

## Managers' social capital and banks EVA, REVA and MVA

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### ABSTRACT

*In order to achieve organizational goals, managers need social capital as well as physical and human capital in order to attain organizational goals, provide the ground for competition and pave the way for development of their respective organization. Managerial social capital is an asset in a social network that can be accessed and mobilized through network membership. As such, the main objective of this research is to examine the impact of managers' social capital on economical performance of banks. The research hypotheses are tested using the statistical method of regression analysis with synthetic data on 19 banks of the I. R. Iran. on stock exchanges, in 2009-2018 Conclusively, 160 data-years are extracted to test the hypotheses. The findings of the research show that social capital has a positive and significant relationship with economical performance criteria, including the Economic value added and adjusted economic value added. Also, there was no significant relationship between managerial social capital with Market value added.*

*Keywords: Managerial Social Capital, Economic value added, adjusted economic value added, Market value added.*

### Introduction

Banks play an important role in the country's economic growth by providing financial resources to investors and attracting and allocating these resources. One of the most important issues for managers, investors and analysts is the concern about the performance of companies, which has a particular relationship with the profitability of banks (Nazarian et al., 2017).

The success or failure of a bank cannot be conceived of as the performance of managers. A bank can succeed by benefiting from the competent managers, diverse tools, and capabilities and potential to win the collection. Bank managers must be able to identify new market opportunities. Banks, with the help of well-known managers and well-educated human resources, can have a permanent relationship with customers and the market and bring the society under the spotlight by creating changes (Abbasgholipour, 2010). There has been a lot of research on the performance of banks and the factors affecting it. Social capital is one of the factors that have recently emerged in the economic affairs and the performance of firms. Social capital

has been widely discussed in the fields like economics, sociology, political science, and anthropology, but less so in management and finance. Previous studies have shown the impact of social capital and managers' social communication on the organizational performance (Konak, 2018). Social capital is defined as the resources available to individuals and groups that can be mobilized and allocated through social network membership (EbrahimiSalari&Salehnia, 2017). Managers' social capital is defined as the number of social relationships between corporate executives and other people in other groups. Previous researches have shown that corporate managers maintain informal relationships with the leaders in other organizations to reduce uncertainty about access to the resources they need (Ferries et al., 2017).

The criteria for evaluating financial performance can also be classified into the economic and accounting categories. The main accounting performance criteria are profit, cash flows, return on assets and return on equity. In contrast, the main criteria for evaluating economic performance are residual profit-based measures such as economic value added, cash added value of free cash flows, and market value added. Economic performance measurement criteria seek to integrate firm capital expenditure into the financial statement information so as to address the deficiencies in the accounting criteria of performance evaluation. The essence of these criteria is that if the company's performance exceeds the company's cost of capital, the company will create value (Mohajer and Chaharmahali, 2019).

In the present research, the impact of managers' social capital on the economic criteria of the banks performance including economic value added, adjusted economic value added and market value added has been investigated.

### **Theoretical Foundations and Background of the Research**

According to social capital theory, the social networks and communications have a profound effect on improving the performance of an organization. Many studies have examined the impact of social capital on the corporate performance. Some of these studies have examined the impact of social capital and long-term relationships of senior management with the government officials on the company's performance (Knock, 2018).

Social capital is a set of norms in the social systems that promote the level of cooperation of its members and lower the level of transaction costs. At the individual level, the social capital is defined as the individual social characteristics, such as skills, relationships with others, and reputation, which are crucial to create market or interact with others. Social capital is the sum of the actual and potential resources that lie in the network between individuals, derived from and accessible through it, so the social capital is both the network and the privileges that may be provided through the network (Jandaghi et al., 2017).

Social capital facilitates honest transactions by endangering the reputation of those who act fraudulently. This ability to punish and reward is another way that social capital reduces the need for supervision. Social relationship parties can engage in the transactions that are not governed by precise contracts because the social capital provides a complementary mechanism for executing the contract. In addition, the social capital offers an alternative solution to the voluntary cooperation that can further reduce the need for costly formal legal solutions. As a result, the parties to a social relationship involved in the financial matters or other transactions are less likely to pay for protection against the violation of contract. Social capital comprises two dimensions of social relations and social networks (Ferris et al., 2017).

