Providing the financing model through the purchase of debt (factoring) with a risk management approach (Case study: Listed and non-listed companies)

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(Communicated by Mohammad Bagher Ghaemi)

Abstract

The current research aims to present a financing model through the purchase of debt (factoring) with a risk management approach in listed and non-listed companies. This research was applied in terms of its purpose and descriptive survey in terms of its implementation method. The statistical population includes all managers of listed and non-listed companies. Due to the uncertainty of the number of the population, Cochran's formula was used to determine the sample size and the required sample size was determined to be 384 people. Data collection tools include interpretive structure questionnaires and researcher-made questionnaires. Data analysis was done through interpretive structural software (ISM) and structural equation modelling. The results showed that at the first level, the factoring selection component was identified as a financial method. Second, two components of communication with factoring companies and interaction with business partners were identified. At the third level, there are financial risk management variables at this level. In fact, this component became a bridge between the second and fourth levels. At the fourth variable level, there are economic and financial factors. Also, the results showed that choosing factoring has a significant effect on communication with companies and interaction with partners. Also, communication with companies and interaction with partners has a significant effect on financial risk management. On the other hand, financial risk management has a significant effect on economic and financial factors. Therefore, the proposed model in this research had good validity.

Keywords: financing, debt purchase, risk management approach, structural equation modeling, listed companies
2020 MSC: 91G15, 91G45

1 Introduction

In recent years, the issue of financing has become one of the main challenges of development, and from the perspective of economic actors, access to financial resources is one of the most important problems in the business

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environment [9]. Using the right financing methods to implement profitable projects can play a key role in increasing shareholder wealth. One of the decisions that business managers must make to maximize shareholder wealth is decisions related to effective financing. In fact, financing, if provided to companies at the right time, in sufficient quantity and in the right way, is of great importance [9, 11]. Therefore, one of the fundamental issues in the country's progress is the issue of financing and granting facilities. There have always been and continue to be many challenges in financing resources for businesses, which has reduced the efficiency and productivity of enterprises and in many cases has led to the bankruptcy and dissolution of such economic enterprises [8]. Given that companies need new investments to advance and develop their activities in a competitive and growing environment, new investments require financing and the necessary cash. The use of debt financing by companies, which is used as a strategy, has a different impact on the value of the company. Therefore, the existence of debt in the financial structure of companies due to the tax advantage increases accounting profit and consequently increases earnings per share; However, due to the existence of interest expenses and the possibility of non-fulfillment of obligations on the due date, it increases the possibility of financial risk and consequently reduces the market price of shares and consequently reduces the return on shares. Although financial risk is not a positive phenomenon, understanding it leads to better and more informed decisions in the field of business or investment and helps to evaluate the value (risk-reward ratio). Evaluating and predicting financial risk helps to determine the value of that investment, and if financial risk is not controlled, it will have irreparable consequences that will be difficult to overcome and there is a possibility of their spread and impact on entire sectors and markets [6]. Factoring, also known as accounts receivable financing, is a financial transaction and a form of debt financing in which a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount. A business sometimes factors its receivables to meet its current and immediate cash flow needs. Accounts receivable financing is a more precise term used to describe a form of asset-based lending against accounts receivable [14]. A review of the literature shows that, despite the relatively large amount of research on financing, only a few studies [2, 7] have examined factoring. This indicates a clear research gap in the literature. On the other hand, factoring has not been examined from a risk management perspective in either domestic or international literature. In other words, a review of the literature shows that risk management and factoring are concepts that have often been examined in separate research fields. In light of this research gap, this study aims to develop a risk management-based factoring financing model. Thus, the main innovation of this study can be stated in two categories: one is the entry into the field of factoring financing and the other is the presentation of a model in relation to factoring financing with a risk management approach.

