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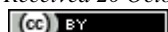
The structure of democracy and dictatorship of firms (corporate governance) in relation to the non-competitive product market and stock abnormal returns

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Abstract

In this research, the relationship between the structure of democracy and dictatorship of enterprises, non-competitive structure of markets and abnormal returns is evaluated. This assessment is conducted through the relationship between the most important criteria for this structure in the literature of research in Iran's money market, the institutional shareholder, and product market competition with abnormal returns. This issue is carried out using the data extracted from information published by TSE-Tehran Stock Exchange and tax records of 78 firms are acquired by TSE-Tehran Stock Exchange using the Carhart model and the combined data regression. The results indicated that there is a meaningful relationship between the democracy structure of firms, percentage of institutional shareholders and abnormal returns on the non-competitive market. In other words, in a non-competitive market, the more desirable the firm's democracy structure or business governance is, returns are also greater.

Keywords firm's democracy structure; dictatorship structure; institutional shareholders; abnormal return; product market competitive.

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1 Introduction

Recent studies in some countries (e.g. Hou and Robinson (2006), Dan et al. (2007), Hashem (2010) and Sharma (2010) indicate that in addition to risk factors, the competitive structure of the product markets also has a significant impact on the returns of firms. In fact, economists often claim that there is a strong incentive for corporate managers in the competitive industries to reduce the stagnation and maximize the benefits, but in non-competitive industries where there is no sense of competition for firms to compel managers to impose economic and financial discipline, the structure of democracy can be used as a good governance for this purpose. According to the Organization of Economic Cooperation and Development, the governance of a good company creates an appropriate incentive for the board of directors and management, and the existence of an

efficient corporate governance system within a firm and, generally speaking, an economy provides a degree of trust in the proper functioning of a market economy (TSE-Tehran Stock Exchange, 2007).

In fact, according to Gompers et al. (2003), it is expected that under low competitive conditions (all financial news and information are not available to all shareholders on time), Democracy Firms which are good governance agents due to the constraints of the corporation owners' equity, not only do they perform better than Dictatorship Firms that represent a bad governance, but also they also have more returns on their owners' equity and more valuable corporate. In fact, in Democracy Firms, the long-term survival of the firm is ensured and the interests of the owners of the firm are protected from the management of the organizations (Zhang, 2014, 2016, 2018). In other words, the following objectives will be met in these firms: (1) Reducing the risk of the enterprise by improving transparency and accountability; (2) improving the long-term effectiveness of the organization by preventing arbitrariness and non-accountability of executive management. Accordingly, in this study, it has been attempted to investigate this issue in Iran that "whether economic firms in non-competitive industries benefit more from the structure of democracy than firms in the competitive industries or not?"

1.1 Theoretical fundamentals of research

Following the emergence of agency problems in order to protect public interest, information must be secured and the interests of managers and owners are consistent. In this regard, various ways are used, such as the presence of non-executive directors in the board of directors, the establishment of accounting standards, internal controls and so on. Still, problems have not been diminished, but their complexity has increased. The stated criteria cannot support the interests of shareholders in front of managers, may be due to the lack of mechanisms of corporate governance, particularly the presence of institutional shareholders, which in addition to complying with all the criteria, can lead to the ultimate goal of the company, that is, to increase the interests of shareholders. A good corporate governance (Democracy Firms) means the laws, cultures and systems that achieve the goals of accountability, transparency and respect for the rights of the stakeholders (Hasas Yeganeh and Baghomian, 2005). Among the criteria for Democracy Firms that have been introduced as key factors, one can mention the following

1. The existence of a non-executive member: refers to a member of the board of directors who has no formal administrative responsibility at the firm.
2. The existence of institutional stockholders: refers to real and legal persons who hold a significant number of ordinary shares of the firm. Investment institutions, non-governmental public institutions or other business enterprises are considered as institutional stockholders.
3. No duplication of responsibility of the CEO: This situation occurs when the CEO of the firm is not elected as the chairman of the board of directors. Contrary to this, it may lead to conflict of interests and loss of independence.

Among recent studies in Iran, such as the brothers Hassanzadeh et al. (2011), Ghanbari (2007), Hosseini (2007), Yazdani (2006) and Rahbarikharazi (2005) indicated that the presence of institutional stockholders in the firm as a criterion of democracy has the greatest relationship with the fundamental variables determining the firm's value (per share).

There are several potential reasons why a competitive product market structure may affect stock returns. Firms adopt different operational decisions in this regard. For instance, they carry out initial marketing research, offer attractive products, decide on the value and sales prices, promote their products, do financing and then they start to produce and eventually sell the products to consumers. The nature of the competition in

product markets, affects the behavior of the firms in all these stages and the product market policy affects profit and rate of return (Lyandresy and Watanabe, 2011).

