Adv. J. Manag. Humanit. Soc. Sci. (2026), Volume 2, Issue 1, 23-35

Advanced Journal of Management, Humanity and Social Science

Journal homepage: https://www.ajmhss.com/

DOI: https://doi.org/10.5281/zenodo.18061966

The Impact of Financial Risk Management on Profitability of Steel Companies in Afghanistan

Abdul Kabir Azizi

Balkh University, Faculty of Economics, Department of Finance and Banking

Article info

Received: 02.11.2025
Accepted: 16.12.2025
Available Online: 26.12.2025
Checked for Plagiarism: Yes

Keywords:
Profitability, Steel, Financial Risk, Risk Analysis, Statistical Method

ABSTRACT

This study examines the effect of financial risk management practices on the financial performance of steel milling companies operating in Afghanistan. Using a quantitative, explanatory research design, primary data were collected from 32 finance-related staff across five steel companies through a structured Likert-scale questionnaire, while secondary financial data were obtained from audited statements to compute return on assets (ROA). Descriptive statistics, Pearson correlation analysis, and multiple linear regression were employed to evaluate the relationships between financial performance and four dimensions of financial risk management: understanding of risk and risk management, risk identification, risk analysis and assessment, and risk monitoring. The findings reveal that all four dimensions exhibit positive and statistically significant effects on ROA, indicating that firms with stronger and more structured risk-management systems achieve higher profitability. The regression model explains 84.3% of the variation in financial performance, demonstrating substantial predictive power. While firm size and capital structure show positive but statistically insignificant effects, the results emphasize that managerial capability in applying risk-management practices outweighs structural firm characteristics in determining profitability. The study concludes that effective financial risk management is essential for enhancing financial performance in Afghanistan's steel industry, which operates within a highly volatile and uncertain environment. Strengthening internal controls, broadening risk-identification processes, and improving monitoring systems are recommended to support long-term financial sustainability.

Introduction

The steel industry is a key factor in achieving the economic and infrastructural development of Afghanistan. In the recent years, a number of domestic steel companies have started operating in the hope of boosting national self-sufficiency, curbing the dependence on imported steel from neighboring countries, and making a contribution to the overall economic stability. Current estimates by the industry show that over 220,000 tons of steel have been produced by five major companies in the recent fiscal year, with an estimated national iron-ore reserves of approximately two billion tons. These are some of the indicators that there will be significant potential for growth and a strategic opportunity for Afghanistan to strengthen its industrial base.

Despite such developments, the overall business environment in Afghanistan is still very volatile. Economic fluctuations, political instability, and pressure from external markets put steel firms at risk for a variety of financial and operational risks. As global markets become more interconnected, steel companies in Afghanistan simultaneously benefit from greater market access and are vulnerable to more disruptive risk stemming from exchange rate fluctuations, commodity price volatility, and disruptions of the supply chain. Previous research highlights the fact that poor risk management practices have played a major role in the failure of big companies across industries while good financial risk management practices can lead to increased competitiveness and long-term sustainability (Moeller,2007).

Corresponding Author:* ***Abdul Kabir Azizi* *(azizi@ba.edu.af - ORCID: 0000-0001-7833-2409)*

The steel industry is in particular subject to large price fluctuations for both raw materials and finished goods. This exposes firms to a large commodity price and currency risks. Internationally, steel producers use a range of financial instruments, such as futures, swaps, options and forward contracts, to hedge their market exposures and stabilize cash flows (Chorn & Croft,2000). However, the adoption of such risk-mitigation practices in Afghan steel firms is still limited, owing to infrastructural constraints, underdevelopment of the market and disruptions brought about by decades of conflict.

Additionally, Afghanistan's logistics and transportation infrastructure has been badly affected by years of war. Damaged highways, security issues and limited regional connectivity make supply chain operations more complicated and more likely to be hit by unexpected disruptions. These conditions increase the importance of effective risk management systems of steel companies to ensure continuity of production, reliable distribution and access to the domestic and foreign markets.

Given these challenges, there is a critical need to study the financial risk exposures of steel companies in Afghanistan, as well as the extent to which risk management practices are being implemented. Such an examination does not only bring to light the vulnerabilities that are already present, but also gives insights into how firms can build resilience, become more operational efficient, and contribute to the national economic development.

Accordingly, the focus of this study is to analyze the major financial risks of the steel companies in Afghanistan, assess existing risk management practices, and find out strategic measures to improve the risk mitigation processes. The findings are expected to make a contribution to the literature on financial risk management in emerging and fragile economies as well as provide practical recommendations for policymakers and industry stakeholders. The rest of this paper is organized as follows: Section 2 is a literature review, Section 3 is the research methodology, Section 4 is the results and discussion, and Section 5 is the conclusion with implications and recommendations.

Research Background

Risk has been defined in many different ways in the academic literature, most often as the likelihood of adverse outcomes or negative departures from expected results (Olsson,2002, pp.78-93). Yet risk is not completely negative, and risk can also create favorable deviations, which means that uncertainty can lead to both threats and opportunities for firms (Herman & Head,2002, pp. 34-56). From a risk management point of view, risk is a reflection of uncertainty about whether an event will or will not happen and what the consequences will be (Olsson,2002). Lucouw (2004, pp. 93-107) holds that total avoidance of risk limits business growth and hence risks must be controlled at an acceptable level where potential benefits outweigh potential losses. In the economic world, risk is defined as a condition where decision-makers are aware of the possible outcomes of decisions and its probabilities (Lam,2011, pp. 78-98). Scholars generally classify risks as credit, market and operational risks. Alijoyo (2002, pp. 98-99) identifies financial risks such as market, credit, operational and reputational risks and non-financial risks while Doherty (1985, pp. 76-78) identifies marketing, financial, resource management and environmental risks as major categories of risks that affect organizations. These classifications give a basis for analysis and prioritization of risks in companies.

