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Investigating the Role of Financial Institutions in the Development of Capital Market in Iran

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Abstract: Financial markets have a key role in mobilizing and channeling funds towards sectors of the economy and industry and thus improve economic growth, as according to some economists, development of financial markets is economic growth thrusters of countries. In this study, the role of financial institutions in the development of capital market in Iran is studied. Therefore, to do research, data and time-series regression model are used to test the hypothesis of the distribution.The results of tests show that, firstly, financial institutions has a direct role in the development of stock exchanges in the Tehran Stock Exchange and secondly, financial institutions have a direct role in increasing the play value of the rial in Tehran Stock Exchange. Therefore, it can be concluded that there is a significant positive relationship between the development of financial institutions and the stock market's development.

Key words: Financial institutions, time series, ARDL Model, Iran capital market, hypothesis

INTRODUCTION

The financial system of a country market is made up of different financial instruments and products. Financial market, a market that is associated with people's lives. In financial markets, debt securities (such as bonds) and equity securities (e.g., shares) are bought and sold. However, financial markets are different in detail, the most important difference is the type of securities that are traded and how transactions buyers and sellers are concerned. Financial institutions provide investment needed by people's money.The proceeds institutions in financial assets such as stocks and bonds or other securities investing. Financial institutions or financial intermediaries are part of the financial system that their task is to transfer funds borrowed from lenders to borrowers.

Over the past few decades that world stock markets have been created, the rate and extent of stock market development in developing countries has been unprecedented and leads to a fundamental change in the financial structure of the least developed countries and capital flows from developed countries to this country (Yartey, 2008). Countries need not only to the banking sector with optimum performance but also need a developed stock market because long-term economic growth is associated with the development of the stock market (Ma and Lin, 2016).

Researchers consider several factors as factors of developed markets and for the development or underdevelopment of the market, these factors should be focused. In fact, the development of the stock market is a complex concept that can be measured by metrics such as stock market, stock market liquidity and stock market concentration. One of the main indicators of stock market size is the capital market that is defined as shares of domestic companies in the Stock Exchange. The capital market is another indicator of the size of the stock market by dividing the value of shares already in stock on GDP. The number of companies listed on the stock exchange indices measuring stock market is considered. Stock market liquidity is usually based on how easily buy and sell shares described. Stock market liquidity standards that are commonly used are as follows: the total value traded, total value traded to GDP ratio and the ratio of the volume of transactions that represent the activities of the stock market and can be calculated by dividing the total transactions in the shares of domestic companies in the stock exchange. Finally, the focus of the stock market ten largest companies by stock value to the total value of domestic companies listed on the stock exchange is measured. A high concentration level indicates that the market is dominated by a few companies and this could negatively affect the proper functioning of the market and its liquidity.

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According to the efficient market theory, capital market should act like a competitive market, so that an individual or small group of individuals can influence on prices and entry and exit from the market be free. Price based on supply and demand and price adjustment to be done quickly. In addition, the securities must be exchanged readily and easily be converted to cash. For transaction costs low, without any cost possible information and data quickly influence on prices.

On the other hand, lack of liquidity and working capital units as well as steadily increasing rate of bank profits is the main problem with the manufacturing country.

Financial markets because of the essential role of collecting resources by small and large savings in the national economy, optimizing the flow of financial resources and directing them toward productive economic sectors, especially industry investment purposes and needs the attention assign fall.

In the meantime, financial institutions, costly and time-consuming task, evaluate firms, managers are doing your layout. For example, the possible course of future income business banks assess credit risk. As the development of institutions, intermediaries and financial instruments, the objectives and priorities of developing countries, therefore, reform of financial markets in developing countries is inevitable and absolutely necessary because studies have shown a relationship between financial development and economic development of the economy is close, intimate (Falahati *et al*., 2011).