But alignment with economic growth and the growth of business units reduced the power of controlling owners in practice, because the distribution of ownership structure increases and most of the owners are minor owners. In such a case, only a small number of owners (shareholders) have the opportunity to play a role in selecting members of the board of directors and also the director. This problem will become more acute when the incentive of most of the owners is to invest in the firm to profit (short-term perspective) rather than take control of the firm (long-term perspective). Then the only stockholders' barrier against the problem of representation theory, is to create a variety in the investment portfolio, or ultimately, after the investor's irrecoverable losses in the company's shares, will sell the shares invested (purchased). In such a system, if there is no incentive for competition, without the presence of institutional owners, the governance of the firms is at the disposal of management uncontrolled. In this case, based on the theory of emperorization, the director will not invest the cash of the company in an optimal manner, and based on the agency's theory, the manager will act for his own interests and not the interests of the beneficiaries. Market competition can, to a large extent, prevent such inefficiencies done by the manager, but when competition in the market is low, the structure of democracy or the governing structure can be replaced by the mechanism of competition in the market. (Xavier and Mueller, 2011)

In fact, all responsibilities are placed on Banga's managers, in which case the role of the highest executive officer (CEO) will be more prominent (Hosseini, 2011). The executive director is responsible for directing the resources so that the owner's interests reach the maximum. Due to the lack of controlling factors created by above problems and delegation of these criteria to the managers, the CEO's authorities and his power of influence has been greatly increased. In fact, the boards of directors elected by the owners are, in most cases, among those who first chose their CEO and introduced to the owners. The manager determines short-term and long-term goals and also the necessary strategies for achieving these goals, and only accounting procedures can measure the degree of success or failure of management practices, but the CEO can play an important role in choosing accounting procedures to change the results (Jensen and Meckling, 1976).

According to the literature of the research, if there is no incentive for competition, institutional owners are considered to be a key factor in improving democracy in firms and also have a strong control over the application of the principles of corporate governance. Therefore, they are expected to improve the system of democracy in the firm, increase effective monitoring and pressure on management to increase the returns of owners. Hence the research hypothesis is as follows: The firm's structure of democracy, in a low competitive situation, leads to higher abnormal returns for the product market.

1.2 Review of literature

The most important foreign researches related to the research topic are Xavier and Mueller (2011), Lefort and Urzua (2007), Ignatieva and Gallagher (2010), Sharma (2010), Bebchuk et al. (2012), Black (2001), Holderness (2003), Jae-Seung et al. (2004), Ditmar and Mahrt-Smith (2006), Himmelberg et al. (1999) and the most important domestic researches related to the subject of this research are Rahbarikharazi (2005), Yazdaniyan (2006), Hosseini (2007), Ghanbari (2007), Namazi and Ebrahimi (2011), brothers Hassanzadeh et al. (2011) and Setayesh and Kargarfard Jahromi (2010). These hypotheses, research methods and results are presented in Table 1.

Table 1 Hypotheses, research methods and results.

Researchers	Reviewed Hypotheses and models	Results
Bebchuk et al., 2012	Investigating the relationship between governance and returns using combined Regression, Fama and French Model, Q Tobin and Caharat	Failed to confirm the relationship between governance and return
Xavier and Mueller, 2011	Investigating the relationship between good corporate governance (corporate governance), competition in product market and stock returns, using combination regression and Fama and French models.	Profit and stock returns in non-competitive industries and a good governance are more than competitive industries; weak governance also leads to lower returns
Sharma, 2010	Investigating the relationship between efficiency and three dimensions of competition in the product market	Enterprises in the centralized industries have lower returns
Ignatieva and Gallagher, 2010	Investigating the effect of economic factors determining stock returns on the Australian Stock Exchange	Not only the size and the ratio of book value to market value, but also the structure of the product market, affect the average return on stock and market-focused firms gain more risk-adjusted returns than firms in the more competitive market
Lefort and Urzua, 2007	Investigating the relationship between the ratio of members of the board of directors and the firm's value	When the ratio of unauthorized members and professional members is examined, only the ratio of unauthorized members affects the firm's value
Ditmar and Mahrt-Smith, 2006	Investigating the relationship between two criteria: Firm Governance and Firm Market Value	Firms with weak corporate governance, for each dollar change in cash, cause a change of about 0.88 to 0.42 in market value, while this value doubles in firms with good governance
Jae-Seung et al., 2004	Investigating the relationship between corporate governance and corporate value	Better executives lead to better corporate governance and pay attention to their stakeholders and there is a positive relationship between the value of firms and corporate governance
Holderness, 2003	Investigating the relationship between institutional stockholders and returns in the United States	The relationship between institutional shareholders and returns is sometimes positive and sometimes negative.
Black, 2001	Investigating the relationship between firm governance and firm performance in Russia using time series and regression	Strong correlation between firm governance and firm performance
Himmelberg et al., 1999	Investigating the relation between unauthorized members and performance	There was no relationship between the ratio of unauthorized members and performance
Namazi and Ebrahimi, 2011	Investigating the relationship between product market competitive structure and stock returns, using the Lerner, Herffindal Hirschman Index and combined data	There is a negative relationship between the market's competitive structure and stock returns, and the more competition among industries, the more stock returns will be
Brothers Hassanzadeh et al., 2011	Investigating the relationship between some corporate governance mechanisms and the value created for shareholders and economic added value, using multiple regression	Among 8 corporate governance mechanisms (corporate governance), (The degree of government influence and ownership, the amount of ownership of institutional shareholders, the structure of capital and the amount of free floating shares) 4 mechanisms are related to created value and 3 mechanism (The level of government influence and ownership, the amount of ownership of institutional shareholders and the free floating shares) are related to economic added value
Setayesh and Kargarfard Jahromi	Investigating the effect of competition in the	There is a positive and significant