In response to such risks, risk management is considered as a systematic process of identifying, analyzing, evaluating and treating risks to attain organizational objectives under the state of uncertainty. The international standards define risk management as value-creating, structured, systematic, based on the best available information, tailored to the organization and inclusive of human and cultural factors (Head,2009, pp. 112-117). Effective risk management strategies can be used to reduce the volatility in the performance of the corporate entities, stabilize the operations and market transactions, reduce the chances of failure, and improve the internal and external image of the firm (Urciuoli & Crenca,1989, pp. 341-370). Kawamoto (2001, pp. 57-73) explains risk management as the process of recognizing, analyzing and determining how to deal with specific risks faced by an entity, including financial risks.

Enterprise Risk Management (ERM) extends the traditional risk management practices by incorporating various risks into a single, firm-wide framework. Meulbroek (2002, pp. 122-130) highlights the fact that ERM does not deal with each risk separately but tries to integrate different types of risks and apply integrated tools and methods across the organization. According to Gordon et al. (2009), ERM is a structured process implemented by the board, management and staff, whose purpose is to identify the potential events, manage the risk within risk appetite of the firm, and provide reasonable assurance on the accomplishment of organizational objectives. Searle (2008, pp. 21-29) adds that ERM is useful in reconciling investor expectations with operational difficulties by maintaining constant awareness of risk exposure and facilitating strategic changes.

Financial risk is the potential impact of the variability of cash flows, returns, or financing conditions on the ability of a firm to meet its obligations. Punithavathy (2009, pp. 51-63) points out that there is a great relationship between financial risk and a firm's capital structure: The greater the leverage, the greater the financial risk.

Liquidity constraints, irregular cash-flow patterns, and debtor defaults are the major contributors to financial risk (Kiragu,2014, pp. 117-121).

Tapiero (2004) defines financial risk management as the creation of economic value through the management of the exposure to financial risks, especially to credit risk and market risk. Holton (2004) in a similar vein defines financial risk as unexpected volatility of returns which includes credit risk, liquidity risk, market risk. Consequently, financial risk management practices constitute policies and procedures to protect organizations from these risks and may generally be classified into credit-risk management, liquidity-risk management and market-risk management (Kithinji,2010). Effective financial risk management provides a steady flow of cash, limits the chance for financial distress and may even ultimately improve profitability.

The risk management process generally involves risk identification, assessment, control and monitoring. The identification stage has been consistently emphasized in the literature.

Tchankova (2002) and Barton et al. (2002) describe risk identification as the first and critical step which involves the recognition of key areas internally and externally where major risks may arise. Responsibilities for identifying specific risks will need to be allocated appropriately; for example, interest rate and foreign exchange risks are generally the responsibility of the finance department. Scenario analysis and risk mapping are popular methods which can help to classify risks according to their frequency and severity, which can be used to prioritize them effectively by firms (Barton et al., 2002).

Fuser (1999) makes a case for classifying risks based on the potential damage they may inflict and the likelihood that they will occur, allowing firms to distinguish risks that threaten their survival from those that will cause minor harm and aid in the efficient allocation of resources.

Monitoring and control ensure that the practices of risk management are consistent with the company's goals and risk appetite. Al-Tamimi and Al-Mazrooei (2007) emphasize the importance of continuous monitoring to detect the deviation in its initial stages. Since it is not possible for top management to do in-depth oversight, organizations typically have separate risk or internal-audit departments to oversee the system and report deficiencies to the board (Tseng,2007, pp. 120-131).

Foundational theories in financial economics are also used to inform the relationship between risk and return. The Capital Asset Pricing Model (CAPM), developed by Sharpe (1964, pp. 231-240) based on Markowitz's portfolio theory (1952;1959) makes the distinction between systematic (market-wide) and unsystematic (firm-specific) risk. Systematic risk, which is affected by macroeconomic conditions, cannot be diversified and is thus priced by the market, while unsystematic risk can be reduced by diversification. Arbitrage Pricing Theory (APT), introduced by Ross (1976, pp. 73-80; 97-105), extends this analysis, in that it models asset returns as a linear function of a number of macroeconomic factors such as inflation, industrial production and interest rates. Both models emphasize the need for higher expected returns to offset higher systematic risk - a crucial point for industries such as steel, where exposure to commodity-price volatility and exchange rate fluctuations is high.

Hedging forms an integral part of financial risk management and enables firms to balance their exposure to adverse fluctuations in key variables such as interest rate, exchange rate, and price of commodities (Okochi,2008, pp. 56-63). Derivative instruments such as futures, forwards, options and swaps are important in shifting market risk to other market participants (Selvi & Asli,2010, pp. 143-152). Futures and forward contracts lock in future prices; options offer asymmetric protection, whilst preserving upside potential; and swaps help firms manage interest rate and currency exposures. These instruments are particularly important in commodity-intensive industries such as steel where the time lag between procurement of raw materials and the sale of finished products exposes firms to substantial price risk. Chorn and Croft (2000) report widespread use of swaps, futures, options, and forwards in the steel industry in markets in which such instruments are available, although there is less use of such instruments in emerging or fragile economies.

