



## Paper Type: Original Article

# Investigating the Effect of Financial Restrictions on the Growth of Companies According to the Moderating Role of Family Ownership in Companies Listed on the Tehran Stock Exchange

Yazdan Rostami<sup>1,\*</sup>, Shirin Pouomidiyan<sup>2</sup>, Mojtaba Rahimiyan<sup>3</sup>, Fatemeh Vafaei<sup>4</sup>

<sup>1</sup> PhD Accounting, Financial Director and CEO of Peshgaman Accounting Company, Amroleh, Tehran, Iran - (Corresponding Author)\*; yazdanrostami11@yahoo.com.

<sup>2</sup> Senior Accounting Expert, Lecturer at Ahvaz Girls Vocational Technical College, Ahvaz, Iran; sh.pouomidiyan@gmail.com.

<sup>3</sup> Senior Expert in Accounting, Financial Affairs of Farhangian University, Allameh Tabatabai Center and expert in charge of Sabzevar program and budget planning, Sabzevar, Iran; mojrhemean@gmail.com.

<sup>4</sup> Senior Accounting Expert, Secretary of Education, Malayer, Malayer, Iran; Fatemeh.vafaei93@gmail.com.

### Citation:

Received: 14 December 2022

Revised: 09 March 2023

Accepted: 02 May 2023

Rostami, Y., Pouomidiyan, Sh., Rahimiyan, M., & Vafaei, F. (2024). Investigating the effect of financial restrictions on the growth of companies according to the moderating role of family ownership in companies listed on the Tehran Stock Exchange. *Accounting and auditing with application*, 1 (2), 64-73.

## Abstract

In this research, the impact of financing restrictions on the growth of companies has been investigated concerning the moderating role of family ownership in companies listed on the Tehran Stock Exchange. This research is part of applied research in terms of its purpose and methodology, and it is a type of post-event correlational research. The statistical population of the research is the companies listed on the Tehran Stock Exchange for a period of 7 years, from 2017 to 2023, and the sample size is 114 companies. Eviews10 software was used to analyze the data. The results of the research showed that there is a relationship between financial constraints and the growth of companies. Also, family ownership moderates the relationship between financial constraints and firm growth.

**Keywords:** Financial constraint, Company growth, Family ownership.

## 1 | Introduction

It is widely accepted that access to capital is crucial for SMEs to achieve a strategic advantage over competitors. However, small and medium-sized companies are more exposed to financial constraints than large companies due to a lack of information transparency, relative scarcity of collateral assets, and

disproportionately high monitoring costs for creditors [1]. Financial limitation affects the financial performance and growth of the company. In the market, the company's capital may be threatened with removal from the market or the reduction of its abilities in front of investors and creditors [2]. In fact, financial restrictions affect competition in the product market in two ways (directly and indirectly). The direct effect is that in imperfect markets, as opposed to complete markets, foreign financing costs are very high due to information asymmetry and agency costs. The indirect effect of financial restrictions through product pricing affects market competition. As long as economic enterprises are limited in financing their investments, the manager tries to increase the product's price to compensate for the gap between external resources and the company's expenses [3]. As a result, economic enterprises lose their advantage and competitive power by increasing the price of products. If the business unit is financially constrained, it is expected to increase the price of its product during economic downturns, which hinders the advantage. The competitive performance in the product market itself has a negative effect on the company's competitiveness in the market [4]. Family companies are also different from other types of organizations due to the existence of two interconnected systems of family and business. Family management reinforces the controlling family's position as the organization's dominant coalition, creates a distinct set of family-oriented goals, and increases the overlap between the family and the firm [5].

Financial limitation is an important factor affecting investment. It is also a factor for measuring the company's financial or balance sheet status, such as cash flow, financial leverage, and company size. The financial limitation of most companies indicates weaker financial conditions. According to the investment theory, companies with financial constraints have more unfavorable balance sheet conditions and, as a result, higher financing costs than other companies, and this statistic originates from their unfavorable liquidity situation and bankruptcy risk. As a result, more financial constraints on the company increase the risk of financial reporting. This can be because companies have difficulty providing investment resources and external financing [6]. Financially constrained companies tend to invest their cash first to finance profitable projects and then invest in fixed assets or working capital. They invest their cash in a guaranteed way to be considered for receiving a new loan. Due to the financing problems they will face in the future, companies are more inclined to increase tangible fixed assets [4]. Companies with severe information and representation problems have limited access to external financing, so they easily reject or ignore profitable investment opportunities. In the long run, this issue has harmed the ability of profitability and growth, as well as the financial status of the companies. It may have caused the companies to lag behind the competition and be removed from the market. Such companies are called limited financing companies. Therefore, access to sources of internal funds is considered a vital and very important issue for companies with limited financing [7]. Company growth, especially in small companies, has always been one of the most important issues in the business world. The company's survival, initiative, and innovation in changes are reasons for the importance of growth.

