*Iranian Journal of Management Studies (IJMS)* *http://ijms.ut.ac.ir/*
*Vol. 10, No. 3, Summer 2017* *Print ISSN: 2008-7055*
*pp. 697-714* *Online ISSN: 2345-3745*
*DOI: 10.22059/ijms.2017.230026.672597*

# The Mediation Effect of Financial Leverage on the Relationship between Ownership Concentration and Financial Corporate Performance

**Amirhossein Taebi Noghondari*, Ali Taebi Noghondari**

*Department of Accounting, Kerman Branch, Islamic Azad University, Kerman, Iran*

(Received: March 17, 2017; Revised: August 12, 2017; Accepted: August 22, 2017)

## Abstract

The purpose of this paper is examining the impact of financial leverage as a mediation variable on the relationship between ownership concentration and financial corporate performance. To test the hypotheses, multiple regression analysis is used. The statistical population of this research is all listed companies in Tehran Stock Exchange. However, data were available only for 60 companies during the period of 2004-2015. The research results show that the ownership structure negatively affects the financial corporate performance. Moreover, the financial leverage explains the relationship between the ownership concentration and financial corporate performance. It is recommended to the investors and other users of financial statements to increase the quality of their portfolio decisions, by taking into account the hidden impact of financial leverage on the relationship of ownership concentration and the companies' performance, in addition to the direct impact of ownership concentration on the companies' performance.

## Keywords

Financial leverage, Market performance, Mediation effect, Ownership concentration.

* **Corresponding Author, Email:** amirtaebi@gmail.com

## Introduction

In recent years, corporate governance is recognized as a main aspect of trade dynamics and according to this issue is growing every day. The external mechanisms of corporate governance are increasingly important to minimize the conflict associated with the separation of control and ownership of companies. Whatever the share of a shareholder in the company is low, the monitoring ability of him/her to control the manager's behavior will be less. In theory, the more concentrated shareholders will focus more on monitoring and consequently reduce the opportunistic behavior of managers. Since the institutional shareholders have more access to valuable information about future prospects and long-term investments, it is expected that the firm performance with higher concentration may be better than the performance of the company with low concentration (Balsmeier & Czarnitzki, 2015; Shahveisi et al., 2016). However, some other studies show the inverse association (Fazlzadeh et al., 2011; Mashayekhi & Bazaz, 2008).

Financial leverage is one of the most difficult issues facing managers to make a decision. Financial managers must adopt methods of financing that match the type of investments and cause to increase company's value and decrease financial risk. High debt ratio in the companies could increase their financial risk and raise the cost of capital which is very important for the major shareholders and play as the fundamental factor in their decision making process. Therefore, ownership concentration may negatively affect the financial leverage. Beside, since the interests of shareholders are threatened against the company's risk, it is possible to take steps to reduce the risk including how to use excessive debt and how to change financial leverage. Accordingly, companies must optimize the use of limited resources of financing that show themselves in the form of increased profitability (Kadapakkam et al., 2016). As a result, the company's use of financial leverage could affect the company's performance.

The divergence in the previous studies may introduce a question whether ownership concentration just directly affects the financial

corporate performance or an important hidden variable like financial leverage may influence such a relationship. If financial leverage is put as a hidden variable in the ownership concentration and financial corporate performance association, the financial leverage can play a substantial role in this regard. As a matter of fact, major shareholders may monitor the company more efficiently through giving more attention to financial leverage and therefore, affect the companies' performance. The prior studies have focused on the financial leverage and ownership concentration, individually. Since little research has been done in this area, the current study would like to investigate this issue and fill such a research gap in Iranian capital market.

By providing empirical evidences to market players that how financial leverage plays a role in major shareholders' decision portfolio, this study will help investors, creditors and managers in order to select appropriate and effective indicators for the evaluation and analysis of financial position and operating properly so that it leads to wealth creation for beneficiaries.