Itechorical background and review of literature: The financial system of a country activatesthe financial resources in the economy. It can be said when the financial system is efficient and optimal, as it can be succeful in absorbing the resources and its allocation to investment projects, so financial development is realized. The financial development is a multifecet concept that covers the development of bank, other financial dimensions, the improvement of economic factors including liquidity development and liquidity policy, cultural and legal factors and organizational environment. The development of the stock market can be measured by things like the stock market, stock market liquidity and stock market concentration. Several factors can contribute to the development and underdevelopment of the stock market. One of these factors enable financial institutions in the stock market. Financial institutions in the stock market can be referred to brokers, traders, portfolio management, investment advisors, consultants offer and acceptance, rating agencies, investment funds, investment companies, financial processing companies, finance companies and pension funds (Moazeni, 2014). Vithessonthi and Tongurai (2016) examined the development of financial markets, business cycles and bank risk involved. The sample included 22 years period from 1991-2012. The results showed the development of financial markets investment bank rate increase resulting in a decrease in traditional activities and the bank's risk. Ivanov *et al*. (2016) examined the issue of recovery of stock markets after the financial crisis began in 2008. The sample consisted of equity markets in European countries.

The results showed the main factor causing the difference between the realities of capital markets and forecasts in relation to the capital market, America is structural failure in the stock market. The stock markets in Europe depends heavily on the stock market in America. Vithessonthi and Kumarasinghe (2016) studied the financial development, international trade integration and integration with evidence of Asia's stock market. The sample consisted of 15 developed and developing countries in the period 1985-2013. The results showed that financial development in countries that have had a positive impact on the stock market.

Holmes and the Maghrebi (2016) studied the impact of financial markets on the real economy: an assessment of the asymmetry of the relationship between stock market fluctuations and the unemployment rate. In this study, using GARCH and VAR and America countries, the issue was investigated.The results showed a positive effect on equity markets and reduce its unemployment rate. Also, the positive and negative impact of shocks to stock market returns in the case of asymmetry caused by a short-term supplement and the effect of substitution between capital and labor.

Castro *et al*. (2015) conducted a research entitled as financing in an emerging economy: Is financial development or financial structurem important? They studied the effects of the financial system in a company's investment decisions over the period 1998-2006 using data from 404 Brazilian companies. The results show that financial development has an important influence on a company's investment.

Slavtcheva (2015) conducted a research titled financial development, the exchange rate and productivity growth: "Does the system of fixed exchange rates in countries with low financial development lead to higher long-term productivity growth?" He suggests that a positive effect on the growth of the system of fixed exchange rates for countries with lower levels of financial development is greater.

Laeven (2014) in a study entitled develop local capital markets, concluded that capital markets can allocate capital to the real economy, thereby sharing the risk and be more efficient capital markets.

In this study, the literature on costs and benefits of developing local capital markets to big capital markets has been studied. Finally, some suggestions in relation to the development of local capital markets were presented.

Meng and Pfau (2010) in an article entitled "the role of pension funds in the capital market development", studied the impact of these financial institutions in the stock market and the bond market.The results showed that the depth and liquidity of financial assets pension fund has a positive effect on the stock market and bond market depth is private. However, when countries are divided into two groups according to the level of financial development, the effect is significant only for countries with high financial development. Pension funds in countries with low financial development does not have much impact on capital market development. As well as countries with low financial development must use investment strategies for pension funds and their management methods.

Farahi and Mahdavirad (2016), a study entitled "the relationship between exchange rate fluctuations in stock market prices in the petrochemical industry in Iran", examined the relationship between exchange rate volatility in the stock market price of Iranian petrochemical industry, through monthly data petrochemical companies listed on the Stock Exchange using ARDL, paid during the period 2007-2014. The results suggest that exchange rate volatility is positively correlated with stock market prices of petrochemical industry. According to the results of this study, variable oil prices has a negative effect on the stock market price of petrochemical industry. According to the results, the inflation rate has a positive impact on stock market prices of petrochemical and variable interest rates and significant negative impact on the stock price has petrochemical industries.

Basirat *et al*. (2015) examined the effect of exchange rate fluctuations due to the level of financial development and economic growth in selected OPEC member countries began.

It can be said that factor in various analyzes of the relationship between exchange rate fluctuations and economic growth has been less attention, is the level of financial development countries.

This study aimed to investigate the effect of exchange rate fluctuations on economic growth due to the development of financial markets in selected OPEC member countries, including Algeria, Ecuador, Iran, Nigeria and Saudi Arabia during the period 1981-2010. The results of this paper uses panel data and show that the effect of financial development on economic growth as well as the interaction of exchange rate fluctuations and financial development on economic growth is positive, but not statistically significant. The effect of exchange rate fluctuations on economic growth is negative and significant.