Companies that grow well are more important to investors. According to the agency theory, managers also seek to find effective factors in the company's growth. They always try to pay attention to these factors in their plans and obtain the owners' satisfaction [8]. Family ownership also brings problems. Increased family ownership means a greater share of personal wealth is tied to the company. In this situation, family owners are willing to invest smaller amounts in uncertain investments; this may lead to poor investment decisions and avoidance of high-risk long-term investments [9]. In this regard, the present study has been conducted to determine the relationship between financing constraints and the growth of companies concerning the role of family ownership in the developing economy of Iran.

Since large family groups control family firms, they usually have high prestige and close ties with financial institutions. Several studies have shown that in developing countries, financial liberalization policies are insufficient to support the financial growth link and reduce companies' financial constraints [10]. Due to the limitation of family-based data (small and medium-sized companies) in Iran, we studied large family companies were studied. These are big companies that are owned and managed by a few families. This perspective provides a unique analysis of the relationship between financing constraints and growth in

emerging markets. Therefore, this study aims to fill the gap related to the background of research by focusing on the differences between the dependence of the growth of family companies on internal cash flow in the context of developing countries, which is important.

The main goal of this research is to investigate the impact of financing restrictions on the growth of companies, considering the role of family ownership in companies listed on the Tehran Stock Exchange. This research also seeks to find the relationship between financial constraints and the growth of companies, the moderating role of family ownership, and the relationship between financial constraints and the growth of companies.

## 2 | Theoretical Foundations and Research Background

### 2.1 | Financial Constraints and Company Growth

A financial limitation is a limitation that prevents the provision of all the funds needed for the optimal investment of companies. The most complete and clear definition of financial constraint is that companies face financing constraints when they face a gap between the internal and external uses of allocated funds. Financial restriction means that there is an obstacle in financing all desirable investments. The inability to provide funds for investments may be due to bad credit conditions, inability to obtain a loan, inability to issue new shares, or illiquid assets [11]. A company that faces more problems accessing external sources of the capital market provides more of the financial resources it needs from sources within the company. Therefore, it cannot access cash through borrowing from foreign sources.

For this reason, it suffers from financial restrictions [12]. Company growth, especially in small companies, has always been one of the most important issues in the business world. The company's survival, initiative, and innovation in changes are reasons for the importance of growth. Companies that grow well are more important to investors. According to the agency theory, managers also seek to find effective factors in the company's growth. They always try to pay attention to these factors in their plans and obtain the owners' satisfaction. The ability of companies to identify potential financial resources (whether domestic or foreign) to provide capital for investments and to prepare appropriate financial plans is one of the main factors for the growth and progress of companies [10].

Doucet and Requejo [13] investigated the financial constraints and growth of private family companies: evidence from Western Europe and East Asia in Spain. The research results showed that the growth of private family companies is less dependent on internal finances. The beneficial effect of family control is particularly evident in countries where foreign lenders are more supportive. Therefore, family control and a protective organizational environment complement each other to facilitate business growth.

Karakoç [14] examined the relationship between business credit and corporate growth: evidence from Turkey. The results of the research showed that commercial credit increases with growth, which is caused by liquidity-related conditions.

Haider et al. [15] examined state ownership, financial constraints, corruption, and corporate performance, international evidence was obtained from 81 countries. The research results showed that companies with state ownership have fewer financial constraints, and those with fewer financial constraints perform better. Also, the relationship between state ownership and financial constraints and the relationship between financial constraints and company performance is less important for companies in countries with a lower level of deviance.

According to the theoretical foundations and the stated background, the first hypothesis is as follows:

there is a relationship between financial constraints and the growth of companies.