## Literature Review and Theoretical Background

The research literature is presented in three parts as follows:

1. The impact of ownership concentration on corporate performance.
2. The influence of ownership concentration on financial leverage and
3. The effect of financial leverage on corporate performance.

### The Impact of Ownership Concentration on Corporate Performance

The relationship between ownership and performance has been major and the current issue of corporate governance. Many researchers find a positive correlation between ownership concentration and corporate performance (Bhattacharya & Graham, 2009; Cornett et al., 2007; El-Masry et al., 2008a; Fazlzadeh et al., 2011; Gutiérrez & Pombo, 2009; Karaca & Eksi, 2012; Leung et al., 2014; Nguyen & Giang, 2015; Yu, 2013). In fact, both of ownership achieving by managers and

monitoring by shareholders are ways which can reduce agency problems. The right of ownership causes the interests of managers to be aligned with interests of shareholders and the existence of major shareholders can increase monitoring and improve the company's performance. However, other researchers, such as Fazlzadeh et al. (2011), and Mashayekhi and Bazaz (2008) found a negative and significant relationship between ownership concentration and corporate performance. Nevertheless, scholars such as Omran, Bolbol, and Fatheldin (2008), and Demsetz and Villalonga (2001) showed companies' performance are influenced by environmental constraints and there is no significant relationship between ownership concentration and company's performance.

**The Impact of Ownership Concentration on Financial Leverage**

Chen (2004) showed, on the basis of various studies on the relationship between ownership structure and capital structure, that high leverage ratio in companies represents negative signs regarding the future financial problems. Therefore, institutional investors prefer companies that have less leverage ratio. Butt and Hasan (2009) also showed that major shareholders have a negative and significant relationship with debt-to-equity ratio. Some other researchers in different countries have found the same results (Céspedes et al., 2010; Ganguli, 2013). An Iranian research by Asadi, Mohammadi and Khorram (2011) showed a negative and significant relationship between ownership structure and capital structure.

The results of El-Masry, Al-Najjar and Taylor (2008) was contrary to the above stated. They found that there is no negative and significant relationship between capital structure and investors. They stated that external control mechanisms affecting corporate governance are the emergence of major shareholders as capital owners. The shareholders monitor through gathering information, pricing management decisions implicitly and managing company operations clearly. Capital structure is an important factor in determining the value of the company and can affect the company's performance. Exactly since then, capital structure and its influencing factors were considered by researchers.

### The Effect of Financial Leverage on Performance

Some studies point out the positive relationship (Fosu, 2013; Pouraghajan et al., 2012; Shah Fasih Ur Rehman, 2013), whereas some others indicate the negative relationship (Foong & Idris, 2012; González, 2013; Javed et al., 2015; Rezaei & Jafari, 2015; Wabwile et al., 2014).

Conflicting and contradictory results of the mentioned studied may vary from differences regarding measuring variables, periods tested in studies, evaluation techniques. However, from the theoretical aspect the differences in the behavior of companies' owners which is affecting their company's performance, are in different time output and places and may be as a result of financial leverage as a hidden variable. In fact, ownership concentration may indirectly influence the financial corporate performance through financial leverage which it can explain why there is a conflict in prior literature.

## Theoretical Framework

Recently, the ownership structure and its impacts on companies' different aspects of performance in Asian and European emerging markets have been raised in the literature of corporate governance. Those countries with concentrated ownership, with large shareholders using control rights to achieve their own interests and abuse the small shareholders' benefit that would create a conflict of interest between majority and minority shareholders, are discussed under the agency theory. In such a situation, expected beneficial effects would decrease the effective supervision by major shareholders on managers and cause to weaken company's performance.

**$H_1$:** There is a significant and negative relationship between ownership concentration and financial corporate performance.

The major shareholders may prefer higher level of leverage. In fact, major shareholders would like to enjoy the benefit of getting more external financing by sharing its risk with minority shareholders.