2 Research literature

2.1 Factoring (financing through debt purchase)

Factoring is a financial transaction and a type of debt-based financing in which a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount. A business may factor in its receivables to address its current and immediate cash flow needs. Forfaiting is a factoring arrangement used in international trade financing by exporters who want to sell their receivables to a purchaser. Factoring is commonly referred to as accounts receivable factoring, invoice factoring, and sometimes accounts receivable financing. Accounts receivable financing is a more precise term used to describe a form of asset-based lending against accounts receivable. The Commercial Finance Association is the leading trade association for the asset-based lending and factoring industries [14]. In a factoring agreement, depending on the type of agreement between the seller and the broker, it can be either non-recourse or recourse. If the agreement is non-recourse to the seller and the buyer (debtor) is unable to pay its debt, the broker cannot recourse to the seller. However, if the agreement is recourse to the seller, in the event of the buyer's inability to pay the debt, the broker has the right to recourse to the seller. However, in a foreign factoring agreement (forfeiting), the agreement is non-recourse to the seller (exporter) and in the event of the buyer's (importer's) inability to pay the debt, the broker (forfeiture) does not have the right to recourse to the seller (exporter) [20].

2.2 Risk management

Risk management is crucial for ensuring that a company and its leadership are aware of potential problems, helping them develop solutions to those problems and mitigating their risks. A company with high risk or a lack of management may find that investors are not excited to give them money. They may also find that they face more problems later on when they do not have the money or time to fix them. Taking risk management seriously can help a company prepare for the future. Business owners and investors may measure risk in a variety of ways. One way might be the amount of money that could be lost if a problem occurs. Another is the frequency of the risk and the harm that it might cause. Other risk measures can include historical, scenario-specific, and customer impact. All of these

ways of measuring risk can be important for an organization hoping to analyze, reduce, or minimize potential risks for itself and its investors [15]. The risk management process can vary depending on the business and the situation. Some companies have dedicated corporate risk management teams that focus on strategic risk, risk assessment, risk profiling, risk treatment, and risk readiness for each new product and strategy. Smaller companies may only have one person who focuses on risk assessment, or it may simply be a task among other responsibilities for one person in the company. Before starting a business, they need to define and analyze their risk. Business owners and investors alike must understand the risks before they really go for it and move their company forward [4].

Table 1: Summary of experimental background

author	Title	findings
PorAhmadi et al [16]	The effect of enterprise risk management on the relationship between external financing and earnings management	Organizational risk management as well as external financing have an impact on profit management.
Jafari Nodoushan et al [12]	"Identification and ranking of credit risk management tools in the banking system with fuzzy multi-criteria decision-making methods	Collateral and guarantee are considered as the most important tools in credit risk management.
Dehmolaei and Jafari [8].	Development of financing strategy and development of human resources, case study of Bushehr municipality	The assumptions of the model are: formulation of common vision, analysis of public environment, analysis of operational environment, analysis of municipal image and analysis of analysis.
Ahmadvand, Naserpour [2]	Providing a financing model based on debt purchase papers	Models based on debt purchase bonds have had more priority than models based on murabaha bonds.
Ershadmanesh et al [10]	Providing financial resources for construction projects	The necessary financial factors and levers from internal sources are: a) stock exchange b) sale of partnership bonds c) use of funds of insurance and pension funds d) use of unused or underutilized assets of economic units
Pourqanbari et al [17]	The method of providing financial resources in the organization	Every type of activity requires financial resources and one should know all the methods, both internal and external, and provide financial resources according to them.
Ahmadi, Dejdar [1]	Debt purchase bonds are an effective tool in providing working capital for companies	Debt sukuk based on accounts receivable is proposed as a new model for the efficiency of working capital of companies in the financial market of Iran.
Saeidi et al [18]	The effect of company risk management on company performance with the moderating effect of intellectual capital dimensions	Overall intellectual capital has a moderating effect on ERM firm's financial performance.
Kamenev [13]	Comparative analysis of budget financing efficiency through emission, tax and debt	The decline rate decreases as the level of ceded premiums increases relative to total gross premiums written
Aksoy et al [3]	The effect of board composition on debt financing	The presence of a female chairman and female directors on the board reduces the cost of debt and the perception of default risk by fund providers, while board independence and board size have no significant effect on the cost of debt.
Chen [7]	Corporate financing mode: financing through factoring	Business factoring does not necessarily require related financing, but can provide financing services at the same time. This article mainly introduces factoring financing.
Souza et al [19]	The relationship between effective enterprise risk management and improving the performance of non-financial companies	Risk plays an important role in the organization's main activities, and performance improvement is related to the maturity level of effective risk management and the level of stakeholder participation in effective risk management.
Bertinetti et al [5]	The effect of implementing organizational risk management on the organizational value of European companies	There is a positive and meaningful relationship between the acceptance of organizational risk management and company value