Qalibaf *et al*. (2015) examined the relationship between risk aversion in international scholarly managers and financial institutions in the capital market (Case study co-investment funds). To calculate the fund's performance, four indicators were measured: efficiency, portfolio risk, the rate of trading activity and portfolio diversification. To analyze the data, first through principal component analysis and significant variables in the performance of indices determined were estimated by the least squares regression model. The results of this study show that there is a significant inverse relationship between risk aversion and managers of investment funds performance.

Research hypotheses: In this study, the impact of financial institutions on the development of capital market in Iran is studiedand in this regard, the following hypotheses are proposed:

- The main hypothesis: financial institutions have direct impact on stock market development

Hypotheses:

- Financial institutions play a direct role in the development of their stock exchanges Stock Exchange
- Financial institutions have a direct role in increasing the value of the rial Stock Exchange

MATERIALS AND METHODS

In this study, according to the type of data and statistical analysis methods available, the econometric model is used to estimate model parameters and to test the hypothesis. Since, the quantitive value contains the independent and dependent variables from the beginning of the activities of financial institutions of Tehran Stock Exchange, the time series data is used. To test the hypothesis, regression model (RDL) is used, Eviews9 is used to analyze data.

Hypothesis test: The following model was used to test the hypothesis:

$$Y_t = \alpha z_t + \beta F_t + \varepsilon$$

Where:

Y = The development of the stock market
Z = The most important variables influencing the development of the stock market
F = Financial market development variables in this study, the volume of bank credit to financial institutions have been used as a benchmark

So, by extension of the model, the following model is obtained:

$$\log(SMC_i) = \alpha + \beta_1\log(BP_i) + \beta_2\log(GDP_i) + \beta_3\log(GDF_i) + \beta_4\log(INF_i) + \beta_5\log(Rate_i) + \varepsilon$$

Where:

$\log(SMC_i)$ = Logarithm of Stock market development
$\log(BP_i)$ = Logarithm of financial institutions
$\log(GDP_i)$ = Logarithm of GDP
$\log(GCF_i)$ = Logarithm of the volume of credits
$\log(Rate_i)$ = Lograithm of exchange

Thus, the dependent variable and the logarithm of the logarithm of stock market development financial institutions, the logarithm of GDP, gross capital logarithms, the logarithm of the logarithm of inflation and exchange rates are independent variables.

RESULTS AND DISCUSSION

Descriptive statistics: In this type of analysis, data collected using descriptive statistics indices are classified. In other words, the data collected with the preparation and adjustment of the frequency distribution table are summarized and areshown in diagrams. Finally, the data are summarized using descriptive statistics indicators and presented in Table 1.

Inferential statistics

Unit root test: In the first phase, stationary and non-stationary variables have to be determined using the unit root test. There are different ways to do this test in the study of Dickey Fuller unit root test is used. The most important part of this test is the selection of the optimal order in which the properties of autocorrelation of residuals series. To select the optimal, four Akaike's information criterion, Hanan, Queen, Schwartz Bayesian and verisimilitude logarithm is provided. In samples with volume less than 100 observations, as in this study, it is the Bayesian Schwartz index should be used to avoid missing a large degree of freedom. This test indicates that the null hypothesis that the variable has a unit root test is, or it is unstable. The results of unit root test are presented in Table 2.

As you can see, the only variables are the logarithm of the market value of rial, financial institutions and the logarithm of the logarithm of inflation are stable level. Therefore Dickey-Fuller test generalized to non-stationary variables at this time, with a time difference measurement is repeated. Dickey-Fuller the test results at once differencing are presented in Table 3.

The first sub-hypothesis test: Based on the the test results Akaike is optimal. After estimating the dynamic development of the stock market by taking up three break through Schwartz criteria, the results are given in Table 4.