## 2.2 | Financial Constraints, Company Growth and Family Ownership

Due to fluctuations in internal cash flows, companies reject or postpone some investment opportunities. In the absence of information defects, it is argued that there is no difference between the cost of internal and external financing [16]. Financial constraints limit managers' ability to finance investment projects. Companies facing financing restrictions may abandon accepting and carrying out projects with positive net present value due to high financing costs, which leads to underinvestment [7]. In general, using growth as a measure of company performance relies on the idea that growth is a leading factor in achieving sustained competitive advantage and profitability. A classic theory claims that if a company shows a high growth rate, it should take advantage of more growth opportunities that are less profitable but still generate profits. In this regard, three points are argued: first, growth rates converge to zero in the long run. Second, a high profitability rate positively affects the growth rate unless the profitability rate reaches zero. Third, the growth of the company has a negative effect on the profitability rates [10].

The importance of family ownership in the economic world is such that in many countries, several indicators have been presented to define such companies, and researchers have conducted various researches about these companies in recent years due to the importance of these companies [17]. Ownership and management of most family businesses is centralized. Due to credit discrimination applied by financial institutions, family businesses have limited access to financing options [18]. Family businesses invest significantly in innovation. High innovation investment is attributed to long-term development orientation, low agency costs, and flexible organizational structure. Family businesses seek short-term economic benefits, have long-term development vision and orientation, including investment to ensure sustainable prosperity, and are required to increase their investments in technological innovation. The joint participation of family members in business operations leads to the coordination of internal goals and interests, which partially reduces agency costs and minimizes information asymmetry and moral hazard, thus contributing to long-term investment. Finally, they have a flexible organizational structure that enables them to participate in business, make decisions in unconventional ways, and respond to environmental changes. Therefore, family firms usually target innovation projects with high levels of investment uncertainty [1]. Family companies often face the limitations of traditional financing methods in the development process because family members do not want to reduce the control of the companies. As a countermeasure, family firms often use pyramid structures, stock structures, and other mechanisms to exchange multiple stakes for greater control, resulting in a split-rights situation [19].

In terms of ownership percentage, companies are family companies. It is considered that one or more people from one or two families own at least fifty percent of the equity rights. A company is considered family if a family member is part of the board of directors and at least two generations of the family have a role in control with at least five percent of the voting shares. The family company to include companies that have a large amount of shares in the hands of family members, and these people actively participate in the company's management and board of directors [20].

Du and Cao [21] investigated the governance of non-family shareholders and green innovation of family companies in China. The research results show that family companies help to achieve a solid foundation for long-term orientation.

Mondal et al. [22] provided evidence from India in a study investigating family ownership, family management, and structures of multinational companies. The research results showed that family ownership has a negative relationship with the scale and scope of the multinational structure of companies in India. Still, positively, family management, which includes the selection of board members close to the company's founder, affects the structure of multinational companies. Technical innovation of companies has a negative relationship. Also, family ownership with the participation of family management has a positive relationship with the technical innovation of companies.

Islam et al. [19] discussed the relationship between family ownership and financial performance in emerging markets using data from companies operating in different countries. The research results showed that the concentration of family ownership improved the monitoring of managers' performance and, by creating a balance between the interests of major and minority shareholders, improved the company's performance in emerging markets.

According to the theoretical foundations and the background, the second hypothesis is proposed: family ownership moderates the relationship between financial constraints and company growth.

### 3 | Research Method and Data Analysis Method

In terms of its purpose and approach, this research is part of applied research. Regarding methodology, it is considered post-event correlational research, and its relationship with the surrounding environment is considered quasi-experimental research. According to the results obtained from the sample, it generalizes to society; it is included in the category of inductive research. To collect data, we refer to the group of companies accepted in the stock exchange and enter the collected data in Excel columns to calculate the research variables. Finally, using Eviews10 software, we will analyze the data and test the research hypotheses.

### 4 | Statistical Community and Research Area

The statistical population of this research will include the companies admitted to the Tehran Stock Exchange from 2017 to 2023. The subject area of this research is to examine the impact of financing restrictions on the growth of companies concerning the role of family ownership in companies listed on the Tehran Stock Exchange. The spatial scope of this research is all the companies admitted to the Tehran Stock Exchange, and the time of this research is from 2017 to 2023.