2010	product market on capital structure using panel data and the Q-Tobin and Herfindal-Hirschman Index.	relationship between competition in the product market and the capital structure of the companies
Ghanbari, 2007	Investigating the relationship between the presence of unauthorized members, information transparency, the existence of the internal auditor and the presence of institutional shareholders on the firm's performance	Only institutional stakeholders and internal auditors have an impact on firm performance
Hosseini, 2007	Investigating the relationship between corporate governance and stockholders' return using Regression and Fama and French Models	There is no relationship between institutional shareholders and shareholders' returns in Iran
Yazdaniyan, 2006	Investigating the multicriterion effect of corporate governance on reducing earnings management	Only institutional investors have an impact on reducing earnings management
Rahbarikharazi, 2005	Investigating the Status of Corporate Governance and the observance of shareholders' rights in Iranian stock exchange	Non-observance of shareholders' rights in Iran

2 Methods

The purpose of this study is to investigate the relationship between the structure of democracy or dictatorship (tyranny) of the firm, the competition and the abnormal stock returns of the company; and since the present study seeks to assess the relationship between two or more variables, it is considered to be an operational goal. The statistical model used in this research is the Carhart model. Also, in order to analyze the data and extract the results of the research, the combination regression and Eviews7 and Excel software are used. In this research, to test the hypothesis and analyze the data, the Carhart model that has been developed by the Fama and French model has been used

$$rt_rf = \alpha + \beta_1 \times MKT_t + \beta_2 \times SMB_t + \beta_3 \times HML_t + \beta_4 \times UMD_t + e_t \quad (1)$$

where rt_rf : a portfolio risk that is obtained through risk-free returns deduction of coverage or hedge portfolio return. rf : is the risk-free return rate, and in this study the rate of interest on public participation bonds has been used as a risk-free return rate. From 2006-2010, this rate has been indicated in Table 2. $MKT (rf-rm)$: the surplus of monthly portfolio returns after the risk-free return rate, this variable is called market risk premium. The rm of monthly market return is calculated from equation (2)

$$rm = (I_t - I_{t+1}) / I_{t+1} \quad (2)$$

where I_t : total price index at the end of period t ; I_{t+1} : total price index at the end of period $t+1$.

To calculate the HML, UMD and SMB variables in Carhart model, all sample firms based on the stock market value, each year in September, are divided into two classes: 50% with high market value and 50% with low market value and then independently, according to the book value of the end of the financial period of each share to its market value (B/M), each class is divided into three categories: 30% (high B/M), 40% (medium B/M) and 30% (low B/M). Totally in each category, 6 portfolios were obtained which were used to calculate the SMB and HML. In order to calculate UMD, all sample firms, based on market value, were

divided into two categories: 50% of high market value and 50% of a lower market value, and then, independently, each class was divided into three classes based on MOM: 30% (high MOM), 40% (medium MOM) and 30% (low MOM); and a total of six portfolios were obtained which were used to calculate UMD. SMB: The monthly returns of large firms-the monthly returns of small firms in terms of size (market value),

$$\text{SMB} = \frac{\frac{S}{L} + \frac{S}{M} + \frac{S}{H}}{3} - \frac{\frac{B}{L} + \frac{B}{M} + \frac{B}{H}}{3} \quad (3)$$

HML: Monthly returns of firms with higher B/M- returns of firms with lower B/M,

$$\text{HML} = \frac{\frac{S}{H} + \frac{B}{H}}{2} - \frac{\frac{S}{L} + \frac{B}{L}}{2} \quad (4)$$

Table 2 Percentage of rate.

year	85	86	87	88	89	90
Percentage of rate	15/5	15/5	18	17	17	16/5

Table 3 Combination of six portfolios of Fama and French.