Social relations mean norms and networks that facilitate collective action. Social capital reduces the inefficiency of financial markets by sharing information, trust, and contract enforcement channels. Social capital reduces information sharing and reduces information asymmetry through the social networks (Cohen et al., 2010).

Social networks are the means by which social capital is created, maintained and used. The cost of acquiring information within a social network is low because information can be widely acquired through intra-network behaviors. According to the structural theory of social capital, the social capital is defined as an asset within a social network that is transferred by its members (Lynn, 1999). In the management literature, the scholars often define social capital as a set of networks that serve the interests of the company (Payne et al., 2011).

Managers' social capital is defined as an asset in the social network that can be accessed and mobilized through network membership (Chen et al., 2018). Senior managers of the organization can develop social capital through a number of personal, social and economic relationships with competitors, customers, suppliers, financial institutions and government agencies and social organizations. This capital can be used by the organization after its creation (Fernandez et al., 2013).

Managers naturally incorporate their background and experience when making their strategic decisions. In this context, it is believed that social networks, social relations and business relations of managers influence the strategic decisions and company performance. Using their social capital, the managers can acquire the resources needed by the organization, acquire valuable information and knowledge and thereby improve the performance of the organization they manage (Knock, 2018).

In their research, Chen et al. (2018) examined the impact of social capital on the supply chain of 176 Chinese companies. In their research, they showed how senior managers' relationships affect supply chain integration and thus improve organization performance. The research results show that the business relations of senior managers have a positive relationship with the supply chain integration.

In their research entitled the Impact of Managers' Social Capital on the Cost of Capital, Fries et al argue that social relations reduce capital costs by reducing information asymmetry and agency problems. They used the number of social connections to calculate social capital. To this end, they considered the number of social relations between corporate managers and their counterparts in other companies. In their research, two individuals have social relations if they: a) work in the same company at the same time; b) have had an academic relationship with each other in the past; this means that they have studied and obtained a degree at one and the same university, c) they have relation with each other through other social activities, they are members of a professional social organization, a non-profit organization or a club. The results indicated that social capital had an adverse effect on the cost of company capital. Their findings also show that the relationship between social capital and cost of capital in less developed financial markets and companies with limited investment opportunities is stronger.

In his research, Knock (2018) examined the relationship between external social networks and company performance. In this research, the effect of senior managers' social networking characteristics, such as network size and relationship strength, on the company's performance was measured. Data were collected from a survey of senior managers at five-star hotels in Istanbul and Antalya. According to the results, there is no relationship between network size and company's performance. There is also a positive correlation between the strength of relationships and company's performance. In addition, the relation with government officials has a positive impact on the company's performance.

Talebi and Tuey (2018) examined the relationship between the social capital and organizational performance. The study population was municipal employees of Esfarrayen. Their results show that there is a positive and significant relationship between the social capital and organizational performance. ShamsiGoushaki and Nemati (2015) examined the relationship between social capital and organizational performance. The statistical population of the research consisted of all employees of Kerman shops. The results of their research indicate a positive and significant relationship between the social capital and human capital. Also, the social capital has a positive and significant effect on the organizational performance. Among the factors in social capital, the correlation between individuals, relationships between the individuals and business entities, and informal relationships with managers have the most influence and other factors have the least impact on the human capital and organizational performance. In addition, the human capital has a significant and positive effect on the organizational performance.

Jaha (2013) in his research showed that the social capital where managers are transferred is positively associated with social capital from where the managers are transferred. Assuming that employees reside near the company location, this means that the office-centered culture reflects the culture of that location. So, if the city where the company is located has low social capital, then the managers of the company where they are established will be the same.

### Research Hypotheses

According to the theoretical foundations of the research, the research hypotheses have been formulated as follows:

**Hypothesis 1:** There is a positive relationship between the managers' social capital and economic value added.

**Hypothesis 2:** There is a positive relationship between the managers' social capital and adjusted economic value added.

**Hypothesis 3:** There is a positive relationship between the managers' social capital and market value added.

### Research Method

The present research is applied and since the data is based on the past real data, it is a post-event type. It is also descriptive-correlational in nature. The library method is used for conducting preliminary studies of the research background, and formulating the theoretical framework of the research. The data gathering tool in this research was documentary research. The data on stock exchange banks were collected using the Tehran Stock Exchange database and the RahawardNowin software, and the financial statements and attachment notes for non-stock banks were collected. Field research has also been used to gather the data needed to calculate social capital. Excel software was used to classify and process the data, and Iviews software was used for final data analysis.