3 Research methodology

The current research is applied in terms of purpose, cross-sectional in terms of data collection time, and descriptive survey in terms of research execution method. The research is quantitative based on the nature of the data. The

statistical population includes all managers of listed and unlisted companies. Due to the unknown number of the population, the Cochran formula for infinite populations was used to determine the sample size. Considering the total size of the population, the required sample size is 384 people. Simple random sampling will be used to select the samples. The data and information collection tools of the research include a structural interpretation questionnaire and a quantitative questionnaire. The researcher-made questionnaire items in the present research will be measured based on a 5-point Likert scale. Content validity is also examined using CVI and CVR. Content validity is used to assess the coordination between the content of the measurement tool and the research objective from the perspective of experts. To examine content validity quantitatively, two coefficients of content validity ratio (CVR) and content validity index (CVI) are used. Omega McDonald test was used to measure reliability in this research. To measure reliability, the questionnaire was administered to 30 members of the statistical sample in a pilot study and its Cronbach's alpha coefficient was calculated. The results of the reliability test of the questionnaires are presented in the table. Since the reliability of the questionnaire is above 0.7, it has good validity and reliability. Data analysis was conducted using structural interpretation modelling (ISM) and structural equation modelling (SEM).

Table 2: McDonald's omega factor

Components	Dimensions	Questions	McDonald's omega factor
Financial risk management	Developing risk management strategies	1-5	0.965
	Anticipate risks and the need for additional financing	6-10	0.946
	Identifying financial risks related to factoring	11-13	0.834
Interaction with partners	Communicate with vendors and customers	14-18	0.935
	Creation of factoring agreements and contracts	19-21	0.625
	Setting the terms of interaction with business partners	22-24	0.983
Communication with companies	Negotiating and agreeing with factoring companies for agreed terms	25-28	0.874
	Constant communication with factoring companies	29-32	0.953
	Choosing the right factoring companies	33-36	0.834
Economic and financial factors	Evaluating the financial and economic effects of using factoring	37-40	0.824
	Improving profitability and liquidity by financing through factoring	41-44	0.952
	Communication with related associations and organizations in finance and risk management	45-48	0.983
Choice of factoring	Selection of factoring types (single, official, informal)	49-52	0.838
	Analysis of the advantages and disadvantages of using factoring	53-57	0.876

4 Findings

The results showed that 85.16% of the sample were women and 15.83% were men. 02.16% had a bachelor's degree, 49.52% had a master's degree, 49.31% had a doctorate or higher degree. 7.26% were under 40 years old, 3.53% were 40-50 years old, and 20% were over 50 years old.

Table 3: Descriptive statistics of research variables

Research variables	Number	Average	minimal	maximum	Variance	variation range	standard deviation
Communication with companies	362	4.036	2.500	5/000	0.314	2.500	0.560
Choice of factoring	362	3.571	2.500	750/4	0.290	2.250	0.538
Interaction with partners	362	3.739	2.250	5/000	0.373	2.750	0.611
Economic and financial factors	362	3.618	1.750	5/000	0.411	2.250	0.641
Financial risk management	362	3.539	2.550	5/000	0.343	2.730	0.621

Based on the data in Table 3, it is clear that 362 valid data points were collected on the research variables. The mean scores of the variables ranged from 3.5 to 4.0, with communication with companies having the highest mean and financial risk management having the lowest mean. The range of dispersion was not large in terms of the range indicator, ranging from 2.2 to 3.0. In terms of the standard deviation indicator, the variables economic and financial factors and factoring selection had the highest and lowest standard deviations, respectively. The structural-interpretive modelling method was used to develop the model. This method was used to examine the impact of one construct on other constructs. In this way, it is possible to identify the relationships between the constructs and propose a

structural-interpretive model of the constructs. Finally, the constructs are classified based on their power of influence and degree of dependence. The constructs under consideration for the model are:

- Factoring selection (C01).