A significant amount of empirical research has been done on the relationship between risk management practices and firm performance. Shahroudi et al., 2012, pp 91-111 Risk prevention policies, monitoring, and control have a positive effect on financial performance by reducing losses and stabilizing returns. As cited by Mudaki et al. (2012, pp. 111-119), Ernst & Young report that companies that have credible risk management frameworks benefit from higher revenues, greater efficiency, and better return on assets. Several studies support a strong positive correlation between risk management and organizational performance (La & Choi,2012, pp. 76-81), with Asemeit and Abuda (cited in La & Choi,2012, pp. 12-23) claiming that there is a direct, positive, correlation between risk management processes and financial performance. However, there are researchers who argue that the evidence is mixed, and that managerial quality and strategic decision-making may have a stronger influence on performance than formal systems for managing risk in some contexts. Overall, the dominant finding is that good financial risk management increases profitability by reducing downside risk, stabilizing cash flows and improving

resource allocation - and this is especially the case in volatile environments.

Despite the large body of literature, most empirical studies are on developed markets, large financial institutions or relatively stable economies. Evidence is still limited on the impact of financial risk management practices on the profitability of firms operating in highly volatile and institutionally fragile environments. Moreover, the steel industry - with its commodity-price volatility, exchange-rate risk and complex supply chains - has received comparatively less attention than the banking and financial sectors. In Afghanistan, there is a definite research gap about the nature of financial risk exposure in steel companies, types of financial risk management practices adopted, and empirical relationship between risk management practices and firm profitability. The present study tries to address this gap by investigating the impact of financial risk management practices on the profitability of steel milling firms in Afghanistan. By examining a strategic industry that has received little study in a fragile economy, this research seeks to have both academic and practical applications to managers and decision makers.

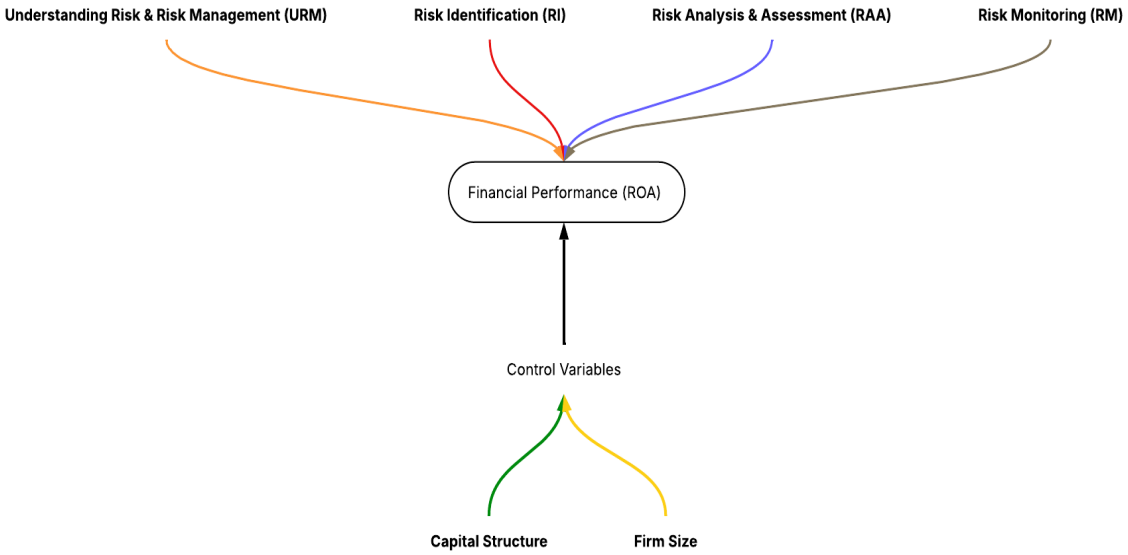

Figure 1. Conceptual Framework of the Study

The conceptual model demonstrates the correlations between financial risk management practices, which are presented in four key elements, including understanding risk and risk management (URM), risk identification (RI), risk analysis and assessment (RAA), and risk monitoring (RM) and financial performance of steel companies expressed in terms of return on assets (ROA). The control variables that impact on the dependent variable are firm size and capital structure.

Research Methodology

This study investigates the effect of financial risk management practices on the financial performance of steel milling companies in Afghanistan. The present chapter describes the research design, target population and sampling approach, data collection procedures, and the methods used for data analysis and model specification.

The study adopts an explanatory, quantitative research design. A quantitative approach is appropriate because the objective is to measure the relationships between clearly defined independent and dependent variables and to test hypotheses using numerical data. In line with the positivist paradigm, the study assumes that the phenomena under investigation can be observed, measured, and analyzed objectively through statistical techniques (Lavrakas,2008, pp. 122-126; Sekaran & Bougie,2011, pp. 35-41). The design focuses on explaining how variations in financial risk management practices are associated with variations in firm profitability among steel companies operating in Afghanistan at a given point in time.

The target population of the study consists of all steel milling companies that are actively operating in Afghanistan. For the purposes of this research, the population comprises five steel companies that dominate the domestic steel market. Following the definition by Kilani and Kobziev (2016, pp. 77-82), the population is understood as the entire group of entities sharing common, observable characteristics relevant to the study--in this case, Afghan steel firms engaged in production and sales activities. Because

the number of such firms is small, the study applies a census approach at the firm level, including all five companies in the analysis.

Within these companies, the units of observation are key personnel involved in finance and risk-related functions (e.g., finance managers, risk managers, senior accountants). A purposive (judgmental) sampling strategy is employed to select respondents who are directly involved in or knowledgeable about financial risk management practices in their respective firms. This non-probability sampling technique is suitable when the researcher seeks information from individuals who possess specific expertise and are willing to participate, thereby increasing the relevance and accuracy of responses (Kombo & Tromp,2009, pp. 121-127).

The study relies on both primary and secondary data. Primary data are collected through a structured, self-administered questionnaire designed to capture financial risk management practices in the steel companies. The questionnaire consists mainly of closed-ended items measured on a Likert scale, supplemented by a limited number of open-ended questions where clarification is necessary. The instrument is organized to gather information on respondents' understanding of risk and risk management, the firm's risk identification processes, risk analysis and assessment procedures, and risk monitoring practices. To ensure clarity and to facilitate accurate responses, the questionnaire was prepared in English and translated into local languages (Dari and Pashto), then back-translated into English to maintain consistency.