**$H_2$:** There is a significant and positive relationship between ownership concentration and financial leverage.

The debt creates financial difficulties for the company's future investment, by increasing its financial risk. Therefore, higher financial leverage in the companies may entail the more possibility of lower performance.

**$H_3$:** There is a significant and negative relationship between financial leverage and financial corporate performance.

Ownership concentration can influence the financial corporate performance from two aspects. First, the high ownership concentration directly affects corporate performance, as it was explained in the first hypothesis. Second, it could also impact it through financial leverage, indirectly. Therefore, financial leverage may explain the relationship between ownership structure and firm performance.

**$H_4$:** The financial leverage explains the relationship between ownership concentration and financial corporate performance.

## Research Methodology

The statistical population of this research includes listed companies in Tehran Stock Exchange in the period of 2004-2015. According to the availability of data, only 60 companies were eligible. Collecting data has been done from Rahavard Nonin 3 database and financial statements of the sample companies. The statistical analysis was conducted by Eviews 8 and Stata 14 software.

### Variables and Research Model

#### Independent variable

Ownership concentration is the absolute control over corporate affairs. In this research, ownership concentration is measured using the following formula:

$$\text{Own} = \frac{\text{N}}{\text{M}} \qquad (1)$$

where OWN is ownership concentration and *N* represents the number of common shares owned by major shareholders (e.g. institutional, governmental, and family), and *M* stands for outstanding shares in the company (Moradzadehfard & Adili, 2011).

**Dependent variable**

In this study dependent variable is financial corporate performance which is measured by price to earnings (PE) ratio (price-to-actual EPS). PE ratio is one of the most important and essential Indices in the capital market that has been used by investors to evaluate the corporate performance of firms (Hribar et al., 2006).

**Mediation variable**

**Capital Structure.** for measuring capital structure Long Term Debt (LTD) is applied which is divided by total assets for standardization (Baker & Xuan, 2016).

**Control variable**

- **Company size.** It is equal to natural logarithm of company's total asset value (Faccio et al., 2016).
  - **Asset structure.** AS is the tangible fixed assets divided by total assets (Gill et al., 2010).
  - **Age of company.** It is the number of years elapsed since the establishment of the company by the end of time horizon.
  - **Liquidity.** It is the current assets divided by the current liability (Parker et al., 2016).

**Mediation Model**

To examine the mediation model, the model of Mathieu and Taylor (2006) has been applied. The suggested relationship for the first assumption is as follows:

$$PE_{it} = \alpha + \beta_1 Size_{it} + \beta_2 AS_{it} + \beta_3 Age_{it} + \beta_4 Liquity_{it} + \varepsilon \quad \text{Model 1}$$

$$PE_{it} = \alpha + \beta_1 OWN_{it} + \beta_2 Size_{it} + \beta_3 AS_{it} + \beta_4 Age_{it} + \beta_5 Liquity_{it} + \varepsilon \quad \text{Model 2}$$

The first model evaluates the impact of research control variables on the dependent variable (PE) without considering the independent variable in order to determine the pure impact of control variables on the dependent variable. In the second model, independent variable is added until changes are shown with the arrival of this variable. This model shows the direct effect of ownership on PE (path c).

$$LTD_{it}=\alpha+\beta_1 Size_{it}+\beta_2 AS_{it}+\beta_3 Age_{it}+\beta_4 Liquity_{it}+\varepsilon \quad \text{Model 3}$$

$$LTD_{it}=\alpha+\beta_1 OWN_{it}+\beta_2 Size_{it}+\beta_3 AS_{it}+\beta_4 Age_{it}+\beta_5 Liquity_{it}+\varepsilon \quad \text{Model 4}$$

In the third and fourth model, the dependent variable is financial leverage. The impact of the control and dependent variable has been examined without considering the independent variable in order to determine the pure impact of control variables on the dependent variable in the third model and fourth model, independent variable is included in Model 3. Model 4 shows *path a* in the research model.

$$PE_{it}=\alpha+\beta_1 OWN_{it}+\beta_2 Ltd_{it}+\beta_3 Size_{it}+\beta_4 AS_{it}+\beta_5 Age_{it}+\beta_6 Liquity_{it}+\varepsilon \quad \text{Model 5}$$

In the fifth model financial leverage plays the role of mediator variable in the relationship between ownership concentration and PE. This model shows the mediation effect of financial leverage (path c′) as well as the impact of financial leverage (path b) on PE.