### 5 | Statistical Community and Research Area

#### 5.1 | Statistical Community and Research Area

Based on the research of Kaplan and Zirnegas, the KZ index will be used for the financial constraint variable. This index will be calculated based on the following formula:

$$KZ_{it} = -0.026 \frac{CachFlow_{it}}{Total\ Assets_{it}} + 4.114 \frac{Div_{it}}{Total\ Assets_{it}} + 2.853 \frac{Cash\ Holding_{it}}{Total\ Assets_{it}} + 2.22 \frac{Debt_{it}}{Total\ Assets_{it}} \quad (1)$$

$KZ_{it}$ : financial limitation.

$CachFlow_{it}$ : Operating Cash Flow: the operating cash flow ratio to total assets.

$Debt_{it}$ : Debt ratio: the ratio of total debt to total assets.

$Dividends_{it}$ : annual dividend payments divided by total assets.

$Cash\ Holding_{it}$ : company's cash collection.

$Total\ Assets_{it}$ : the total of the company's assets.

#### 5.2 | Dependent Variable: Company Growth

Due to the ability to reflect short-term and long-term changes in companies, this study calculated company growth as the growth rate of net sales; that is, the logarithmic difference between current net sales and backlog net sales is calculated.

### 5.3 | Moderator Variable: Family Ownership

The family ownership (company) variable is a dummy variable assigned a value of one if the company under investigation is a family company and zero otherwise.

### 5.4 | Control Variables

- I. Financial leverage (Levit): calculated as total liabilities over total assets.
- II. Company size (Sizeit): calculated as the natural logarithm of total assets.
- III. Tangible assets ratio (K/Ait): it is measured as total tangible fixed assets compared to total assets.

## 6 | Research Hypothesis Test Models

### 6.1 | First Hypothesis Test Model

$$\text{Growth}_{it} = \beta_0 + \beta_1 \text{KZ}_{it} + \beta_2 \text{Lev}_{it} + \beta_3 \text{Size}_{it} + \beta_4 \frac{\text{K}}{\text{Ait}} + \epsilon_{it} \quad (2)$$

### 6.2 | Second Hypothesis Test Model

$$\text{Growth}_{it} = \beta_0 + \beta_1 \text{KZ}_{it} + \beta_2 \text{KZ}_{it} * \text{Family}_{it} + \beta_3 \text{Lev}_{it} + \beta_4 \text{Size}_{it} + \beta_5 \frac{\text{K}}{\text{Ait}} + \epsilon_{it} \quad (3)$$

## 7 | Descriptive Statistics of Research Variables

The summary of descriptive statistics related to model variables is presented in *Table 1*.

As we can see in *Table 1*, for example, the variable "GROWTH" as the dependent variable of the regression model of the research has a mean of 0.492, median of 0.393, maximum 6.595, minimum -1.000, standard deviation of 0.689, skewness 4.440, and kurtosis 8.022. It can also be seen that the value of numerical skewness is low, which indicates that the dependent variable has a symmetrical graph and a slight deviation from the normal distribution; therefore, in the estimation of the regression models related to the research, it is expected that the appropriate models fit the data find.

**Table 1. Table of descriptive indices and normal test for research variables.**

	Standard Deviation	Minimum	Maximum	Median	Mean
GROWTH	0.689	-1.000	6.595	0.393	0.492
KZ	0.610	0.155	4.378	1.704	1.712
FAMILY	20.011	0.000	94.340	0.000	8.945
LEV	0.236	0.025	1.494	0.511	0.522
SIZE	1.595	11.675	21.328	14.671	15.020
KA	0.176	0.000	0.920	0.185	0.233

Also, the variable "KZ" as an independent variable of the research regression model has a mean 1.712, median 1.704, maximum 4.378, minimum 0.155, standard deviation 0.610, skewness of 0.352, kurtosis of 3.974.

Also, the variable "FAMILY" as a moderator variable of the research regression model has a mean of 8.945, median of 0.000, maximum of 94.340, minimum of 0.000, standard deviation of 20.011, skewness of 2.310, and kurtosis 7.242.