The statistical population of the research is 19 banks in the Iranian Stock Exchange for 10 years from the beginning of 2008 until the end of 2017. The entire study population (including 19 country banks) has been surveyed to obtain more accurate results. According to the date of establishment of the banks and the available information during the research period, 160 data-years were extracted to investigate the research hypotheses and measure them. In fact, data from banks whose 10-year data was not available were not eliminated, and were used to calculate the variables and test research hypotheses.

To investigate the research hypotheses, the research regression model of Fires et al. (2017) has been used and according to previous researches, the control variables proportional to bank performance have been used.

$$performance_{i,t} = B_0 + \beta_1 MSC_{i,t} + \beta_2 EXP_{i,t} + \beta_3 INC_{i,t} + \beta_4 Ownership + \beta_5 Boardcomp + \beta_6 SIZE + \beta_7 Age + \varepsilon$$

### Dependent variable: economic performance

In the present research, from among the economic performance criteria, the variables of economic value added (EVA), adjusted economic value added (EVA) and market value added (MVA) are included in the regression model.

### Economic Value Added (EVA):

In general, the added value can be defined as the difference between the sales of the final product and services and the purchased materials and services, or in other words the sum of the revenue generated by employees, capital providers, government, and trading houses (Roudposhti, 2013). Economic added value refers to the ability of a business to make more profit than expected based on a given risk and expresses the difference between the return on investment of a company and its cost in terms of money. Economic added value determines whether operating profit is sufficient for the total cost of capital employed (KhalatbariLimaki, 2012).

One way to calculate economic value added is as follows:

$$EVA = (r - c) * Capital$$

**EVA:** Economic Value Added

**r:** Rate of return on capital

**c:** Capital cost rate

Capital

**Return on capital (r):** For a company to survive, it is always necessary to earn income and to achieve returns above the cost of capital. This rate of return is calculated as follows:

$$r = \frac{NOPAT}{Capital}$$

**Where r:** rate of return on capital, NOPAT: net operating income after fraction of tax, and capital.

Net operating income after fraction of tax: depreciation expense + tax savings interest expense - interest expense + tax deductible net accounting expense + deferred expense + employees' end-of-service benefits expense + suspicious receivables expense + investments depreciation expense.

**Capital:** Savings of Deposits Investments depreciation + Savings of Deposits depreciation + Interesting Debts + Equity Debt + Deferred Expenses Debit + Savings of Employees' End-of-Service benefits + Savings of Suspicious Claims.

Calculating Capital Cost Rate (c): The formula for calculating capital cost rate is as follows:

$$C = \sum W.C$$

$$C = W_1.C_1 + W_2.C_2 + W_3.C_3 + \dots + W_n.C_n$$

WC: Balanced Average Cost of Capital

The cost of capital is calculated on the basis of financing sources, which include debt and equity costs.

**A) Cost of debt**

**Interest-bearing Debts:** For these types of funds, the rate used is based on the notes to the financial statements and as an effective (tax-free) rate.

$$C_1 = \text{interest rate} (1 - 22/5\%)$$

$$\text{Balanced Average of interest-bearing Debts} = W_1 \frac{\text{interest-bearing Debts}}{\text{total resources}}$$

**Bonds:** For this category of funds, similar to the interest bearing debts, the rate used is based on the notes to the financial statements and is used as an effective (tax-free) rate.

$$C_2 = \text{bonds interest rate} (1 - 22/5\%)$$

$$\text{Balance average of interest bearing debts} = W_2 \frac{\text{bonds amount}}{\text{total resources}}$$

**B) Cost of equity**

**Ordinary stock and other equity derivatives**

For ordinary shares and other derivatives belonged to ordinary shareholders, the Gordon model with a constant growth rate was used. Using Gordon model with constant growth rate, the calculation method is as follows:

$$\text{Ordinary shares Interest Rate and Derivatives} = \frac{D+g}{P_0(1-F)}$$

**P:** Ordinary Stock Price

**D:** Ordinary shares Interest for the year in question

**G:** Growth rate

**F:** Release Fee Rate

Fixed rate of 1% was applied to the equity release costs only in the capital section.

$$\text{Balance average of Ordinary Shares cost} = W_3 \frac{\text{Ordinary shares value and Derivatives}}{\text{total resources}}$$

Banks' annual growth of earnings per share is used to calculate banks' annual growth rate. To standardize the economic value added variable, we divide it into the book value of equity at the beginning of the period.