- Interaction with business partners (C02).

- Communication with companies (C03).

- Financial risk management (C04).

- Economic and financial factors (C05).

The Structural Self-Interaction Matrix (SSIM) is the first matrix formed in structural-interpretive modeling. The final access matrix of the model pattern variables is presented in Table 4.

Table 4: Final accessibility matrix of variables

RM	C01	C02	C03	C04	C05
C01	1	1	1	1	1*
C02	0	1	0	0	1*
C03	0	1	1	0	0
C04	1	1	1	1	1*
C05	0	0	1*	0	1

To determine the relationships and hierarchical levels of the criteria, the set of outputs and the set of inputs for each criterion must be extracted from the received matrix. The final pattern of the identified variable levels is illustrated in Figure 1. This figure only considers the meaningful relationships of the elements of each level to the elements of the lower level, as well as the meaningful internal relationships of the elements of each row.

Table 5: Set of inputs and outputs to determine the level

| Variables	symbol	Output: effect (rows)	Entrance: Effectiveness	Commonalities	level
Economic and financial factors	C05	C01, C02, C03, C05, C06, C07, C09,C11,C13,C14	C01, C03, C04, C06, C07, C08,C10, C13	C01, C03, C06, C07	4
Choice of factoring	C01	C02, C03, C04, C05, C06, C07, C08, , C11,C14	C01, C08, C09,C10 , C13	C08	1
Communication with companies	C02	C03, C09,C12	C01, C04 ,C10, C11,C12, C13	C12, C04	2
Financial risk management	C04	C01, C02, C03, C05, C07, C08, C09,C10,C11, C12,C13,C14	C01, C03, C04, C06, C13	C01, C03,C13	3
Interaction with partners	C03	C02, C03, C09,C14	C04, C06, C08 ,C11, C13,C14	C14, C06	2
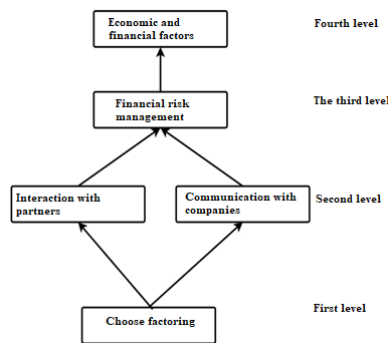
Figure 1: Presentation of the model based on dimensions and components

The Measurement Model in the Standard Estimation State and the Significance of the Coefficients
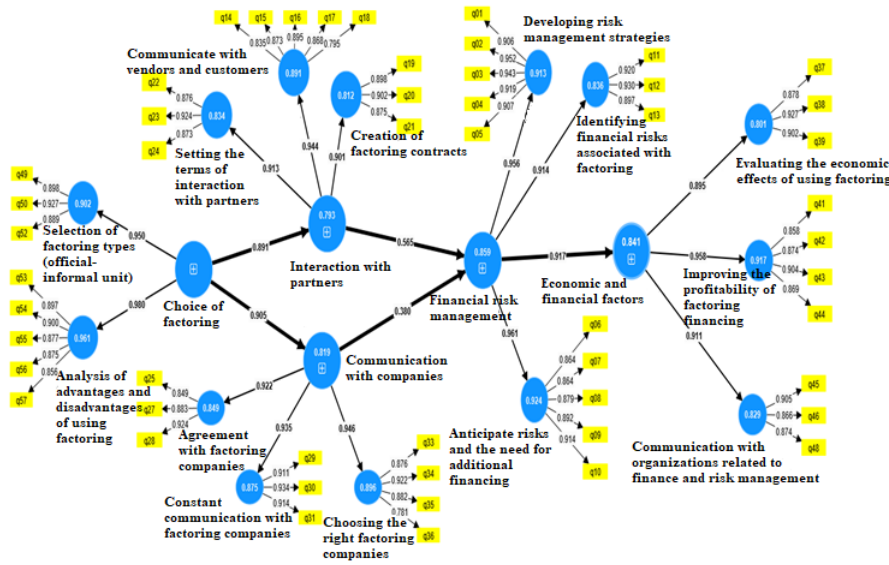