Based on Mathieu and Taylor's model (2006), there are some requirements to have the mediation effect. 1. Path c, a, and b must be significant. 2. If path c′ is significant, there is a partial mediation effect and if path c′ is not significant, then there is a full mediation effect (Fig. 1).

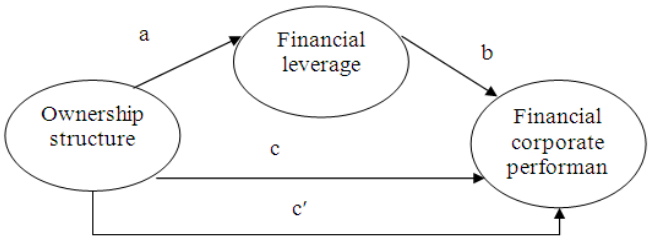


**Fig. 1. Research framework**

## Research Findings

### Descriptive Statistics

Table 1 illustrates the descriptive statistics of population parameter in which mean and standard deviation are calculated for all variables. The highest standard deviation belongs to ownership concentration and the lowest standard deviation is owned by structure of assets. The

mean of ownership concentration is 72.99 which represents a high concentration of ownership in Iran capital market.

**Table 1. Descriptive analysis**

| Variables | Abbreviation | Mean | SD | Min | Max |
|---|---|---|---|---|---|
| PE | PE | 6.56 | 3.21 | 1.91 | 23.54 |
| Ownership Concentration | Own | 72.99 | 24.24 | 0.00 | 99.45 |
| Financial Leverage | LTD | 0.63 | 0.19 | 0.18 | 1.22 |
| Size | Ln Size | 5.73 | 0.56 | 4.38 | 7.70 |
| Asset Structure | AS | 0.23 | 0.18 | 0.1 | 0.89 |
| Age | Age | 16.88 | 10.15 | 1 | 44 |
| Liquidity | Liquidity | 1.18 | 0.30 | 0.17 | 2.69 |

## Unit Root Test

The first step in panel data econometrics is checking the unit root test, Levin-Lin-Chu test. As Table 2 shows, the amount of P-value is less than 5% for all variables; therefore, all variables are at a stable level during the period studied.

**Table 2. Unit root test**

| Variables | Abbreviation | P-value | t-statistic |
|---|---|---|---|
| PE | PE | 0.00 | -17.12 |
| Ownership Concentration | OWN | 0.00 | -4.24 |
| Financial Leverage | LTD | 0.00 | -6.87 |
| Size | LnSize | 0.00 | -15.96 |
| Asset Structure | AS | 0.00 | -17.85 |
| Age | Age | 0.00 | -15.82 |
| Liquidity | Liquity | 0.00 | -12.46 |

## Heteroskedasticity and Serial Correlation

To recognize the Heteroskedasticity, Breusch-Pagan/ Cook-Weisberg test is applied. Based on Table 3, the P-values of all research models are greater than 5 percent, thus, there are no Heteroskedasticity problems in all the five models. Wooldridge test is used to examine the serial correlation in the current study as well. The results indicated that the P-values of research models are all greater than 5 percent and therefore, there are no serial correlations, as shown in Table 3.