Secondary data are obtained from the audited financial statements of the sampled steel companies. Specifically, annual financial data for a multi-year period (e.g., 2015-2018) are collected in order to compute the firms' financial performance indicators, particularly return on assets (ROA). The combination of survey-based data on financial risk management practices and archival financial data enables the study to empirically test the effect of these practices on firm profitability.

Data collection follows a drop-and-pick (drop-off and later collection) procedure for the questionnaires. The researcher delivered the questionnaires to the selected respondents in each company and later collected the completed forms. This procedure allowed respondents sufficient time to provide thoughtful answers in their normal working environment. The financial statements were obtained from company records, with permission from management, and key financial figures were extracted into a structured spreadsheet for analysis.

Both descriptive and inferential statistical methods are used to analyze the data. After the completed questionnaires are received, responses are checked for completeness, edited, coded, and entered into the Statistical Package for Social Sciences (SPSS). Descriptive statistics--such as means, standard deviations, minimum and maximum values--are computed to summarize the characteristics of the variables and to provide an overview of financial risk management practices and firm performance across the five companies. Tables and charts are used to present the results in a clear and interpretable manner.

Inferential statistics are then employed to examine the relationship between financial risk management practices and firm profitability. Correlation analysis is first used to explore the strength and direction of the association between the independent variables (financial risk management dimensions) and the dependent variable (ROA). Subsequently, a linear regression model is estimated to assess the effect of financial risk management practices on financial performance while controlling for firm-specific factors such as size and capital structure. In this framework, the financial performance of steel companies is treated as the dependent variable, and financial risk management practices are the main explanatory variables.

Financial risk management practices (FRMP) are conceptualized as a multi-dimensional construct comprising four key components: (i) understanding of risk and risk management, (ii) risk identification, (iii) risk analysis and assessment, and (iv) risk monitoring. These dimensions are measured using composite indices derived from the Likert-scale questionnaire items. Firm size and capital structure are included as control variables, measured respectively by the ratio of turnover to total assets and the debt-equity ratio.

The functional relationship can be expressed as:

$$\text{FRMP} = f(\text{URM,RI,RAA,RM})$$

and the econometric model linking financial performance to financial risk management practices is specified as:

$$\text{ROA}_i = \alpha + \beta_1 \text{URM}_i + \beta_2 \text{RI}_i + \beta_3 \text{RAA}_i + \beta_4 \text{RM}_i + \beta_5 \text{SIZE}_i + \beta_6 \text{CS}_i + \varepsilon_i$$

where:

- ✓ ROA_i=financial performance of firm i, measured by return on assets;
- ✓ α= intercept term;
- ✓ $\beta_1, \dots, \beta_6$= regression coefficients;
- ✓ URM_i=understanding of risk and risk management in firm i;
- ✓ RI_i=risk identification practices in firm i;
- ✓ RAA_i=risk analysis and assessment practices in firm i;
- ✓ RM_i=risk monitoring practices in firm i;
- ✓ SIZE_i=size of firm i, proxied by the ratio of turnover to total assets;
- ✓ CS_i=capital structure of firm i, measured by the debt–equity ratio;
- ✓ ε_i=error term capturing unobserved factors.

This methodological framework is designed to provide a rigorous and coherent basis for assessing the impact of financial risk management practices on

the profitability of steel milling companies in Afghanistan, using a combination of survey evidence and financial statement data and relying primarily on quantitative, explanatory analysis.

Findings and Analysis

This section presents the empirical findings of the study and their interpretation in line with the research objectives. Primary data were collected using a structured questionnaire based on a five-point Likert scale, while secondary data on financial performance (ROA) were obtained from the audited financial statements of the sampled steel companies. Descriptive statistics, correlation analysis, and multiple regression analysis were used to examine the effect of financial risk management practices on the profitability of steel milling companies in Afghanistan.

The target population consisted of five steel companies operating in Afghanistan. A total of 40 questionnaires were distributed to finance-related staff across these firms, of which 32 were completed and returned, yielding a response rate of 80%. This response rate is considered excellent for survey research and sufficient to provide reliable insights into the research problem. The distribution of respondents by position is shown in Table 1 Most of the respondents were finance managers, finance officers, and credit analysts, positions that are directly involved in financial decision-making and risk-management activities within the firms and therefore appropriate for this study.

Table 1. Position and Response Rate in Steel Firms

Respondent Category	Population (Frequency)	Population (%)	Responses (Frequency)	Response (%)
Finance Managers	18	45.0	14	35.0
Finance Officers	5	7.5	3	20.5
Credit Analysts	10	30.0	10	30.0
Others	7	17.5	5	12.5
Total	40	100	32	80

Source: Research findings

With respect to the existence of formal risk management systems (RMS), 55.8% of respondents indicated that their companies have a formal RMS in place, while 31.3% reported that no formal system exists in their organizations; the remaining respondents were neutral. This suggests that a majority of steel firms have institutionalized some form of structured risk management, although a sizeable minority still operate without fully formalized systems. Regarding the duration of these systems, 37.5% of respondents reported that a structured RMS has been in place for more than ten years, 25.0% indicated a duration of 7-10 years, 21.9% reported 4-6 years, and 15.6% indicated 1-3 years. Overall, these results show that for many firms, risk management is a well-established function, while others remain at relatively early stages of development.