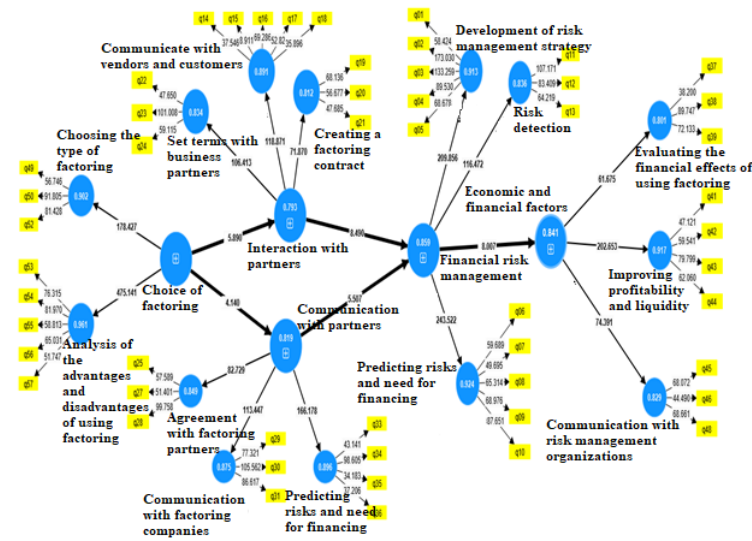Figure 2: Modified reflective measurement model in standardized coefficient estimation mode

Figure 3: Modified model of reflective measurement in the significance mode of coefficients

In the structural equation modeling method in SMART PLS, three criteria of reliability, convergent validity and divergent validity were used to check the fit of measurement models.

As it was clear in Table 6, Cronbach's alpha reliability value for all the variables in the research model was 0.7. Therefore, the variable has the necessary Cronbach's alpha reliability. According to Table 7 of shared reliability, all variables in this research are greater than 0.5. Therefore, the variable has the necessary shared reliability

To confirm discriminant validity, the average variance extracted (AVE) square root should be greater than all the correlation coefficients of the variable in question with the remaining variables. As shown in the table, the square root of the average variance extracted index is lower than the correlation of that variable with the other variables shown below the diagonal of the Pearson correlation coefficients for all variables. All coefficients were significant at a p-value of less than 0.01. This was true for all research constructs and indicates confirmation of discriminant validity. The most common measure used to evaluate the structural model was the coefficient of determination ($R2$ value). This coefficient was a measure of the model's predictive accuracy and was equal to the squared correlation between the actual and predicted values of a particular endogenous construct.

Table 6: Cronbach's alpha reliability

Variable	Cronbach's alpha coefficients
Communication with related associations and organizations in financial affairs and risk management	0.857
Communication with companies	0.903
Improving profitability and liquidity by financing through factoring	0.899
Evaluating the financial and economic effects of using factoring	0.886
Selection of factoring types (single, official, informal)	0.889
Choosing the right factoring companies	0.888
Choice of factoring	0.921
Creation of factoring agreements and contracts	0.871
Communicate with vendors and customers	0.907
Constant communication with factoring companies	0.909
Analysis of the advantages and disadvantages of using factoring	0.928
Developing risk management strategies	0.958
Identifying financial risks related to factoring	0.904
Interaction with partners	0.946
Setting the terms of interaction with business partners	0.871
Economic and financial factors	0.906
Financial risk management	0.971
Negotiating and agreeing with factoring companies for agreed terms	0.862
Anticipate risks and the need for additional financing	0.929