### **Adjusted Value Added (REVA)**

In the adjusted economic value added, the market value of the company is used to calculate, rather than use the company's book value. Calculating Adjusted Economic Value Added is similar to Economic Value Added. The basic difference between the economic added value and the adjusted economic value added as mentioned above is that the capital expenditure used in the adjusted economic value added is based on the market value of the company at the beginning of the period  $t$ . However, the economic surplus is calculated based on the book value of the assets at the beginning of the year (Lestari and Oktaria, 2019).

$$EVA = (r - c) * MCapital$$

**Mcapital:** Bank market value at the beginning of the year

To standardize the resulting variable, we divide the expression above into the book value of equity at the beginning of the period.

Market Value Added (MVA)

The market value of a company is equal to the total market value of equity and the market value of its debts. Theoretically, this is something that can be obtained at any given moment in the market. Market Value Added (MVA) is the difference between the total market value of a business unit and its economic capital.

This criterion is calculated based on the difference between the market value of the equity and the book value of the equity.

To standardize the variable of market economic value added, we divide it by the book value of equity at the beginning of the period.

### **Independent variable: Managers' social capital (MSC)**

Based on the previous studies of managers' social capital, managers' social relations, including their job relationships, their position and relationship with the political and government officials, have been identified as influencing the performance of the organization (Knock, 2018). In the present research, the social, occupational and political relationships of managers have been used as social capital. Considering the economic, social and cultural conditions of the country and with the opinion of experts in the field of finance and banking, the social capital of managers has been defined and measured in three parts as follows:

- A) Parliamentary record. It can be argued that the CEO or any member of the bank's board of directors who was previously a member of parliament, because of effective relations with the law institutions and government agencies, effective relations with people and investors of the city, location or ethnicity, have ability to transfer resources and customers to the bank. These relations are of particular importance because of the special status Parliamentary record has had. If the CEO or any member of the Board of Directors of the Bank has previously represented the Parliamentary, he/she will have the score one, otherwise zero. This score is assigned to the total number of members of the Bank's Board of Directors and Board members each year. The scores are then combined to generate social capital through this section. According to the 10-year period of research, the membership in the three most recent periods of the Islamic Consultative Assembly has been the criterion for representation.
- B) History of the Ministry or Deputy Minister. If the CEO or any member of the Bank's Board of Directors has a high executive in the ministerial level or Deputy Minister, he or she can have extensive relations with the decision makers, contractors and clients of the ministry or its related agencies, thereby being able to attract resources and earn special points for the bank that is currently at the core of its leadership

(CEO or Board of Directors). If the CEO or any member of the Bank's Board of Directors was formerly a Minister or Deputy Minister, they will have the score one, otherwise zero. This privilege is assigned to all members of the Bank's Board of Directors and manager Directors. The scores are then combined to generate social capital through this section. Criterion for the Ministry's History, according to the 10-year research period, has been the Ministry in the last three government periods.

C) The background of the CEO of influential institutions. If the CEO or any of the current members of the Bank's Board of Directors are formerly the CEO of influential institutions such as the CEO of other banks, the Stock Exchange, the Central Bank, the High Council of Banks, they have a higher social relations ability than other competitors. For example, if the current CEO of one bank was previously the CEO of another bank, because of his social relations with his former clients, he may encourage such clients to cooperate with the bank that is currently the CEO or a member of its board of directors. A similar argument can be made for other similar cases. If the Bank's CEO or Board of Directors has previously been the CEO of one of the influential entities, including the CEO of other banks, the Stock Exchange, the Central Bank and the Bank's High Council, he/she will have the score one, otherwise zero. This privilege is assigned to the total number of members of the Bank's Board of Directors and Board members each year. The scores are then combined to generate social capital through this section. The criterion of the experience of CEOs of influential institutions with respect to the 10-year period of research is the record of the last three periods of the government.

Finally, the scores collected from the above three sections are considered in the form of managers' social capital score.