The study further examined which parties are involved in developing risk management strategies in the steel firms. Respondents rated, on a five-point Likert scale, the extent of involvement of various factors such as executive management, directors, finance managers, credit specialists, consultants, and employees. The results are summarized in Table 2 Credit specialists, executive management, and external consultants are involved to a large extent in the formulation of risk management strategies, as reflected by mean scores above 3.5. Directors and finance managers are involved to a moderate extent, while suggestions from employees and other parties are relatively less influential. These findings suggest that risk management strategy in Afghan steel companies is primarily driven by senior finance professionals and top management, with limited bottom-up participation.

Table 2. Parties Involved in Developing RM Strategies

Parties	Mean	Standard Deviation
Executive Management	3.6042	1.35414
Suggestions from Employees	2.8912	1.52681
Directors	3.1955	1.53240
Finance Manager	3.1522	1.55155
Credit Specialist	3.9129	1.40112
Consultants / Third Parties	3.5423	1.43018
Others	2.4129	1.41569

Source: Research findings

The main functions of financial risk management in the sampled firms were also investigated. Respondents evaluated the extent to which different roles are considered major functions of financial risk management. As presented in Table 3, enhancing financial strength, implementing and ensuring security, and establishing business continuity programs are rated very highly. Ensuring employees' protection is also seen as an important role, while managing risk-transfer programs is perceived as moderately important. Overall, financial risk management is viewed as integral to both financial resilience and operational continuity in Afghan steel companies.

Table 3. Major Roles of Financial Risk Management

Roles	Mean	Standard Deviation
Enhancing financial strength	4.9130	0.83253
Implementing and ensuring security	4.5217	1.06173
Ensuring employees' protection	4.0870	1.35344
Managing risk-transfer programs	3.4783	1.51146
Establishing business continuity programs	4.3261	1.14728

Source: Research findings

The study also explored factors influencing the firms' overall approach to financial risk management. Respondents rated the influence of several contextual and strategic factors. As shown in Table 4, regulatory requirements and industry competition are the most influential drivers of financial risk management, both with mean scores above 4.0. The desire to achieve high returns is also a strong driver, while the influence of the board of directors is moderate. Competition in the broader economy appears to have a relatively weaker impact on the firms' risk-management posture. These results underline the importance of external pressures and compliance obligations in shaping the adoption and intensity of risk-management practices.

Table 4. Factors Affecting the Financial Risk Management Approach

Factors	Mean	Standard Deviation
Board of Directors' influence	3.2861	1.42572
Regulatory requirements	4.0652	1.33020
Industry competition	4.0217	1.57289
Competition in the entire economy	2.0870	1.71076
Desire to achieve high returns	3.5435	1.43022

Source: Research findings

Regarding risk identification, respondents evaluated the extent to which their firms focus on different types of risks. The results are summarized in Table 5 The firms place the greatest emphasis on market risk and interest rate risk, followed by transaction risk and technology risk. Liquidity risk and foreign-exchange risk receive moderate attention. In contrast, political risk and price risk exposure are rated relatively low despite the highly uncertain political and economic environment in Afghanistan and the volatility of steel prices. This indicates a potential gap in the risk identification process, where some critical external risks may be underemphasized.

Table 5. Risk Identification (RI)

Type of Risk	Mean	Standard Deviation
Interest rate risks	4.1957	1.15802
Transaction risks	3.9783	1.41146
Liquidity risks	3.4348	1.50404
Political risks	2.0870	1.71076

Market risks	4.5217	1.06173
Price risk exposure	2.1522	1.56910
Foreign exchange risks	3.2391	1.76567
Technology risks	3.6087	1.42673

Source: Research findings

The means through which awareness of financial risks is raised within the firms were also examined. As indicated in Table 6, regular meetings are the most commonly used method and are rated as highly effective in creating awareness among staff. Regular training programs are used to a moderate extent, while one-on-one sessions are relatively rare. This suggests that group-based communication is the dominant channel for disseminating risk-related information in Afghan steel firms.

Table 6. Means of Creating Awareness on Financial Risk Management

Means of Awareness	Mean	Standard Deviation
Regular meetings	4.2957	0.87072
Regular trainings	3.5348	0.92939
One-on-one sessions	2.1087	0.75962

Source: Research findings

The effectiveness of specific risk-monitoring practices was then assessed. Table 7 shows that monitoring of foreign currency prices and world steel prices is perceived as effective to very effective. Strict monitoring and adherence to customer credit limits are also rated as effective. In contrast, the regular review of debtors' aging and working capital is seen as less effective. This indicates that while external price and currency monitoring is relatively strong, internal monitoring related to short-term liquidity and receivables management could be strengthened.

Table 7. Risk Monitoring Practices

Risk Monitoring Practice	Mean	Standard Deviation
Credit limits for customers are strictly monitored and adhered to	3.6304	0.67355
The companies regularly review the debtors' aging	2.1913	0.73118
The company regularly assesses its working capital	2.5682	0.78335
The companies monitor world steel prices through steel price-assessment platforms	3.7174	0.74471
The companies monitor foreign currency prices regularly to time foreign-currency deals	4.2783	0.97575

Source: Research findings

In terms of risk-management techniques, respondents rated the effectiveness of different tools and practices in influencing financial performance. The results in Table 8 indicate that strict credit policies, regular appraisal of debtors using the 5C's, and incorporating foreign-exchange fluctuations into the cost model are perceived as highly effective techniques. Forecasting exposure to exchange-rate risk, using forwards and futures, price-risk management, and enhanced information sharing between hedging units and supply chain management are also considered effective. On the other hand, commodity price hedging and margin transaction hedging are rated as only slightly effective or infrequently used. This suggests that while Afghan steel firms actively apply basic financial risk-management techniques, the use of more sophisticated derivative-based hedging for commodity prices is still limited.

