Designing a Structural Model of Types of Non-Financial Risks in Stock and Securities Brokerage Companies

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Abstract

Purpose: Today, the expansion of global competition and technological advancements have led to more complex business environments. Stock and securities companies are not exempted from this rule. The purpose of this research is to design a structural model of non-financial risks in Yazd stock and securities brokerage companies.

Method: This research is applied in terms of purpose and descriptive survey in nature. The statistical population is experts, managers and employees of Yazd stock and securities brokerage companies. The tool of data collection was a paired questionnaire, in order to complete it,15 managers and experts were selected as a sample using the judgmental sampling method. After presenting the conceptual model of the research, to fit the obtained model, a number of 200 questionnaires were distributed among the employees of the stock brokerage companies in Darized, of which 171 questionnaires were returned.

Results: The results of this research showed that management risk has a positive and significant effect on network and infrastructure risk, as well as network and infrastructure risk on the risks of laws and regulations, population risk, and competitive risk. It is also possible to look at the effect of the risks of laws and regulations, demographic risk and competitive risk on operational risk and the effect of operational risk on customer-related risk.

Conclusion: Stock exchanges and securities markets play an important role in the economy of any country and allow companies and investors to take advantage of the financial resources of the capital market and perform financial operations. Risk management is also very important in these companies because failure to manage these risks can have a significant effect on their performance and profitability; therefore, this research deals with the design of a communication model between types of non-financial risks.

Contribution: Risk management in stock exchange companies is one of the critical factors in the success and stability of these companies. Considering the dynamic nature of the capital market and the ability of risks to have a high impact on the performance of companies, it is essential and vital to pay attention to the management of these risks.

Keywords: Risk Management, Financial Management, Non-Financial Risks, Structural Equation Modeling, Interpretive Structural Modeling.

Research Article

Introduction

Today, the expansion of global competition and technological advancements have led to more complex business environments. Stock and securities companies are not exempted from this rule. The purpose of this research is to design a structural model of non-financial risks in Yazd stock and securities brokerage companies. The increasingly competitive global landscape, coupled with technological breakthroughs, has rendered business environments more intricate (Ricardianto et al., 2023). Stock exchanges, as key players in the capital market, have not been exempt from these trends. These institutions serve as marketplaces for securities, facilitating capital allocation and economic growth. By providing a platform for trading equities, bonds, and other financial instruments, stock exchanges are vital to a nation's economy, enabling companies to raise capital and investors to diversify their portfolios (Mamari et al., 2022). These institutions play a pivotal role in price discovery and promote investor confidence through transparency and regulatory oversight (Iswajuni et al., 2018). Given the significance of risk identification in companies, managers and decision-makers have focused on proper risk management and how to address various types of risks in the workplace. In other words, risk management has become an integral part of business today .Risk management in stock exchanges is a critical factor in the success and sustainability of these companies. Considering the dynamic nature of the capital market and the significant impact of risks on company performance, paying attention to managing these risks is essential and vital (Suryanto & Irawanati, 2023; 70). Unlike traditional risk management where each risk was managed individually, companies that employ effective risk management must manage a wide range of risks in a coordinated manner. Effective risk management activities are often not perceived as a strategic management process but rather as a specific effort to create a shock absorber capable of absorbing and transferring economic shocks. In other words, effective risk management is not only used to limit losses but also seeks to identify, develop, and exploit opportunities. Moreover, effective risk management is a powerful two-sided tool, both defensive and offensive, in today's competitive financial services market.

Materials and Methods

This research, in terms of its purpose, is applied and in terms of the type and method of data collection, is descriptive survey. In this research, first, by using a literature review and previous research, various types of non-financial risks were identified and then adjusted and localized by consulting experts in stock exchange companies. The analysis in this research is carried out in two stages: In the first stage, using the interpretive structural modeling technique, a model of the relationship between various types of non-financial risks in the stock exchange companies of Yazd province was designed. The goal of this stage was to achieve a structural model of the relationship between the main variables and the prioritization level of addressing them. The output of this stage was used to

conduct structural equation modeling and add measurement models to the structural model obtained from the previous stage. In the first phase of the survey, a pairwise comparison questionnaire among the identified dimensions was provided to experts. The number of experts in filling out the pairwise comparison questionnaire to implement the interpretive structural modeling technique is sufficient between 8 and 15 experts (Yadav & Sagar, 2021; 318). Accordingly, in this section of the research, 15 experts familiar with the research topic, who have research experience in this field and at least 5 years of relevant work experience, were asked to answer the questionnaire. In implementing the interpretive structural modeling technique, a questionnaire consisting of 8 final identified factors from the previous research was designed. This questionnaire was based on pairwise comparisons of factors and was designed to discover relationships (no relationship, one-way relationship, mutual relationship between them).

Results and Discussion

In the initial phase, a pairwise comparison was conducted among the various non-financial risks identified in the listed companies of Yazd Province, considering the expert opinions. In the subsequent phase, utilizing the data derived from the initial pairwise comparison matrix, an initial reachability matrix was constructed. Subsequently, through necessary calculations, the final reachability matrix was extracted. To determine the hierarchical levels of factors and the causal relationships among them, as previously explained, the identification of reachable, precedent, and common sets is imperative. This stage enables us to delineate the overall structure of the problem as a hierarchical model and clearly visualize the relationships between various factors. In the second phase, to validate the conceptual model extracted from the Interpretive Structural Modeling (ISM) method, Structural Equation Modeling (SEM) and Smart PLS 3 software were employed. Data collected from 171 employees and managers of brokerage firms in Yazd Stock Exchange was used to fit the model. The results indicated that the research questionnaire had satisfactory reliability and validity. Furthermore, the overall fit of the structural model and goodness-of-fit indices (such as R^2 and Q^2) were confirmed. The SRMR value of 0.044 indicated a very good overall fit of the model. Additionally, all path coefficients (t-values) were significantly greater than the threshold value of 1.96, indicating strong causal relationships between the research variables.

Conclusion

The results of this study indicated that non-financial risks include managerial risk, network and infrastructure risk, legal and regulatory risk, demographic risk, competitive risk, technology and cyber risk, operational risk, and customer-related risk. After identifying non-financial risks through a literature review and prior research and validating them with experts and managers of brokerage firms in Yazd, the relationship between non-financial risks was examined using a pairwise

comparison questionnaire. Subsequently, using the interpretive structural modeling approach, a model of the relationship between non-financial risks was identified. Based on the results obtained from the interpretive structural modeling approach, the conceptual model of the research was presented in six levels. At the sixth and foundational level of the model, the managerial risk variable was placed. At the second level, the network and infrastructure risk variable were placed, at the third level, the competitive risk, demographic risk, and legal and regulatory risk variables, at the fourth level, the technology and cyber risk, at the fifth level, the operational risk, and at the sixth level, the customer-related risk.

Conflict of Interest

The authors of this article declared no conflict of interest regarding the authorship or publication of this article.

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