**Table 3. Heteroskedasticity and serial correlation**

| Model | Heteroskedasticity | | Serial correlation | |
|---|---|---|---|---|
| | P-Value | $Chi^2$ | P-Value | F value |
| Model 1 | 0.63 | 0.23 | 0.57 | 0.31 |
| Model 2 | 0.12 | 2.33 | 0.54 | 0.37 |
| Model 3 | 0.31 | 1.00 | 0.24 | 1.39 |
| Model 4 | 0.23 | 1.40 | 0.24 | 1.39 |
| Model 5 | 0.22 | 1.47 | 0.30 | 1.06 |

## Multicollinearity

In this study, to test the Multicollinearity problem among the independent variables, the Variance Inflation Factor (VIF) is used. Based on the results in Table 4 and 5, the variance inflation factor (VIF) of all variables were less than 5 that indicate a very weak Multicollinearity (Hair et al., 2009).

**Table 4. The test results according to dependent variable PE (first hypothesis)**

| Variables | First model | | | | Second model | | | |
|---|---|---|---|---|---|---|---|---|
| | β | T Statistic | P-value | VIF | β | T Statistic | P-value | VIF |
| Age of Company | 0.24 | 1.37 | 0.20 | 1.30 | 0.29 | 1.39 | 0.16 | 1.47 |
| Size | -0.32 | -1.91 | 0.04 | 1.25 | -0.48 | -2.11 | 0.03 | 1.40 |
| Asset Structure | -0.59 | -2.65 | 0.00 | 1.09 | -0.51 | -2.34 | 0.02 | 1.20 |
| Liquidity | 0.18 | 1.28 | 0.14 | 1.01 | 0.15 | 0.65 | 0.51 | 1.10 |
| Ownership Concentration | - | - | - | - | -0.64 | -3.52 | 0.00 | 1.01 |
| C | 0.77 | 3.53 | 0.70 | - | 0.89 | 4.33 | 0.50 | - |
| $R^2$ | 0.05 | | | | 0.07 | | | |
| Adjusted $R^2$ | 0.03 | | | | 0.04 | | | |
| $Chi^2$ | 2.74 | | | | 2.85 | | | |
| P-value | 0.00 | | | | 0.00 | | | |
| F limer | 0.00 | | | | 0.00 | | | |
| Bursh Pagan test | 0.00 | | | | 0.00 | | | |
| Hausman test | 0.78 | | | | 0.09 | | | |

**Table 5. Test results according to dependent variable, financial leverage and PE (second, third and fourth hypotheses test)**

| Variable | Third model | | | | Fourth model | | | | Fifth model | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | β | T Statistic | P-value | VIF | β | T Statistic | P-value | VIF | β | T Statistic | P-value | VIF |
| Age of Company | -0.14 | -2.74 | 0.00 | 1.25 | -0.10 | -1.8 | 0.03 | 1.47 | 0.80 | 2.07 | 0.04 | 1.49 |
| Size of Company | 0.01 | 1.78 | 0.02 | 1.30 | 0.42 | 2.25 | 0.01 | 1.40 | -0.08 | -0.41 | 0.67 | 1.44 |
| Asset Structure | -0.01 | -0.09 | 0.90 | 1.01 | -0.02 | -0.10 | 0.91 | 1.02 | -0.51 | -2.27 | 0.02 | 1.01 |
| Liquidity | -0.22 | -3.01 | 0.00 | 1.09 | -0.83 | -3.17 | 0.00 | 1.10 | 0.44 | 2.04 | 0.04 | 1.16 |
| Ownership | - | - | - | - | 0.66 | 2.55 | 0.04 | 1.20 | -0.11 | -1.88 | 0.06 | 1.22 |
| Financial leverage | - | - | - | - | - | - | - | - | -0.67 | -2.03 | 0.03 | 1.14 |
| C | 0.57 | 4.73 | 0.80 | - | 0.75 | 3.93 | 0.57 | - | 0.89 | 5.53 | 0.87 | - |
| $R^2$ | 0.05 | | | | 0.1 | | | | 0.12 | | | |
| Adjusted $R^2$ | 0.03 | | | | 0.08 | | | | 0.10 | | | |
| $Chi^2$ | 8.53 | | | | 5.48 | | | | 5.21 | | | |
| P-value | 0.00 | | | | 0.00 | | | | 0.00 | | | |
| F-Limer | 0.00 | | | | 0.00 | | | | 0.00 | | | |
| Brush Pagan test | 0.00 | | | | 0.00 | | | | 0.00 | | | |
| Hausman test | 0.65 | | | | 0.71 | | | | 0.69 | | | |