Table 8. Risk Management Techniques

Risk Management Technique	Mean	Standard Deviation
Commodity price hedging	1.1957	1.85802
Having strict credit policies	4.2391	1.16866
Set credit limits for customers	3.8261	1.22572
Regularly appraising debtors using the 5C's	4.0652	1.33020
Factoring foreign-exchange fluctuations into the cost model as part of finance costs	4.0217	1.33020
Margin transaction hedging	2.0870	1.57289
Forecasting exposures to exchange-rate risk	3.5435	1.43022
Use of forwards and futures to reduce exposure to foreign-exchange fluctuations	3.5435	1.43022
Price risk management	3.4384	1.50404
Information sharing between the hedging unit and supply-chain management	3.7609	1.45268
Fully constituted and functional financial management teams	3.6957	1.53599
Emphasis on periodic review of steel sales and delivery procedures	3.8043	1.33378

Source: Research findings

To investigate the relationship between financial risk-management practices and financial performance, Pearson correlation coefficients were computed for financial performance (ROA) and the main explanatory variables: understanding risk and risk management (URM), risk identification (RI), risk analysis and assessment (RAA), risk monitoring (RM), firm size, and capital structure. As shown in Table 9, financial performance is positively correlated with URM, RI, RAA, RM, and especially firm size, while it is negatively correlated with capital structure. These results suggest that stronger risk-management practices and larger firm size are associated with higher profitability, whereas higher leverage tends to be associated with lower financial performance.

Table 9. Pearson Correlation Coefficients

Variable	FP	URM	RI	RAA	RM	Size	Capital Structure
Financial performance (FP)	1.000						
Understanding risk (URM)	0.536	1.000					
Risk identification (RI)	0.752	0.118	1.000				
Risk analysis & assessment	0.467	0.128	0.247	1.000			
Risk monitoring (RM)	0.460	0.126	0.345	0.234	1.000		
Size of the companies	0.910	−0.158	−0.134	−0.433	0.429	1.000	
Capital structure	−0.373	−0.108	0.270	0.505	−0.429	−0.373	1.000

Source: Research findings

A multiple linear regression model was estimated to determine the joint effect of these explanatory variables on financial performance (ROA). The model specification is:

$$\text{ROA} = \alpha + \beta_1 \text{URM} + \beta_2 \text{RI} + \beta_3 \text{RAA} + \beta_4 \text{RM} + \beta_5 \text{SIZE} + \beta_6 \text{CS} + \varepsilon$$

The model summary in Table 10 shows that the coefficient of determination (R^2) is 0.843, indicating that approximately 84.3% of the variation in financial performance is explained jointly by understanding risk, risk identification, risk analysis and assessment, risk monitoring, firm size, and capital structure. The model is statistically significant at the 5% level (p = 0.001), implying a good overall fit.

Table 10. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.918	0.843	0.805	0.51038	0.843	1.242	4	36	0.001

Source: Research findings

The ANOVA results in Table 11 confirm that the overall regression model is statistically significant, indicating that the set of predictors collectively explains a significant proportion of the variation in ROA.

Table 11. ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.852	4	0.213	1.242	0.001
Residual	6.173	36	0.171		
Total	7.024	40			

Source: Research findings

The estimated regression coefficients are reported in Table 12 The resulting equation is:

$$\text{ROA} = 0.260 + 0.131X_1 + 0.170X_2 + 0.051X_3 + 0.048X_4 + 0.075X_5 + 0.031X_6 + \varepsilon$$

where X_1= understanding risk and risk management, X_2= risk identification, X_3= risk analysis and assessment, X_4= risk monitoring, X_5= firm size, and X_6= capital structure.

Table 12. Regression Coefficients

Variable	Code	Unstandardized B	Std. Error	t	Sig.
Constant	–	0.260	0.460	0.565	0.231
Understanding risk & RM	X1	0.131	0.048	2.729	0.001
Risk identification	X2	0.170	0.045	3.778	0.000
Risk analysis & assessment	X3	0.051	0.023	2.217	0.002
Risk monitoring	X4	0.048	0.022	2.182	0.000
Size of the companies	X5	0.075	0.066	1.124	0.270
Capital structure	X6	0.031	0.020	−1.496	0.145

Source: Research findings

The coefficients of understanding risk and risk management, risk identification, risk analysis and assessment, and risk monitoring are all positive and statistically significant at the 5% level. This implies that improvements in each of these dimensions of financial risk management are associated with higher financial performance (ROA) of steel companies in Afghanistan. The coefficients of firm size and capital structure are positive but not statistically significant, suggesting that, once risk-management practices are accounted for, these firm-specific characteristics do not exert a strong independent influence on profitability in this sample. Overall, the empirical evidence indicates that financial risk management practices particularly understanding of risk, systematic identification, rigorous analysis and assessment, and continuous monitoring have a significant positive impact on the financial performance of steel milling companies in Afghanistan, while structural factors such as size and leverage play a comparatively weaker role when effective risk-management frameworks are in place. The findings of this study clearly show the existence of a substantial and positive influence of financial risk management practices on financial performance of steel milling companies in Afghanistan. All four examined dimensions, i.e. understanding of risk and risk management, risk identification, risk analysis and assessment, and risk monitoring, demonstrate significant positive relationships with return on assets (ROA). These findings support the key expectation of the theory of financial risk management that organizations that operate in environments with high financial risks benefit greatly from systematic and structured financial risk management processes. By mitigating uncertainty, securing cash flows, and facilitating informed decision-making, effective risk management is a fundamental driver of financial performance.