Also, the variable "LEV" as the control variable of the regression model has a mean of 0.522, median of 0.511, maximum of 1.494, minimum of 0.025, standard deviation of 0.236, skewness 0.428, and kurtosis of 3.542.



Also, the variable "SIZE" as the control variable of the regression model of the research has a mean of 15.020, median of 14.671, maximum of 21.328, minimum of 11.675, standard deviation of 1.595, skewness of 1.135, kurtosis 4.908.

Also, the variable "KA" as the control variable of the regression model of the research has a mean of 0.233, median 0.185, maximum 0.920, minimum 0.000, standard deviation 0.176, and skewness of 1.101, kurtosis 4.022.

As we can see, skewness is one of the most important indicators of symmetric (normal) data distribution for all research variables (especially the dependent variable), which is less than 5. According to the central limit theorem (which states that in high-sized communities, the community distribution can be considered normal), due to the large sample data, there is no need to use normal diagnostic tests. Therefore, the null hypothesis that the research variables are normal will not be rejected. Therefore, we will assume the variables of this research to be normal based on the central limit theorem. This fact is also confirmed by the insignificant skewness values (less than 5) in all variables.

### 7.1| Inferential Analysis of Research Data

**Table 2. The results of the Manai test for the variables-the test values and the significance level observed for each of the variables.**

Variable	The Value of the Test Statistic	The Significance Level
GROWTH	-16.097	0.000
KZ	-8.148	0.000
FAMILY	-7.184	0.000
LEV	-10.150	0.000
SIZE	-12.976	0.000
KA	-23.897	0.000

### 7.2| Examining the Relationship between Research Variables

**Table 3. The results of the correlation test between the explanatory variables of the research models.**

Size	Lev	Family	Kz	Growth		
			1.000	0.024	The correlation coefficient	KZ
			-----	0.533	The significance level	
		1.000	-0.092	-0.019	The correlation coefficient	FAMILY
		-----	0.016	0.623	The significance level	
	1.000	-0.055	0.529	-0.160	The correlation coefficient	LEV
	-----	0.148	0.000	0.000	The significance level	
1.000	-0.020	-0.203	0.038	0.131	The correlation coefficient	SIZE
-----	0.597	0.000	0.318	0.001	The significance level	
-0.045	-0.104	-0.009	-0.267	-0.042	The correlation coefficient	KA
0.237	0.007	0.805	0.000	0.272	The significance level	

**Table 4. The results of F. Limer, Hausman and Brosh Pagan tests for research models.**

Result	Heterogeneity Test		Hausman Test		Flimer's Test		No Model
	Level Meaningful	Pagan Brosh Statistics	Level Meani Ngful	Hasman Statistics	Level Meaning Ful	Statistics F. Limer	
Panel data, fixed effects, and heterogeneity resolution	0.000	4.420	0.002	16.902	0.000	2.986	1
Panel data, fixed effects, and heterogeneity resolution	0.000	3.991	0.004	16.684	0.000	3.582	2

**Table 5. The fitted regression model for testing the first hypothesis.**

Variable	Coeff.	S.D.	t Stat.	Sig. Prob.
KZ	0.541643	0.030939	17.50692	0.0000
LEV	-1.087053	0.147674	-7.361165	0.0000
SIZE	0.189412	0.031014	6.107374	0.0000
KA	-0.023415	0.143964	-0.162645	0.8709
C	-2.618036	0.522312	-5.012397	0.0000
<b>Model Indicators</b>				
2.851194	The mean of the dependent variable		0.558120	R square
2.416997	D-W		6.110186	F statistics
			0.000000	F Significant probability

**Table 6. The fitted regression model for testing the second hypothesis.**

Variable	Coeff.	S.D.	t Stat.	Sig. Prob.
KZ	0.154466	0.039536	3.906937	0.0001
FAMILY	-0.004733	0.001549	-3.054570	0.0023
KZ*FAMILY	0.002592	0.000788	3.289686	0.0011
LEV	-0.798222	0.068831	-11.59679	0.0000
SIZE	0.051899	0.014614	3.551418	0.0004
KA	-0.086109	0.108399	-0.794370	0.4273
C	-0.127272	0.270603	-0.470326	0.6383
<b>Model Indicators</b>				
2.657497	The mean of the dependent variable		0.522725	R square
1.879607	D-W		32.33202	F statistics
			0.000000	F Significant probability

## 8 | Discussion and Conclusion

**Hypothesis 1.** There is a relationship between financial constraints and the growth of companies. Analysis of the results of the model: according to the table of regression coefficients estimated for the first hypothesis model, it can be seen that the coefficient of the variable kz is equal to 0.54, which has a significance level of 0.000; therefore, considering that this value is from the alpha level of the research, which is equal to 0.05, is smaller, so this hypothesis (zero) that the variable kz does not affect the variable of the company's financial



constraint is rejected, and the opposite hypothesis is supported, so it can be said that there is a relationship between the financial constraint and the growth of companies.