### Model Recognitions

According to the results shown in Table 4 and 5, the significance levels in F Limer and Brush Pagan tests are less than 5 percent which indicate the models may have residuals with fix effect or random effect. In order to select between the fixed and random effects, Hausman test was conducted in this study. The results of Hausman test is shown in Table 4 and 5. According to the results, the significance levels of all research models are greater than 5%, as a result the model of random effects is recommended.

## Hypotheses

### The results of first hypothesis test

The results of the first hypothesis test are shown in Table 4. Model 1 represents the relationship between control variables and dependent variables. Model 2 indicates the relationship between independent and

control variables with dependent variables. According to the results presented in Table 4 (Model 2), the calculated coefficient is (-0.64) for ownership variable which points out a negative and significant relationship between independent variable (ownership concentration) and market performance (PE) at a confidence level of 95 percent. Therefore, path c is significant.

**The results of the second, third and fourth hypothesis test**

The results of the second, third and fourth hypotheses tests are shown in Table 5 including Models 3, 4 and 5. The third model indicates the relationship between the dependent variable and the control variables. According to the results, there are the coefficients of company age (-0.14) and liquidity (-0.22) with the significance level (0.00). Therefore, there is a negative and significant relationship between control variables of the company age and the liquidity with the dependent variable of financial leverage. According to the results of the fourth model in the mentioned table, the variable of ownership concentration with the significance level of 95% has a negative and significant relationship with financial leverage (path a is significant). Based on the results of the fifth model, the independent variable, ownership concentration coefficient (-0.11) at the confidence level of 5 percent does not have a negative and significant relationship with the dependent variable PE (path c′), but the mediation variable, the financial leverage coefficient (-0.67) at the confidence level of 5% has a negative and significant relationship with the dependent variable PE (path b). As a result, the second, third and fourth hypotheses are accepted.

As, all path c, a, and b are significant, it can be concluded that the financial leverage can explain the ownership concentration and market performance relationship. However, path c′ is not significant which shows the financial leverage is fully mediating the relationship. In fact, ownership concentration does not have any significant relationship with market performance (PE) in the present of financial leverage (full mediation effect).

These results indicate that the ownership concentration does not have a direct effect on market performance (PE). Ownership concentration could influence the market performance (PE) only through the hidden variable which is the financial leverage. In other words, the major shareholders cause the firms to have more debts that raise the financial risk. The high levels of risk may reduce the market performance (PE).

## Discussion, Conclusion and Suggestions

This paper intends to propose a new challenge using literature and some existing academic contradictions about the relationship between ownership concentration and companies' market performance according to the financial leverage mediation effect. The results showed that there is a negative and significant relationship between ownership concentration and market performance. There is a highly concentrated ownership structure in Tehran Stock Exchange. As the greater part of the shares is held by major shareholders, so these shareholders have more desire to use financial leverage. Increasing use of financial leverage creates obligations and financial risk for the company and causes a negative effect on the corporate performance. However, there are no stringent rules for the protection of minority shareholders in Iran capital market. The result is in accordance with the results of Sadeghi and Rahimi (2012), and Omran et al. (2008).

Previous researches just discussed the direct and simple relationship between ownership concentration and performance. Accordingly, other hidden variables have been paid little attention especially financial leverage. Thus, major shareholders can affect company's performance considering financial leverage. The results obtained from the statistical analysis suggest the confirmation of mediation effect of financial leverage in the relationship between the independent variable, ownership concentration, and the dependent variable, market performance. Providing empirical evidences to show the existence of full mediation is a valuable part of the present study.