An important pattern emerging from the results is the high level of emphasis that has been placed on market-related risks such as market prices, interest rates, and transaction risks. These risks are inherent in the manufacture of steel, which is so sensitive to changes in commodity prices and foreign exchange markets. The relatively high ratings assigned to these types of risk reflect an awareness among the Afghan steel firms of external financial pressures. However, the noticeably lower emphasis given to

political risk and price risk exposure is striking given the uncertain political and economic environment in Afghanistan. This suggests that although firms have developed internal mechanisms to monitor financial indicators, they may be underestimating broader macro-level uncertainties that have a significant impact on supply chains, cost structures and operational continuity.

The results also show the shortcomings in internal financial monitoring systems. While companies do a good job of tracking the movement of foreign currencies and global steel prices, they do a less effective job in areas such as debtor aging analysis and working capital assessment. Weak internal liquidity oversight puts firms at risk of cash flow issues and potentially limits their ability to react to short-term financial shocks. This imbalance suggests that Afghan steel companies are more sensitive to market signals from outside their borders than to the financial health metrics, which may make the financial risk management frameworks of these companies less effective overall.

Furthermore, the study identifies that the development of risk management strategies is dominated by executive management, credit specialists and external consultants. Employee participation and middle management participation is limited. This top-down structure could limit the variety of risk information gathered in the organization and destroy the creation of a holistic risk culture. Effective risk identification often needs the contribution of operational and departmental staff who have direct contacts with day-to-day processes and the limited involvement in the process found in this study does identify an area for improvement.

Another important finding is that of the tools used by firms. While the basic financial risk management techniques such as strict credit policies, debtor appraisal using 5C's and including currency fluctuations into cost model are effectively implemented, more sophisticated hedging techniques such as commodity futures, forwards and margin hedging are hardly practiced. This reflects both the underdevelopment of the financial markets in Afghanistan and the lack of sophisticated financial instruments. As a result, firms use mainly internal policies, not market-based mechanisms, to reduce risk.

The regression analysis gives us additional information: the combined financial risk management variables account for 84.3% of the variation in financial performance. This remarkably high explanatory power shows that in the case of the Afghanistan steel industry, risk management practices are an important determinant of profitability. In contrast firm size and capital structure do not show any statistically significant influence on ROA. This differs from more traditional corporate finance theory which tends to put leverage and size as major determinants of firm performance. In the Afghan situation however, the low access to credit, the absence of financial diversification and the extremely volatile trading environment, limit the strategic use of debt and the effect of debt on profitability.

Overall, the results show that in fragile and volatile environments like Afghanistan, financial risk management practices are more important for firm profitability than structural firm characteristics. Companies that invest in holistic risk identification and systematic assessment as well as continuous monitoring can greatly improve financial results despite the external challenges they encounter. Nevertheless, the study also highlights some key gaps, especially in the areas of internal liquidity monitoring, recognition of political risks, and the use of advanced hedging instruments, which need to be addressed to further strengthen risk management frameworks in the Afghan steel industry.

Conclusion

This research aimed to investigate the impact of financial risk management practices on financial performance of steel milling companies in Afghanistan. Based on empirical evidence for the questionnaire data and financial statements, the results show that the financial risk management is a major determinant of the profitability in the steel sector. All four of the core components, understanding of risk, risk identification, risk analysis and assessment, and risk monitoring, are all significantly related to return on assets in positive directions. These results confirm that firms with better and more organized systems to manage risk have better financial outcomes.

The study concludes that successful financial risk management is critical for steel companies that are operating in environments with high levels of volatility, underdeveloped financial markets, and political and economic instability. While external risks like market price fluctuations and exchange rate dynamics are monitored well, internal risk monitor mechanisms, especially those linked to liquidity and debtor management, need improvement. Furthermore, while basic financial risk management tools are used in a big way, the use of sophisticated hedging instruments is still limited due to market constraints.

The results of the regression indicate that the financial risk management practices taken together, account for more than 84% of the variation in financial performance, thus highlighting their key role in deciding profitability as a measure of performance within the steel industry in Afghanistan. Firm size and capital structure do not have significant independent effects when risk management practices are considered, emphasizing the importance of organizational resilience in this

sector being dependent on managerial capability rather than structural characteristics.

In sum, the steel milling companies that focus on systematic, analytical, and proactive risk management practices are better positioned to maneuver in the uncertain business environment of Afghanistan and to maintain profitability. Strengthening internal financial controls, improving awareness of the wider classes of risk and advocating for the building of financial markets where there are financial instruments to hedge against risk will further increase the ability of these firms to deal with volatility. Future research can build on these findings by using longitudinal data, increasing sample size, or by comparing the results with other steel industries in other emerging economies to better understand how practices related to financial risk management change in different institutional settings.

Disclosure Statement

No potential conflict of interest reported by the authors.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors' Contributions

All authors contributed to data analysis, drafting, and revising of the paper and agreed to be responsible for all the aspects of this work.

References

[1] Alijoyo, A. F. (**2002**). Board member of the forum for Corporate Governance in Indonesia, Abstract from a panel discussion on corporate Governance.

[2] Amran, A., Rosli, A. M., & Hassan, M. C. H. (**2008**). Risk reporting: An exploratory study on risk management disclosure in Malaysian annual reports.

[3] Aranaz, I., Mengíbar, M., Harris, R., Paños, I., Miralles, B., Acosta, N., … Heras, Á. (**2009**). Functional characterization of chitin and chitosan.

[4] Ball, R. E., & Shiva Kumar, L. (**2005**). The Role of Accruals in Asymmetrically Timely Gain and Loss Recognition.

[5] BCBS. (**2003**). Sound Practices for the Management and Supervision of Operational Risk. Bank for International Settlements.

[6] Creswell, J. (**2006**). Qualitative Inquiry and Research Design. SAGE Publications.

[7] Das, T. K. (**2001**). Strategic risk behavior and its temporalities: Between risk propensity and decision context. Journal of Management Studies.