Book value to market value	H	M	L
Market value			
S	S/H	S/M	S/L
B	B/H	B/M	B/L

UMD: Monthly returns of firms with higher MOM- returns of firms with lower MOM,

$$\text{UMD} = \frac{\frac{S}{U} + \frac{B}{U}}{2} - \frac{\frac{S}{D} + \frac{B}{D}}{2} \quad (5)$$

MOM: The average stock price trend calculated from equation (6) is

$$\text{MOM}_t = \left(\frac{\sum_{i=1}^n Ri}{n} \right) \quad (6)$$

where R_i : The factor of the stock price movement of the firm i at the end of September of the year t , as the total return of the last 11 months of the firm i .

Table 4 Combination of six portfolios of momentum market value.

Momentum Market value	U	M	D
S	S/U	S/M	S/D
B	B/U	B/M	B/D

2.1 Calculating the dependent variable: Abnormal stock returns

The meaning of the abnormal returns of each stock, is the difference in actual returns and market returns of each share. The actual return of each stock is the ratio of the total income from investing in a given period relative to the investment used in that period. In general, stock returns can be written as follows

$$R_t = ((P_{t+1} - P_t) + DPS_t) / P_t \quad (7)$$

where R_t = Normal returns in period t . P_t = Price of ordinary shares at time t . P_{t+1} = Price of ordinary shares at time $t+1$. DPS_t = Ordinary cash dividends during the period t .

2.2 Calculating independent variables: Percentage of owners (institutional shareholders)

The number of ordinary shares of a firm that is held by investment firms or other business firms, indicates the ownership of institutional shareholders. In order to calculate the percentage of institutional shareholders in each firm, the number of institutional investor shares is divided into the total number of ordinary shares of the firm at the beginning of the period. In other words

$$CRH = \frac{n}{m} \quad (8)$$

2.3 Product market competition

Product market competition was measured through the following criteria

Hirschman Herfindall Index: like researches such as Dhaliwal et al. (2008), He (2009), Folsom (2009), Grullon and Michaely (2008) and Marciukaityte and Park (2009), it was used as a measure of competition and was calculated as follows

$$HHI = \sum_{i=1}^N \left(\frac{SALES_{i,j}}{\sum_{i=1}^N SALES_{i,j}} \right)^2 \quad (9)$$

In this regard, $SALES_{i,j}$ is the total sales of firm i in the j industry, but since according to the Tehran Stock Exchange classification, firms in an industry do not necessarily perform similar activities, in order to obtain a meaningful measure of market competition, instead of industry, the industry class was used.

LERNER INDEX (margin of cost divided by sales): The Lerner index is the firm price minus the final cost of production. This index directly indicates the characteristics of market power, which means the firm's ability

to price more than the final cost. The challenge of using the Lerner index in empirical research is that the final costs are not visible. Hence, researchers often align Lerner's index through the margin of cost pricing (Booth and Zhou, 2009). According to Kale and Loon (2011), Gaspar and Massa (2006) and Booth and Zhou (2009), The Lerner index is defined in terms of operating profit divided by sales. This index is estimated using the following equation. (Sharma 2010)

$$I = \frac{SALE - COGS - SG\&A}{SALES} \quad (10)$$

where SALE: sale; COGS: The cost of the sold goods; SG&A: Public, administrative and sales costs.

Adjustable Lerner Index: Although the Lerner index is used to determine the market power of the firm's firm, this criterion does not differentiate the specific factors of the firm, such as the effect of the power of pricing the product market from the factors of the industry level. Hence, in this article, as in researches like Peress (2010), Sharma (2010) and Gaspar and Massa (2006), the adjusted version of the Lerner index is used. (Sharma 2010)

$$LIIA = LI_i \sum_{i=1}^N WiLi \quad (11)$$

where LIIA= Adjustable Lerner Index; LI_i = Lerner index firm i ; Wi = The proportion of sales of firm i to total sales.