### Control variables

According to previous researches on bank performance, other variables affecting bank performance are considered as control variables:

**Expense Management Efficiency (EXP):** It is achieved by dividing operating costs by total assets (Hans & Matisse, 2017).

**Income Structure (INC):** It is achieved by dividing income by the sum of total earnings (Hans & Matisse, 2017).

**Ownership:** Public or private ownership of a bank affects bank performance and risk (Mohammad & Gregory, 2017). In the present research, if it is a state-owned bank, the score is one, otherwise zero. The public or private ownership of the bank is identified by visiting the central bank's website and reviewing the bank's background.

**Boardcomp:** the corporate governance criteria for banks, which include the number of non-executive members and total number of directors, as well as the application of supervisory restrictions on the maximum number of directors (Katobi et al., 2017). In the present research, the ratio of the number of non-executive directors to the total number of directors was used as the variable of the composition of the board.

**Bank Size:** The natural logarithm of all bank assets

**Bank Age:** The natural logarithm of bank age since its establishment

### Research Findings

#### Descriptive Statistics

Descriptive statistics data have been shown below.

**Table 1: Descriptive statistics of research variables**

Variable	Symbol	Mean	Maximum	Minimum	Moderate deviation	Kurtosis coefficient	Skewness
Economic added value	EVA	0/0292	0/1922	-0/1791	0/0238	2/1561	-0/0822
Modified economic value added	REVA	0/081	0/2714	-0/3124	0/019	1/1687	-1/328
Market value added	MVA	0/6521	3/254	0/5248	0/124	2/4755	0/6235
Managers' social capital	MSC	0/458	1/289	0	0/291	0/581	0/188
Cost management efficiency	EXP	0/0546	0/188	0/007	0/0348	0/976	1/162
Income structure	INC	0/672	0/974	0/232	0/174	-0/554	-0/523
Ownership	Owner	0/291	1/00	0	0/455	0/918	0/917
Bank size	Size	18/696	21/38	14/73	0/923	-0/391	-1/304
Bank Age	Age	2/538	4/521	1	1/226	0/0139	1/103
Board composition	Board	0/327	0/714	0	0/0285	2/130	-0/428

Table 1 contains the main central and dispersion indices. The degree of asymmetry is often called skewness. If the skewness coefficient is zero, the population is completely symmetrical, and if this coefficient is positive, skews to right, and if negative, skews to left. The skewness coefficient for the research variables indicates that the distribution is normal. The dispersion index of the elongation rate or the curve relative to the standard curve is called kurtosis. If the kurtosis is around zero, that is, the frequency curve is normal and balanced considering its elongation. The results of Table 1 show the low kurtosis of variables, and it can be concluded that the distribution of variables is almost normal.

#### Durability test of research variables

Before estimating the model, it is necessary to check the Durability (reliability) of the variables. A variable is durable when its mean, variance, and autocorrelation coefficients remain constant over time. In the present research ADF Fisher test was used to diagnose Durability.

**Table 2: Results of the durability Test of research variables.**

Variable	Symbol	Fischer ADF statistic	Significance level
Economic added value	EVA	90/893	0/0062
Modified economic value added	REVA	120/252	0/000
Market value added	MVA	167/4	0/000
Operating net profit to total assets	NOP	94/125	0/0027
Other operating incomes to total assets	OA	119/351	0/0000
Managers' social capital	MSC	130/926	0/0000
Cost management efficiency	EXP	88/284	0/0058
Income structure	INC	78/527	0/0221
Bank size	Size	97/951	0/0014
Bank Age	Age	100/469	0/0008
Board composition	Board	125/688	0/0000

As can be seen in Table 2, the significance level of the unit root test for all variables is less than 0.05 and indicates that they are I (0) and durable (reliable). The mean and variance of the variables were constant over time, and the covariance of the variables was constant.

#### Results of Hypotheses test

Chau test (F Limer) was used to select one of the methods of panel data and integrated data.