Table 1: Descriptive statistics of research variables

Index	Logarithm of the value of the rial	Logarithm of financial institutions development	Logarithm of gross capital	Logarithm of GDP	Logarithm of the volum of credits	Logarithm of inflation	Logarithm of exchange rate
Average	3.2140	32.341	36.057	33.209	8.643	2.868	10.083
Mean	3.6410	32.345	35.972	33.385	9.072	2.897	10.184
Standard deviation	2.0240	2.562	0.281	2.270	1.944	0.414	0.315
Skewness	-0.7750	-0.174	0.597	-0.038	-0.570	0.192	-0.829
Elongation	2.7375	1.921	2.085	1.611	2.360	2.763	2.661
Minimum	-2.0000	27.314	35.670	29.701	4.000	2.120	9.396
Maximum	5.9800	36.215	36.610	36.770	11.270	3.894	10.468

Table 2: Results of the unit root tests (generalized Dickey-Fuller test)

Variables	Statistic value	The possibility of statistic	The result at the level of 95%
Logarithm of trading volume	-2.604	0.1031	Non-stable
Logarithm of the market value of IRR	-3.095	0.0377	Stable
Logarithm development financial institutions	-3.560	0.0130	Stable
Logarithm of GDP	0.044	0.9550	Non-stable
Logarithm of gross capital	1.061	0.9960	Non-stable
Logarithm of inflation	-3.248	0.0268	Stable
Logarithm of exchange rate	-1.323	0.6065	Non-stable

Table 3: Results from a single differencing unit root test (Dickey-Fuller test generalized)

Variables	Statistic value	The possibility of statistic	The result at the level of 95%
Logarithm of trading volume	-11.1430	0.0000	Stable
Logarithm of GDP	-3.6003	0.0116	Stable
Logarithm of gross capital	-6.5070	0.0000	Stable
Logarithm of exchange rate	-5.1320	0.0002	Stable

Table 4: The dynamic development of the stock market in ARDL (3, 3, 3, 3, 3, 3)

Variables	Coefficients	t-values	The possibility of statistic
C	-369.1300	-8.381	0.0750
LHM(-1)	1.1320	9.947	0.0630
LHM(-2)	1.1240	17.161	0.0370
LHM(-3)	-1.0560	-34.490	0.0180
LINF	0.9540	14.772	0.0430
LINF(-1)	0.7800	15.183	0.4190
LINF(-2)	0.1930	8.575	0.7300
LINF(-3)	0.4360	11.493	0.0550
LRATE	-0.3240	-8.770	0.0109
LRATE(-1)	-3.3090	-10.595	0.0590
LRATE(-2)	-0.0897	-24.629	0.0250
LRATE(-3)	4.2470	11.978	0.0530
LGDP	3.5220	10.722	0.0590
LGDP(-1)	0.5400	11.315	0.0560
LGDP(-2)	2.2900	18.070	0.0352
LGDP(-3)	1.2520	16.004	0.0397
LGCF	6.0410	7.249	0.0870
LGCF(-1)	18.2750	29.772	0.0200
LGCF(-2)	25.9050	10.951	0.0580
LGCF(-3)	-4.8900	-6.257	0.1009
LBP	3.2460	17.547	0.0360
LBP(-1)	2.2500	15.230	0.0151
LBP(-2)	3.0760	27.360	0.0230
LBP(-3)	0.7080	8.710	0.0720

$R^2 = 0.9395$; D-W = 2.124; F-value = 0.0024, 104546.3

Table 5: Bounds test (the first sub-hyporhesis test)

The possibility of statistic (%)	I0 bound	I1 bound
10	2.26	3.35
5	2.62	3.79
2.5	2.96	4.18
1	3.41	4.68

$F_{BT} = 2273.796$

Table 6: The results in long-term development of the stock

Variables	Coefficient	t-values	The possibility of statistic
LINF	11.780	10.4694	0.0380
LRATE	-3.770	-17.5250	0.0369
LGDP	20.010	15.5460	0.0365
LGCF	4.667	13.6230	0.0515
LBP	16.701	16.4580	0.0383
C	1837.690	11.5840	0.0583

In ARDL method, we use the bounds test to examine the long-term relationship (integration). If the test statistic is greater than the critical value, it means that if the test statistic is outside the area in a long-term relationship between the variables in the model. The results of this test to the equation are shown in Table 5.

According to the Bank test results can be seen at all levels of the test statistic and critical values is placed outside the area between the two extremes. Therefore, the null hypothesis of no long-term relationship between the variables is rejected. Table 6 outlinesthe results in long-term development of the stock.