Table 7: Collaborative reliability

Variable	Cronbach's alpha coefficients
Communication with related associations and organizations in finance and risk management	0.778
Communication with companies	0.577
Improving profitability and liquidity by financing through factoring	0.769
Evaluating the financial and economic effects of using factoring	0.814
Selection of factoring types (single, official, informal)	0.819
Choosing the right factoring companies	0.751
Choice of factoring	0.661
Creation of factoring agreements and contracts	0.795
Communicate with vendors and customers	0.729
Constant communication with factoring companies	0.846
Analysis of the advantages and disadvantages of using factoring	0.777
Developing risk management strategies	0.857
Identifying financial risks related to factoring	0.839
Interaction with partners	0.651
Setting the terms of interaction with business partners	0.795
Economic and financial factors	0.560
Financial risk management	0.739
Negotiating and agreeing with factoring companies for agreed terms	0.785
Anticipate risks and the need for additional financing	0.779

Table 8: Correlation matrix and divergent validity check by Fornell and Larker method (1981)

Agents	Communication with	Choice of factoring	Interaction with partners companies	Economic and financial factors	Financial risk management
Communication with companies	0.760				
Choice of factoring	0.205	0.813			
Interaction with partners	0.423	0.591	0.807		
Economic and financial factors	0.605	0.487	0.421	0.748	
Financial risk management	0.501	0.598	0.215	0.317	0.860

Table 9: Determination coefficient test

Criteria	R-square
Communication with related associations and organizations in finance and risk management	0.829
Communication with companies	0.819
Improving profitability and liquidity by financing through factoring	0.917
Evaluating the financial and economic effects of using factoring	0.801
Selection of factoring types (single, official, informal)	0.902
Choosing the right factoring companies	0.896
Creation of factoring agreements and contracts	0.812
Communicate with vendors and customers	0.891
Constant communication with factoring companies	0.875
Analysis of the advantages and disadvantages of using factoring	0.961
Developing risk management strategies	0.913
Identifying financial risks related to factoring	0.836
Interaction with partners	0.793
Setting the terms of interaction with business partners	0.834
Economic and financial factors	0.841
Financial risk management	0.859
Negotiating and agreeing with factoring companies for agreed terms	0.849
Anticipate risks and the need for additional financing	0.924

In general, our measurement model had a suitable quality, which showed that the researcher has chosen suitable indicators to measure the variables. In order to check the fit of the overall model, it was enough to measure a criterion called GOF:

$$GOF = \sqrt{\text{Internal model } \times \text{Exterior model}}$$

$$GOF = \sqrt{\text{Communalities} \times \overline{R^2}}.$$

Level $\overline{\text{Communalities}}$ It is obtained from the average of the shared values in the table above. The average value of shared values was equal to 0.779. The average value of $\overline{R^2}$ was equal to 0.658. Therefore, the value of the GOF criterion was equal to 0.628. According to three values of 0.01, 0.25 and 0.36 which are introduced as weak, medium and strong values for GOF. Obtaining the value obtained for this criterion shows the strong fit of the overall research model. After examining the fit of the measurement models, it is time to fit the structural model of the research. Unlike the measurement model, the structural model part has nothing to do with the questions (manifest variables) and only the hidden variables and the relationships between them are examined.
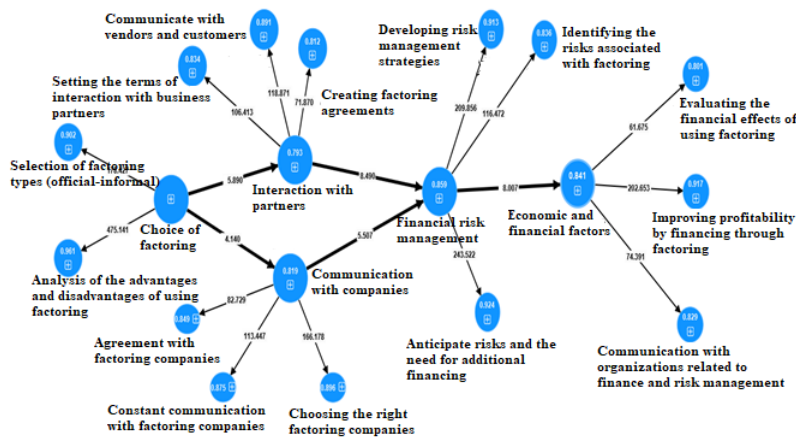