**Table 3: Results of the F Limer test (homogeneity of cross by-intercept).**

Model	Dependent variable	F statistic	Significance level	Chau test result	Type of test
First model	EVA	5/499	0/000	H0 is rejected	Panel data
Second model	REVA	8/481	0/000	H0 is rejected	
Third model	MVA	3/866	0/000	H0 is rejected	

The results of the Limer test in Table 3 show that the null hypothesis that is oriented to the equality of individual effects is rejected. Therefore, the appropriate model for estimating the model under investigation is located in the panel class. In the next step, the Hausman test is performed to select the fixed effects model against the random effects model. The panel method itself can be implemented using both the "random effects" and "fixed effects" models. The Hausman test was used to determine which model to be used. The Hausman test is based on the presence or absence of the relationship between the estimated regression error and the independent variables of the model. If such a relationship exists, the fixed effect model is applied and if no relationship, the random effect model will be used. The results of the Hausman test for the research hypotheses are presented in Table 4.

**Table 4: Hausman test results (fixed or random effects).**

Model	Dependent variable	Test statistic	p-v	Chau test result	Type of test
First model	EVA	10/768	0/149	H0 is not rejected	Random effects
Second model	REVA	28/383	0/0002	H0 is rejected	Fixed effects
Third model	MVA	7/959	0/336	H0 is not rejected	Random effects

The results of Table 4 show the null hypothesis is rejected and the fixed effects model in the second model is appropriate. Also, according to the results, the model suitable for the first and third models is the random effects. The results of the research hypotheses test are as follows.

**The results of the first research hypothesis test**

**Table 5: Test results of the research first model at panel data level - random effects model– EVA.**

Variable	Model coefficients	Standard error	T statistic value	Level	VIF
y-intercept	0/3552	0/0995	3/5697	0/0004	-
Social Capital (MSC)	0/07509	0/01876	4/001	0/0001	1/2154
Cost Management Efficiency (EXP)	0/07148	0/01288	0/5547	0/5795	1/1472
Income Structure (INC)	0/05722	0/03501	1/6341	0/1034	1/3581
Owner	-0/00891	0/0166	-0/5368	0/5918	1/5142
Bank Size	0/02021	0/0055	3/6626	0/0003	2/0247
Bank Age	0/0052	0/0077	0/6768	0/4991	2/1381
Board Composition	-0/010015	0/00432	-2/3135	0/0214	1/0871
Determination coefficient	Modified Determination coefficient	F statistic	Level	Durbin-Watson	
0/35774	0/3059	7/224	0/000	1/614	

According to the results of Table 5, Fisher's F-statistic and significance level, 5% level indicates the significance of the model in general. The Durbin-Watson statistic also indicates a lack of correlation between the disruption components in the models. The value of variance inflation factor index (VIF) when less than 5 is the evidence of non-linearity between the independent variables. The results of Table 5 show that the independent variables of the research model do not have severe linearity problems with each other. Also, since the independent variables of the research models are the same, the VIF index in other tables is

avoided. The adjusted coefficient of determination of the model is 0.30, which indicates the changes in the variable of economic value added resulting from changes in the independent and control variables in the model. According to the t-statistic and the significance level of the table, there is a positive and significant relationship between the social capital and economic value added. As a result, the first hypothesis of the research is confirmed. Other results of Table 5 show the positive and significant effect of firm size on the economic value added and the negative and significant effect of board composition on this variable.

### The results of the second research hypothesis test

**Table 6: Test results of the research second model at panel data level - fixed effects model –REVA.**

Variable	Model coefficients	Standard error	T statistic value	Significance level
y-intercept	0/6835	0/03039	2/2485	0/0254
Social Capital (MSC)	0/3536	0/06621	4/3402	0/0000
Cost Management Efficiency (EXP)	0/0182	0/1015	0/2536	0/7962
Income Structure (INC)	0/1502	0/1160	0/2948	0/1966
Owner	-0/3725	0/0477	-7/8069	0/000
Bank Size	0/0407	0/0173	2/3542	0/0193
Bank Age	0/0128	0/0431	0/299	0/7651
Board Composition	-0/0064	0/0141	-0/4514	0/652
Determination coefficient	Modified Determination coefficient	F statistic	Significance Level	Durbin-Watson
0.6646	0.6141	13.155	0/000	2.2095

According to the results of Table 6, the Fisher F-statistic and significance level indicate that the model is significant in general. The Durbin-Watson statistic indicates a lack of correlation between the disruption components in the model. The adjusted coefficient of determination of the model is 0.61. According to t-statistic (4.34) and significance level (0.00), there is a positive and significant relationship between the social capital and adjusted economic value added. As a result, the second hypothesis is confirmed. The results also show that bank size has a positive and significant effect and the ownership has a negative and significant effect on the dependent variable and other control variables have no significant effect on adjusted economic value added.