The current study provides the required evidences in order to offer the following suggestions for future studies:

1. Investigating the impact of ownership concentration on the companies' market performance, considering the impact of various industries.
2. Evaluating the presented subject using the financial information about the active companies in IPO companies.
3. As this study is limited to certain operationalization for capital and ownership structure as well as corporate performance, it is suggested that other measurement tools may be useful.

## References

Asadi, G. H., Mohammadi, S., & Khorram, E. (2011). The relationship between capital structure and ownership structure. *Journal of accounting Knowledge*, *2*(4), 29-48. (In Persian)

Baker, M., & Xuan, Y. (2016). Under new management: Equity issues and the attribution of past returns. *Journal of Financial Economics*, *121*(1), 66-78.

Balsmeier, B., & Czarnitzki, D. (2015). Ownership concentration, institutional development and firm performance in Central and Eastern Europe. *Managerial and Decision Economics*. DOI: 10.1002/mde.2751.

Bhattacharya, P. S., & Graham, M. A. (2009). On institutional ownership and firm performance: A disaggregated view. *Journal of Multinational Financial Management, 19*(5), 370-394.

Butt, S. A, & Hasan, A. (2009). Impact of ownership structure and corporate governance on capital structure of Pakistani listed companies. *International Journal of Business & Management, 4*(2), 50-57.

Céspedes, J., González, M., & Molina, C. A. (2010). Ownership and capital structure in Latin America. *Journal of Business Research, 63*(3), 248-254.

Chen, J. J. (2004). Determinants of capital structure of Chinese-listed companies. *Journal of Business Research, 57*(12), 1341-1351.

Cornett, M. M., Marcus, A. J., Saunders, A., & Tehranian, H. (2007). The impact of institutional ownership on corporate operating performance. *Journal of Banking & Finance, 31*(6), 1771-1794.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance, 7*(3), 209-233.

El-Masry, A., Abdelsalam, O., & Elsegini, S. (2008a). Board composition, ownership structure and dividend policies in an emerging market: Further evidence from CASE 50. *Managerial Finance, 34*(12), 953-964.

El-Masry, A., Al-Najjar, B., & Taylor, P. (2008b). The relationship between capital structure and ownership structure: New evidence from Jordanian panel data. *Managerial Finance, 34*(12), 919-933.

Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance, 39*, 193-209. http://dx.doi.org/10.1016/j.jcorpfin.2016.02.008.

Fazlzadeh, A., Tahbaz Hendi, A., & Mahboubi, K. (2011). The examination

of the effect of ownership structure on firm performance in listed firms of Tehran stock exchange based on the type of the industry. *International Journal of Business and Management*, *6*(3), 249-266.

Foong, S. Y., & Idris, R. (2012). Leverage, product diversity and performance of general insurers in Malaysia. *The Journal of Risk Finance*, *13*(4), 347-361.

Fosu, S. (2013). Capital structure, product market competition and firm performance: Evidence from South Africa. *The Quarterly Review of Economics and Finance*, *53*(2), 140-151.

Ganguli, S. K. (2013). Capital structure-does ownership structure matter? Theory and Indian evidence. *Studies in Economics and Finance*, *30*(1), 56-72.

Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. *Business and Economics Journal*, *10*(1), 1-9.

González, V. M. (2013). Leverage and corporate performance: International evidence. *International Review of Economics & Finance*, *25*, 169-184.

Gutiérrez, L. H., & Pombo, C. (2009). Corporate ownership and control contestability in emerging markets: The case of Colombia. *Journal of Economics and Business*, *61*(2), 112-139.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Mutivariate Data Analysis*. New York, NY: Pearson.

