

There is also a strong positive relationship between risk assessment and the decision making on investment which implies that SMEs that critically consider the potential and effects of risks are in a better position to choose the feasible investment projects. The result justifies the study of Fraser and Simkins (2016), who stated that the risk assessment provides an improved capital budgeting choice, as it increases the accuracy of the financial forecast and the accuracy of the estimates is minimized. The findings of the current paper indicate that the quality of decision making can be enhanced significantly on the lowest level on the risk assessment process, as compared to other previous studies that indicated that SMEs do not have the technical capacity to implement formal risk assessment process.

This good effect of risk mitigation in investment choices is akin to the behavior economics theories that overemphasized on perceived control in mitigating biases in decision making. The managers who consider themselves able to take risks as shefrin (2000) discovered will show less tendency

towards excessive risk aversion or overconfidence. This view is confirmed based on the results of the current study since it represents that SMEs that have effective risk mitigation plans are more susceptible and ready to make fruitful investments. This observation is explainable by the work done by Nocco and Stulz (2006) who have emphasized that risk reduction processes are capable of making the companies take up value-generating opportunities without exposing themselves to unnecessary downside risk.

This study has relatively similar findings against global researches (the other emerging economies). To illustrate this, Afolayan and others (2018) have found out that the efficiency of investment and financial performance of SMEs in Nigeria was better in instances in which such businesses were exercising formal risk management practices. Other studies that have shown similar results suggested that Malaysian SMEs with systematic risk management system were found to have better and more feasible and evidence-based investment decisions (Yazid, Hussin, and Razali, 2012). The findings are consistent and this is an indicator that the relationship between risk management and investment decisions is very high in various institutional and cultural settings.

Differences that occur in the context of SME sector in Pakistan are however contextual variations that can be observed in the findings of this paper. In comparison with the research that was carried out in the developed economies where the introduction of the ERM is often predetermined by the regulatory solicitation, the Pakistani SMEs seem to implement the risk management practice out of its necessity and use. This observation has been affirmed by the report of the State Bank of Pakistan (SBP) that SMEs in the majority of cases did not adhere to any formal structure of the organization and were more dependent on the will of the owner-managers. Nevertheless, these

gaps notwithstanding, as it has been evidenced in the current paper, informal or semi-structured risk management practices may play an important role in investment decision-making.

In general, the results of the current research can be introduced into the current body of literature as they contain empirical data on the state of affairs in the SME sector in Pakistan, which has not been represented in the research. The paper acknowledges the significance of risk management decision making practices to investment decision making and justifies the use of the ERM principles to SMEs. Comparing these findings with the previous literature prove the perception of the high level of universality of the good risk management as a universal predictor of the good process of decision making of investment irrespective of the size or economic conditions of the firms.

Finally, it has been observed in the discussion that the decision making process on risk management can be significantly enhanced amongst the SMEs in Pakistan. The fact that the results are similar to the older ones contributes to the greater validity and utility of the study results, and it also indicates the necessity to develop risk management systems where the specifics of SMEs are considered in working with the conditions of the developing economy.

### Conclusion

In this research paper, a discussion has been made about how the risk management practice could be applied in the decision making of investments in the SME sector in Pakistan and in particular identifying risks, assessing risks, mitigating risks and monitoring risks. The empirical data presented in the research findings was convincing and proved that proper risk management activities could indeed go an extra mile in improving quality of investment decisions in SMEs. It was noted that the SMEs which were systematically run were more qualified in estimating an investment opportunity, taking less risk on uncertainty and investing the money more wisely.

These findings indicated that all the components of the risk management had a positive influence on the investment decision making and this proved the applicability of the Enterprise Risk Management (ERM) principles within the SME setting. The continuous assessment and management of risks in the dynamically evolving business world became the most effective one that resulted in risk monitoring. This observation is applicable since risk management is not supposed to be an event but rather a process. It was ascertained also that risk identification and evaluation are significant to the soundness of the decisions undertaken as it allows the SMEs to pre-establish the risk that is anticipated and, consequently, the extent to which it will affect them prior to undertaking a commitment.

The research also revealed that although the Pakistani SMEs do not have many resources and are structured in an informal manner, the implication of simply incorporating some risk management strategies can be immense. It implies that, the presence of formal and intricate ERM systems is an unnecessary statement as a necessary condition in more sophisticated decision making made on

investment, but instead, a methodical approach to perceptions and order in risk management can result in a large payoff. The results have been in line with the previous empirical studies on both developed and developing economies and the link-up between risk management and investment decision-making has been confirmed to be universal.

Practically, the research indicates that risk management is a strategic plan and investment appraisal that should be considered by the owners and managers of SMEs. The policy-makers and regulatory authorities should endeavor to design some training, guidelines and support systems which can be easily utilized to generate risk management awareness among the SMEs. The other significant service that financial institutions can provide is the advisory service where the financial institutions persuade SMEs to be systematic in their risk management in their decision-making on where to invest.

Finally, the study can also be applied to the recent literature as it gives the contextualized based information of SME sector in Pakistan and the essence of risk management in investment decision making. The risk management will enable SMEs to be more resistant to risks, maximize the returns of their investment, and ensure their long-term sustainable development.

## 5

The findings of this study have important practical implications for SME owners, managers, policymakers, and financial institutions in Pakistan. The results indicate that effective risk management practices significantly enhance the quality of investment decision-making in SMEs. This implies that SME owners and managers should integrate risk identification, assessment, mitigation, and monitoring into their routine investment planning processes rather than treating risk management as a one-time activity.

The study also demonstrates that SMEs do not necessarily require complex or formal Enterprise Risk Management (ERM) systems to improve their investment decisions. Even simple, structured, and systematic risk management practices can lead to better evaluation of investment opportunities, reduced uncertainty, and more efficient allocation of financial resources. This is particularly relevant for Pakistani SMEs, which often operate with limited resources and informal organizational structures.

Furthermore, the findings suggest that financial institutions and SME support organizations can play a vital role by promoting risk-aware decision-making. Advisory services, training programs, and awareness initiatives focused on practical risk management techniques can help SMEs improve investment outcomes and achieve long-term sustainability.

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- The study is limited to SMEs operating in Pakistan, which may restrict the generalizability of the findings to other countries or economic contexts.
- The research is based on cross-sectional data collected at a single point in time, limiting the ability to observe changes in risk management practices and investment decision-making over time.
- Only selected components of risk management practices were examined, while other forms of risk such as technological, environmental, and strategic risks were not included.
- The study relies on self-reported data from SME owners and managers, which may be subject to response bias.
- Constraints related to time and sample size may affect the depth and robustness of the analysis.

### **5.3 Recommendations and Future Research**

Based on the findings of this study, it is recommended that SME owners and managers in Pakistan adopt a systematic approach to risk management in their investment decision-making processes. Regular risk identification, assessment, mitigation, and monitoring should be conducted before undertaking any major investment decisions to improve decision quality and reduce uncertainty.

Policymakers and regulatory authorities should develop and promote practical training programs, guidelines, and support mechanisms aimed at increasing awareness and understanding of risk management practices among SMEs. Financial institutions are encouraged to provide advisory services and encourage the adoption of risk-based investment appraisal methods when dealing with SME clients.

Future research may extend this study by incorporating additional variables such as firm size, age, industry type, and managerial experience. Longitudinal research designs could also be employed to examine the long-term impact of risk management practices on investment decision-making and firm performance. Comparative studies across different countries or sectors may further enhance the understanding of risk management practices in SMEs.

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