**Hypothesis 2.** Family ownership moderates the relationship between financial constraints and corporate growth. Analysis of the results of the model: according to the table of regression coefficients estimated for the second hypothesis model, it can be seen that the coefficient of the variable  $KZ * FAMILY$  is equal to 0.007, which has a significance level of 0.03, so considering that this value is from the alpha level of the research, which is 0.05, it is smaller, so this hypothesis (zero) that the variable  $KZ * FAMILY$  does not affect the financial constraint variable of the company is rejected and the opposite hypothesis is supported, so it can be said: family ownership moderates the relationship between financial constraint and companies' growth.

According to the findings of the research hypotheses, suggestions based on the results of the hypotheses and in line with the application and future research in the studied industry are suggested to shareholders, investors, lenders, financial analysts, and brokers at the time of investment to the negative relationship between financial restrictions and ownership growth. Pay attention to the family. It is suggested to the Tehran Stock Exchange Organization, as the supervisory body for the companies and the accounting and auditing standards development board, to disclose the necessary information on the financing limitations of family properties for the better use of the users of the financial statements. It is also recommended to managers and financial officers of companies that the negative consequences of financing should be given more special attention.

## References

- [1] Wang, K. T., & Shailer, G. (2017). Family ownership and financial performance relations in emerging markets. *International review of economics & finance*, 51, 82–98. <https://doi.org/10.1016/j.iref.2017.05.014>
- [2] Khoshkar, F., & Sohrabi, A. (2022). Investigating the relationship between financial distress and financing constraints with trade credit provisions. *Journal of accounting and management vision*, 5(56), 72-88. (In Persian). [https://www.jamv.ir/article\\_148273.html?lang=en](https://www.jamv.ir/article_148273.html?lang=en)
- [3] Croce, A., & Martí, J. (2017). Financial constraints in family firms and the role of venture capital. *Economia e politica industriale*, 44(1), 119–144. DOI:10.1007/s40812-016-0055-4
- [4] Salmanian, M., Vakilifard, H. R., Hamidian, M., Sarraf, F., & Darabi, R. (2018). Presenting a model for predicting financial constraints (case study: state-owned companies admitted to the Tehran Stock Exchange). *Governmental accounting*, 4(2), 93-104. (In Persian). <https://ensani.ir/fa/article/486741/>
- [5] Aparicio, G., Basco, R., Iturralde, T., & Maseda, A. (2017). An exploratory study of firm goals in the context of family firms: an institutional logics perspective. *Journal of family business strategy*, 8(3), 157–169. DOI:10.1016/j.jfbs.2017.08.002
- [6] Pouralireza, K., Baradaran Hasanzadeh, R., Badavar Nahandi, Y., & Zeynali, M. (2019). Relationship between financial constraint and investment efficiency and working capital strategy. *Journal of investment knowledge*, 8(32), 129-150. (In Persian). [https://jik.srbiau.ac.ir/article\\_15130.html%Ahttps://jik.srbiau.ac.ir/article\\_15130\\_9e47a68a6122b1f75d5628e928526388.pdf](https://jik.srbiau.ac.ir/article_15130.html%Ahttps://jik.srbiau.ac.ir/article_15130_9e47a68a6122b1f75d5628e928526388.pdf)
- [7] Mousavi, S. A., Ghasemi Panah, M. (2021). Examining the relationship between financing restrictions, competition in the product market and focus on the customer (case study: automobile companies admitted to the Tehran Stock Exchange). *Journal of marketing management*, 16(53), 21-34. (In Persian). <https://sanad.iau.ir/Journal/jomm/Article/811407>
- [8] Nusrat, Q., Badavernhandi, Y. (2018). The relationship between corporate governance and company's growths with emphasis on the role of financial constraints. *Development and transformation management quarterly*, 10(32), 25-35. (In Persian). <https://sanad.iau.ir/journal/jdem/Article/540757?jid=540757>
- [9] Shirvani, H., & Soroushyar, A. (2019). Investigating the effect of concentrated ownership in family and non-family firms on performance of companies listed in Tehran Stock Exchange. *Financial management strategy*, 7(1), 165-184. (In Persian). DOI:10.22051/jfm.2018.14742.1327