Figure 4: Internal structural model in the significance mode of coefficients

Also, the results of table 10 showed that the choice of factoring has a significant effect on interaction with partners. According to the t-statistic equal to 5.890, which is more than 1.96, we conclude that the standard coefficient is 0.891; Therefore, it has a positive and strong effect. The results showed that choosing factoring has a significant effect on the relationship with companies. According to the t-statistic equal to 4.140, which is more than 1.96, we conclude that the standard coefficient is 0.905; Therefore, it has a positive and strong effect. The results showed that interaction with partners has a significant effect on financial risk management, according to the t-statistic equal to 8.490, which is more
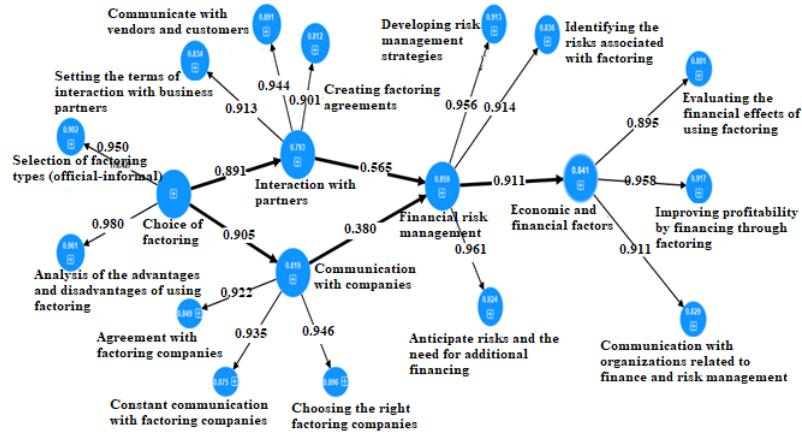
Figure 5: Internal structural model in standard coefficient estimation mode

Table 10: Path coefficients and T-statistics

Row	Predictor variable		Criterion variable	β path coefficient	t statistic
1.	Choice of factoring	->	Interaction with partners	0.891	5.890
2.	Choice of factoring	->	Communication with companies	0.905	4.140
3.	Interaction with partners	->	Financial risk management	0.565	8.490
4.	Communication with companies	->	Financial risk management	0.380	5.507
5.	Financial risk management	->	Economic and financial factors	0.917	8.007

than 1.96, we conclude that the standard coefficient is 0.565; Therefore, it has a positive and moderate effect. The results showed that communication with companies has a significant effect on financial risk management. According to the t-statistic equal to 5.507, which is more than 1.96, we conclude that the standard coefficient is 0.380; Therefore, it has a positive and moderate effect. The results showed that financial risk management has a significant effect on economic and financial factors. According to the tt-statistic equal to 8.007, which is more than 1.96, we conclude that the standard coefficient is 0.917; Therefore, it has a positive and strong effect.

5 Conclusion

The current research aims to present a financing model through the purchase of debt (factoring) with a risk management approach in listed and non-listed companies. The structure-interpretive modelling method was used to present the model. It is possible to identify the relationships of the structures and provide an interpretive structural model of the structures and finally classify the structures based on the power of penetration and the degree of dependence. In the first level, the factoring selection component was identified as a financial method that simultaneously affects communication with factoring companies and interaction with business partners. In fact, these components are the main foundations. These effects can lead to improved business communication and financial relations with business partners, which can facilitate financing processes and increase the trust of participants in the long run. In this way, this research not only helps to choose and optimally use factoring, but also examines and pays attention to its effects on the commercial and financial relationships of companies. Therefore, the results of this research are in line with research such as Bertinetti et al. [5] It is both reading and correct.