The second sub-hypothesis test: The results dynamic model of the stock market that the stock market value of the variable is used as a proxy for stock market development is provided in Table 7.

Table 7: Model the dynamics of development of stock marketin ARDL (3, 3, 2, 3, 3, 3)

Variables	Coefficients	t-values	The possibility of statistic
C	212.450	10.135	0.0096
LARZR(-1)	0.459	4.594	0.0443
LARZR(-2)	0.340	10.367	0.0092
LARZR(-3)	0.775	12.294	0.0010
LINF	0.101	13.038	0.0034
LINF(-1)	0.091	1.968	0.1879
LINF(-2)	-0.486	-8.422	0.0138
LINF(-3)	-0.372	-13.190	0.0050
LRATE	-0.147	-3.772	0.0207
LRATE(-1)	-0.139	-0.914	0.4570
LRATE(-2)	-2.563	0.462	0.6890
LRATE(-3)	0.073	0.462	0.6890
LGDP	0.743	5.432	0.0320
LGDP(-1)	3.641	23.469	0.0018
LGDP(-2)	-0.485	-4.371	0.0486
LGDP(-3)	-1.258	-7.680	0.0165
LGCF	1.721	6.555	0.0220
LGCF(-1)	-33.090	-26.430	0.0014
LGCF(-2)	6.437	2.484	0.1309
LBP	1.400	10.269	0.0093
LBP(-1)	0.648	11.097	0.0022
LBP(-2)	-1.873	-6.920	0.0200
LBP(-3)	2.471	19.390	0.0026

$R^2 = 0.999$; D-W = 2.206; F = 0.000068, 14776.43

Table 8: Bounds test (the 2nd sub-hypothesis test)

The possibility of statistic (%)	I0 bound	I1 bound
10	2.26	3.35
5	2.62	3.79
2.5	2.96	4.18
1	3.41	4.68

$F_{BT} = 479.7251$

Table 9: The results in long-term development of the stock market

Variables	Coefficients	t-values	The possibility of statistic
LINF	0.458	10.233	0.0346
LRATE	-1.310	-11.874	0.0070
LGDP	1.394	26.007	0.0015
LGCF	3.664	11.216	0.0116
LBP	3.342	12.515	0.0220
C	114.290	8.048	0.0151

According to the Bank test results can be seen at all levels of the test statistic and critical values is placed outside the area between the two extremes. Therefore, the null hypothesis of no long-term relationship between the variables is rejected. The bounds test results are showed in Table 8.

The results of long-term stock market development model show that all variable coefficients are statistically valid. Index inflation rate, GDP, gross capital and the development of financial institutions at 95 and 90% in the exchange rate variable coefficients are statistically valid. Table 9 represents results in long-term development of the stock market.

CONCLUSION

Based on the findings, hypotheses are confirmed. This means that financial institutions have a significant positive impact on the development of the stock market. Based on the results, developing a percent of financial institutions in the long run will lead to the development of 16.701% turnover and developing a long-percent increase 3.342% of the monetary financial institutions in the stock market. So, one of the financial institutions in the stock market is portfolio. In fact, the portfolio can affect the liquidity and thus help to develop the stock market. Research evidence indicates the fact that most emerging markets or underdeveloped with a lack of capital and a floating face two major problems. Major problems lead to other problems such as reducing the liquidity and volatility of stock prices. Since, liquidity is as a measure of the depth of capital markets, portfolio management activities can help solve the problem of the liquidity of the stock. As many shareholders and investors do not have sufficient expertise to analyze the Company's financial statements and cannot make decisions in stock selection, they avoid to enter the market due to market risk. But by creating ther financial institutions in the form of investment advice, all investors will be able to take advantage of this market; and by defining the roles and responsibilities of each party, investor confidence will be enough and is not afraid of a drop in prices. This feature of investment adviser could cause the entry of new investors and the market liquidity and depth of the market. In addition,investment funds are the common financial institutions as a financial intermediary in the transfer of resources from those sources can contribute towards consumers and the development of the stock market. Finally, other financial institutions such as banks can carry out their duties in the capital market with the development of the stock market.

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