[8] Descartes, R. (**1998**). Discourse on method and meditations on first philosophy (Fourth). Indianapolis, IN: Hackett: Donald A. Cress, Trans.

[9] Doherty, N. A. (**1985**). Corporate Risk Management. USA: McGraw-Hill.

[10] Drew, C. J. (2010). Qualitative Research In Education. USA: Sage.

[11] Ekwall, D. (**2009**). Managing the Risk for Antagonistic Threats against the Transport Network.

[12] Fandrich, R., Gu, Y., Burrows, D., & Moeller, K. (**2007**). Modern SEM-based mineral liberation analysis. International Journal of Mineral Processing.

[13] Hacket, P. (**2003**). The Selection Interview. The Management Shapers Series, 95.

[14] Head, L. G. (**2009**). Risk Management Why and How. Dallas, Texas: International Risk Management Institute.

[15] Herman, M. L., & Head, G. L. (**2002**). Strategic risk management: Looking at both sides now.

[16] Hume, D. (**1993**). An enquiry concerning human understanding (seconde). Indianapolis IN: Hackett.

[17] Iacono, J., Brown, A., & Holtham, C. (**2009**). Research Methods A Case Example of Participant Observation. The Electronic Journal of Business Research Methods.

[18] John, W., & Kahan, J. (**2007**). Research in Education. Prentice Hall of India Private.

[19] Kawamoto, B. (**2001**). Issues in Enterprise Risk Management: From Theory to Application. Casualty Actuarial Society Spring Meeting.

[20] Kilani, M. A., & Kobziev, V. (**2016**). An Overview of Research Methodology in Information System (IS).

[21] Kiragu, S. M. (**2014**). Assessment of challenges facing insurance companies in building competitive advantage. International Journal of Social Sciences and Entrepreneurship.

[22] Kombo, D., & Tromp, D. (**2009**). Proposal and Thesis Writing: An Introduction. Nairobi, Africa: Paulines Publication: Don Bosco Printing Press.

[23] La, S., & Choi, B. (**2012**). The role of customer affection and trust in loyalty rebuilding after service failure and recovery. The Service Industries Journal.

[24] Lam, J. S. L. (**2011**). Patterns of Maritime Supply Chains: Slot Capacity Analysis. Journal of Transport Geography.

[25] Lavrakas, P. (**2008**). Encyclopedia of Survey Research Methods. Sage Publications, 1.

[26] Lekalkuli, J. (**2016**). Effect of Financial Risk Management Practices on Profitability of Life Assurance Companies Listed at the Nairobi Securities Exchange.

[27] Lintner, J. (**1965**). The Valuation of Risk Assests and the Selection of Risky Investments

in Stock Portfolios and Capital Budgets. Review of Economics and Statistics.
[28] Lucouw, P. (**2004**). Creazing the moe Balancing on the tight rope to prosperous existence. Corals Publisers.
[29] Markowitz, H. (**1952**). Portfolio Selection. Journal of Finance.
[30] Markowitz, H. (**1959**). Portfolio Selection: Efficient Diversification of Investments. Cowles Foundation Monograph.
[31] Meulbroek, L. K. (**2002**). Integrated Risk Management for the Firm: A Senior Manager's Guide. Harvard Business Review.
[32] Mishkin, F. S. (**2007**). Is Financial Globalization Beneficial? Wiley Online Library. Retrieved from https://onlinelibrary.wiley.com
[33] Mudaki, A. L., Wanjere, D., Ochieng, I., & Odera, O. (**2012**). Effects of operational factors on organizational performance in Kenyan insurance industry. International Journal of Business and Social Science.
[34] Mugenda, O. M., & Mugenda, A. G. (**1999**). Research Methods: Quantitative and Qualitative Approaches. Acts Press.
[35] Neeru, S. (**2012**). Meaning of the term-descriptive survey research method. International Journal of Transformations in Business Management.
[36] Okochi, J. (**2008**). Commodity Hedging: Best Practices for Modelling Commodity Exposures. Journal of Corporate Treasury Management.
[37] Olsson, C. (**2002**). Risk Management in Emerging Markets. London: Pearson Education Limited.
[38] Pisca, A. (**2008**). The Right fit: Auditing ERM Frameworks; Enterprise risk management reviews provide assurance that the organization has a sound basis for assessing and mitigation.
[39] Punithavathy, P. (**2009**). Security Analysis and Portfolio Management.
[40] Ross, S. (**1976**). The Arbitrage Theory of Capital Asset Pricing. Journal of Economic Theory.
[41] Sekaran, U., & Bougie, R. (**2011**). Research Methods for Business: A Skill Building Approach (fifth Edition). New Delhi: Aggarwal Printing Press.
[42] Selim, G., & Mcname, D. (**2003**). The Risk Management and Internal Auditing Relationship: Developing and Validating a Model. International Journal of Auditing.
[43] Shahroudi, K., Taleghani, M., & Mohammadi, G. (**2012**). Application of two-stage DEA technique for efficiencies measuring of private insurance companies in Iran. International Journal of Applied.
[44] Sharpe, W. F. (**1964**). Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. Journal of Finance.
[45] Upagade, V., & Shende, A. (**2012**). Research Methodology (sechond Edition). New Delhi: S.Chand Company Ltd. Ram Nagar.
[46] Urciuoli, V., & Crenca, G. (**1989**). Risk Management: Strategie e processi decisional nella gestione dei rischi puri impresa. ISBA Rovereto.
[47] Wilfred, C. (**2006**). Philosophy, Methodology and Action Research. Journal of Philosophy of Eduction.
[48] Zikmund, G., Banin, J., Carr, J., & Griffin, M. (**2010**). Business Research Methods (8TH (8th ed.). Natorp Boulevard mason: South Western: Cengage Learning.