Based on the results obtained from the degree of appropriateness conducted in the survey study, it was determined that the model proposed in this research had favourable validity. Also, the results showed that choosing factoring has a significant effect in relation to companies. In explaining this hypothesis, it can be said that the choice of factoring, that is, the choice of important and influential factors for measuring and analyzing the performance of a company, is very important for every organization. This process has a direct impact on the company's relationship with the surrounding environment. Choosing the right factoring helps companies make the best decisions and improve their business strategies. The results of this research are consistent with the research of PorAhmadi, Amanollahie [16], Jafari Nodoushan et al. [12], Souza et al. [19], Bertinetti et al. [5].

The results showed that the choice of factoring has a significant effect on the interaction with partners. In explaining this hypothesis, it can be said that the choice of factoring, as a process in which the important and influential factors for measuring and analyzing the performance of a company are determined, affects the interaction with partners and Colleagues of an organization have a great influence. This process can clearly affect the relationship between the partners and colleagues of the company; Because choosing the right factors can help the company better understand its goals and priorities and direct its resources and efforts towards common goals and common success. The results of this research are consistent with the research of PorAhmadi, Amanollahie [16], Jafari Nodoushan et al. [12], Souza et al. [19], Bertinetti et al. [5].

Also, the results showed that communication with companies has a significant effect on financial risk management. In explaining this finding, it can be said that communication with companies has a significant effect on financial risk management. These communications can include many things, including financial, commercial and contractual relationships. For financial managers, communication with companies can serve as an important source of information for analyzing and predicting financial risks. The results of this research are consistent with the research of PorAhmadi, Amanollahie [16], Jafari Nodoushan et al. [12], Dehmolaei and Jafari [8], Bertinetti et al. [5].

The findings showed that interaction with partners has a significant effect on financial risk management. In explaining this hypothesis, it can be said that interaction with partners has a very important effect on financial risk management. Partners can serve as an important source of information for analyzing and assessing financial risks. In these interactions, information about the financial status and performance of partners, including profitability, projects and liabilities, helps financial managers to identify and assess the risks associated with each company. Also, these communications can be influential in the financial decision-making process. The results of this research are consistent with the research of Ershadmanesh et al. [10], and Pourqanbari et al. [17].

The results showed that financial risk management has a significant effect on economic and financial factors. In explaining this hypothesis, it can be said that financial risk management is one of the vital aspects in every organization and company, which has a significant effect on economic and financial factors. This process helps the organization to face financial risks more effectively by identifying, evaluating and managing the financial risks related to the business activities, investments and financial operations of the organization. As a result, financial risk management as an essential factor in ensuring the stability and growth of organizations has a significant effect on economic and financial factors and is of great importance [2], Ershadmanesh et al. [10], Pourqanbari et al. [17], Ahmadi, Dejdar [1], Kamenev [13] are both reading and correct.

Based on the needs and common goals of the companies, important and influencing factors on communication and cooperation with them should be selected. Careful planning for the selection of factors can help partners' engagement and commitment to the financial risk management process. To improve engagement with partners, first, important factors that can influence this engagement should be identified. For example, factors such as customer satisfaction, financial performance, quality of products or services, and public relations can be among the factors that influence effective interaction with partners. By actively participating in the processes of sourcing materials and services from foreign companies, you can identify best practices to reduce common financial risks. This includes reviewing the financial status and solvency of the supplier companies, agreeing on the terms of the contracts and creating additional solutions to manage joint financial risks. This research was conducted exclusively in a specific statistical community and caution should be observed in generalizing its results to other communities. Also, this research was conducted on financial management and accounting professors, so it cannot be generalized to all lecturers.

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