- [10] Moradi, J., & Bagheri mooselu, F. (2015). Life cycle impact on the relationship between firm growth and profitability: evidence from Tehran Stock Exchange. *Financial accounting research*, 7(2), 108–93. **(In Persian)**. [https://far.ui.ac.ir/article\\_17044.html?lang=en](https://far.ui.ac.ir/article_17044.html?lang=en)
- [11] Khodadad Pour, A. (2021). Investigating the effect of financial constraints on organizational innovation in commercial banks accepted in Tehran Stock Exchange. *New research approaches quarterly management and accounting*, 5(18), 233-246. **(In Persian)**. <https://majournal.ir/index.php/ma/article/view/1159>
- [12] Pormosa, A. A., & Sharif Zadeh Darban, S. (2021). Investigating the effect of company liquidity on the relationship between financial constraints and investment. *Journal of accounting and management vision*, 4(39), 53-64. **(In Persian)**. [https://www.jamv.ir/article\\_130216\\_en.html?lang=en](https://www.jamv.ir/article_130216_en.html?lang=en)
- [13] Doucet, P., & Requejo, I. (2022). Financing constraints and growth of private family firms: evidence from different legal origins. *Finance research letters*, 44, 102034. DOI:10.1016/j.frl.2021.102034
- [14] Karakoç, B. (2022). Corporate growth-Trade credit relationship: evidence from a panel of countries. *Borsa istanbul review*, 22(1), 156–168.
- [15] Haider, Z. A., Liu, M., Wang, Y., & Zhang, Y. (2018). Government ownership, financial constraint, corruption, and corporate performance: International evidence. *Journal of international financial markets, institutions and money*, 53, 76–93. <https://doi.org/10.1016/j.intfin.2017.09.012>
- [16] Rodrigo, B., Thomas, B., & Fernando, M. B. (2023). Euro adoption and intra-European Union exporters' productivity: differences between family and non-family firms. *European research on management and business economics*, 29(3), 100226. DOI:10.1016/j.iedeen.2023.100226
- [17] Roohollah, S., & Mahannejad, M. (2021). Audit committee effectiveness in family & non family firms listed in Tehran Stock Exchange. *Empirical research in accounting*, 11(2), 217-234. **(In Persian)**. [https://jera.alzahra.ac.ir/article\\_5570.html?lang=en](https://jera.alzahra.ac.ir/article_5570.html?lang=en)
- [18] Si, D. K., Li, X. L., & Huang, S. (2021). Financial deregulation and operational risks of energy enterprise: the shock of liberalization of bank lending rate in China. *Energy economics*, 93, 105047. DOI:10.1016/j.eneco.2020.105047
- [19] Islam, N., Wang, Q., Marinakis, Y., & Walsh, S. (2022). Family enterprise and technological innovation. *Journal of business research*, 147, 208–221. DOI:10.1016/j.jbusres.2022.04.004
- [20] Sharififar, M., Kaab, O. A., Mahmoodi, A., & Mehrabani, F. (2023). Hegemonic model of stakeholders interest conflict o in family-owned companies: the theory of Caudilloism in corporate governance. *Journal management accounting*, 15(55), 112-133. **(In Persian)**. <https://www.sid.ir/paper/1063388/en>
- [21] Du, S., & Cao, J. (2023). Non-family shareholder governance and green innovation of family firms: a socio-emotional wealth theory perspective. *International review of financial analysis*, 90, 102857. DOI:10.1016/j.irfa.2023.102857
- [22] Mondal, A., Ray, S., & Lahiri, S. (2022). Family ownership, family management, and multinationality: evidence from India. *Journal of business research*, 138, 347–359. <https://doi.org/10.1016/j.jbusres.2021.09.017>