In this study, the adjustable Lerner Index was used to calculate the market competitive structure variable. like Gompers et al. (2003) and Xavier and Mueller (2011) researches, in the first step, all sample firms were sorted in ascending order based on the percentage of institutional shareholders; then, based on the middle statistics, they were divided into two samples - a sample of high institutional shareholders and a sample of small institutional shareholders. Then, each of the two classes is divided into three equal classes based on the adjusted Lerner index, which represents the competition, and the result of this classification is 6 portfolios of 2×3 . Then, portfolios of coverage or hedging were formed between portfolios, so that the difference in returns between portfolios with high institutional equity and high competition was used with portfolios with low institutional equity and high competition.

Also, for the medium competition and the low competition, a cover portfolio was created. In this case, the alpha in the equation will be equal to the abnormal return on the basis of the zero-investment strategy, which is due to the long position of portfolios of dictatorial corporations and the short position of the portfolio of companies of the democratic system.

2.4 Statistical population and sampling method

The statistical population of this study was all companies listed in Tehran Stock Exchange. The required data was computed for the study variables since 2006-1389. The method of sampling in this research was a systematic elimination method or a targeted method; therefore, companies that were eligible were selected as samples. In this study, the sample size was equal to the number of companies in the statistical society which had all of the following characteristics and conditions

1. In order to compare the information, the financial year of the company will be March 29th.
2. The stock trading of the company during the research period is not stopped for more than 3 months in the stock exchange.

3. All the information needed for the research companies must be available; All listed companies must have a positive book value. Taking into account the stated.
4. Conditions: a total of 78 companies were selected as samples.

3 Data Analysis

The purpose of the hypothesis test is to investigate the effect of (non-) existence of institutional shareholders as the most important criterion of the democracy (dictatorship) and the competitive market structure of the product on the monthly abnormal return of the shares of listed companies in Tehran Stock Exchange. The results show that the alpha coefficient, which is an abnormal return based on a zero investment strategy, is due to the long position of dictatorship companies and the short position of portfolios of democratic companies, is more competitive than the competitive market in the non-competitive market. This implies that when there is democracy or good corporate governance (high institutional shareholding) and a non- competitive market, an abnormal stock returns increases. Conversely, when there is a dictatorship or an undesirable corporate governance (low percentage of institutional investors) and a non-competitive market, stock returns are the lowest. In other words, in the non-competitive market, the more the structure of the firm's democracy is, the greater the returns is. As the results of the research are shown in Table 5, in the low competition, the p-value of the alpha variable for the coverage portfolio, at a significant level of 5%, is 3 and is significant (0/007). This indicates the effect of the sovereignty of the company on the abnormal stock return of companies at a low level of competition (According to the research hypothesis). The p-value of the F statistic also shows that the whole model is at a 5% significance level. The Watson's projections are close to 2, indicating a lack of tension between the components of the error.

Table 5 The more the structure of the firm's democracy is, the greater the returns is.

$rt_{rf} = \alpha + \beta_1 \times MKT_t + \beta_2 \times SMB_t + \beta_3 \times HML_t + \beta_4 \times UMD_t + e_t$								
p-value Coefficients	Coverage portfolio	α	β_1	β_2	β_3	β_4	p-value of F statistic	Watson's projections
	High LI (high competition)	1/921 0/026	2/218 0/019	- 0/092 0/054	0/172 0/020	0/072 0/035	1/987 0/042	2/462
	Medium LI	2/168 0.017	0/521 0/073	- 0/298 0/037	0/183 0/011	0/056 0/043	2/153 0/008	1/757
	Low LI (low competition)	3/382 0/007	1/467 0/086	0/204 0/022	0/119 0/041	0/182 0/034	1/616 0/018	2/402

4 Conclusions and Suggestions

Economists consider management low management motivation, as the first and most important issue for companies in non-competitive industries. It is expected that creating a democratic environment that leads to the monitoring and enforcement of governance by the stakeholders on management in the firm, can compensate for the factor of competition in a non-competitive conditions. In this research, for the first time in the capital market of Iran, the effect of institutional shareholders as a factor creating the conditions of democracy on abnormal returns in firms, in competitive and non-competitive markets was investigated. The results showed that the relationship between institutional shareholders and abnormal returns in the non-competitive market is more than the competitive market. Therefore, considering the importance of abnormal returns for profit-

making firms and investors in these firms, on the one hand, trustee authorities such as Stock Exchange, apply corporate governance rules on firms and on the other hand, investors take this important variable into consideration in their decisions. Considering the fact that in the stock market, quantitative research about democracy and its effect on abnormal returns, and also with the passing of two decades of corporate governance, further research is recommended in this regard. Generally speaking, there is still no reliable evidence of the effectiveness of corporate governance criteria; therefore, future research on the relationship between firm governance and economic and non-economic variables can be considered.

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