### The results of the third research hypothesis test

**Table 7: Test results of the research third model at panel data level - random effects model – MVA.**

Variable	Model coefficients	Standard error	T statistic value	Significance level
y-intercept	-2/2058	2/2028	-1/0013	0/3175
Social Capital (MSC)	2/4429	0/3986	1/8067	0/0720
Cost Management Efficiency (EXP)	13/3095	0/9234	5/7282	0/0000
Income Structure (INC)	2/5917	0/6823	3/7981	0/0002
Owner	-0/1848	0/2960	-0/62436	0/5329
Bank Size	0/1161	0/1279	0/9078	0/3648
Bank Age	0/1478	0/1871	0/7903	0/430
Board Composition	-0/2238	0/08142	-2/7497	0/0064
Determination coefficient	Modified Determination coefficient	F statistic	Significance Level	Durbin-Watson
0.3972	0.3815	25.2353	0/000	1.9287

According to the results of Table 7, Fisher F-statistic and significance level indicate the significance of the model in general. The adjusted coefficient of determination of the model is 0.385. According to t-statistic (1.8067) and significant level (0.072), there is no significant relationship between the social capital and market value added. As a result, the third hypothesis of the research is rejected. Cost management efficiency, revenue structure, and board composition have significant effects on the market value added and the effect of other variables is not significant.

### **Conclusion and Discussion**

Unlike other capitals, the social capital does not exist physically, but is the result of group and social interactions and norms whose increase leads to lower operating costs and improve the performance of organizations (Talebi and Tuey, 2018). It can take many years for managers to obtain this type of capital and it is difficult to find senior managers with high social capital, so maintaining and expanding social capital and individuals with high social capital is crucial for an organization (Ferris Et al., 2017). The present study, it is attempted to define and explain the social capital of bank managers in a quantitative way. This can be a starting point for defining and applying the important variable of social capital in the organizations and examining its effects on the different aspects of bank and corporate performance and risk. In this research, the effect of managers' social capital on a number of banks' economic performance evaluation criteria was investigated. The results of statistical analysis show that the managers' social capital has a positive and significant relationship with the economic indices of the bank performance including economic value added and adjusted economic value added. The positive impact of social capital of managers on the economic performance of an organization can be resulted from this that the managers by the use of social capital and their relations can attract resources, acquire valuable knowledge and information and thereby improve the performance of the organization (Knock, 2018). Also, according to the results of the study of the third research hypothesis, the social capital has no significant relationship with the market value added. The results of the findings of this research on the first and second hypotheses are consistent with the results of the studies of Chen et al. (2018), Knock (2018), Ferris et al. (2017), Engelberg et al. (2012), Lin (1999), Kai et al. (2013) and Jaha (2012). But the results of the third hypothesis are contrary to the above researches. The results show that social capital has only positive effects on some of the criteria of economic performance. The importance of the present research is to provide a quantitative perspective on the social capital and calculate its impact on the company performance. That also presents a new method of calculating managers' social capital by collecting their social and political career and turning it into a quantitative variable.

According to the results of the research and the positive impact of social capital on the economic performance criteria including economic value added and adjusted economic value added, the investors and users of bank financial statement information are recommended to pay attention to the social capital of bank managers and board members in examining the status and performance of the bank. This variable has had an impact on the performance of the bank and so far has not received much attention.

### **Research Limitations**

In all the researches that are done, the limitations are an integral part of the research because it is these constraints that provide the basis for the future and new researches. This research was no exception. The most important limitation in this research was the extraction of data related to measuring the variable of social capital. Because the approach of this research, unlike the previous domestic studies that have investigated social capital through the questionnaire, is the extraction of social capital quantitatively. Problems related to collecting social capital information in this research were due to the number of banks as well as the relatively long timeframe of research and access to information on the current and former bank directors and obtaining information on their career and political backgrounds.

### **Suggestions for the future researches**

In the present research, the effect of managers' social capital on the financial performance of organizations was investigated. Given the importance of social capital and its role in the organizations'

performance, the researchers are recommended to examine the impact of this variable on the non-financial aspects of organizations. It is also suggested that the impact of social capital on the corporate risk criteria be explored in the future researches.

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