Hribar, P., Jenkins, N. T., & Johnson, W. B. (2006). Stock repurchases as an earnings management device. *Journal of Accounting and Economics*, *41*(1), 3-27.

Javed, Z. H., Huma Rao, H., Akram, B., & Nazir, M. F. (2015). Effect of financial leverage on performance of the firms: Empirical evidence from Pakistan. *SPOUDAI Journal of Economics and Business*, *65*(1-2), 87-95.

Kadapakkam, P. R., Meisami, A., & Wald, J. K. (2016). The debt trap: Wealth Transfers and debt-equity choices of junk-grade firms. *Financial Review*, *51*(1), 5-35.

Karaca, S. S., & Eksi, I. H. (2012). The relationship between ownership structure and firm performance: An empirical analysis over Istanbul Stock Exchange (ISE) listed companies. *International Business Research*, *5*(1), 172.

Leung, S., Richardson, G. & Jaggi, B. (2014). Corporate board and board committee independence, firm performance, and family ownership concentration: An analysis based on Hong Kong firms. *Journal of Contemporary Accounting & Economics*, *10*(1), 16-31.

Mashayekhi, B., & Bazaz, M. S. (2008). Corporate governance and firm performance in Iran. *Journal of Contemporary Accounting & Economics*, *4*(2), 156-172.

Mathieu, J. E., & Taylor, S. R. (2006). Clarifying conditions and decision points for mediational type inferences in organizational behavior. *Journal of Organizational Behavior*, *27*(8), 1031-1056.

Moradzadehfard, M., & Adili, M. (2011). The relationship between Institutional stock ownership and intellectual capital performance of listed companies in Tehran Stock Exchange. *Journal of Accounting Advances*, *3*(2), 141-162.

Nguyen, H. T. M., & Giang, T. T. M. (2015). Triangle relationships among ownership structure, dividend policy and firm performance: An empirical study in Vietnamese companies. *Asian Social Science*, *11*(27), 195.

Omran, M. M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics*, *28*(1), 32-45.

Parker, P. D., Swanson, N. J., Dugan, M. T., & Jahera, J. S. (2016). Management of pension discount rate and financial health. *Journal of Financial Economic Policy*, *8*(2), 142-162.

Pouraghajan, A., Malekian, E., Emamgholipour, M., Lotfollahpour, V., & Bagheri, M. M. (2012). The relationship between capital structure and firm performance evaluation measures: Evidence from the Tehran Stock Exchange. *International Journal of Business and Commerce*, *1*(9), 166-181.

Rezaei, M., & Jafari, S. M. (2015). Identifying the relationship between financial leverage and cash flows of the companies listed in Tehran Stock Exchange. *Indian Journal of Science and Technology*, *8*(27). DOI: 10.17485/ijst/2015/v8i27/82942.

Sadeghi, H., & Rahimi, P. (2012). The relationship between ownership structure and corporation performance of listed companies in Tehran Stock Exchange; using Structural Equation Modeling *Journal of Financial Accounting Research, 4*(14), 89-102.

Shah Fasih Ur Rehman, S. (2013). Relationship between financial leverage and financial performance: Empirical evidence of listed sugar companies of Pakistan. *Global Journal of Management and Business Research, 13*(8), 33-40.

Shahveisi, F., Khairollahi, F., & Alipour, M. (2016). Does ownership structure matter for corporate intellectual capital performance? An

empirical test in the Iranian context. *Eurasian Business Review*, *7*(1), 67-91.

Wabwile, E. S., Chitiavi, M. S., Alala, O. B, & Douglas, M. (2014). Financial Leverage and performance variance among banks: evidence of tier 1 commercial banks listed on Nairobi Security Exchange Kenya. *International Journal of Business and Management Invention*, *3*(4), 01-13.

Yu, M. (2013). State ownership and firm performance: Empirical evidence from Chinese listed companies. *China Journal of Accounting Research*, *6*(2), 75-87.